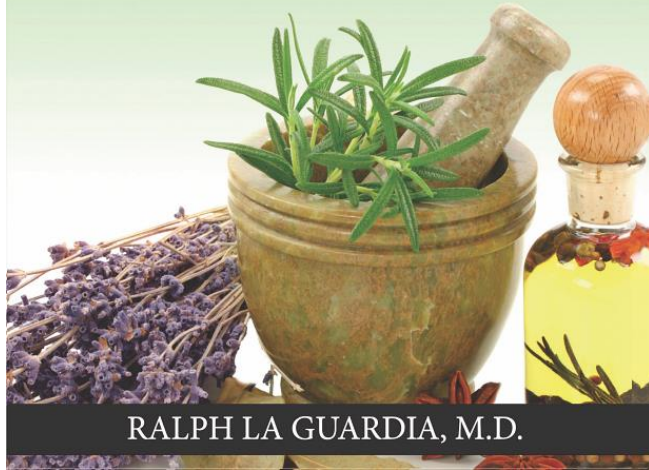


THE BIBLE OF ALTERNATIVE MEDICINE

HUNDREDS OF NATURAL REMEDIES
FOR NEARLY EVERY AILMENT



The Bible of Alternative Medicine is your resource for alternative ways to treat almost any medical problem. It covers information on every medical problem from head to toe, and multiple ways of treating each, all without a prescription!

The Bible of Alternative Medicine

By Ralph La Guardia MD

Order the book from the publisher Booklocker.com

<https://www.booklocker.com/p/books/13613.html?s=pdf>

**or from your favorite neighborhood
or online bookstore.**

THE BIBLE OF ALTERNATIVE MEDICINE

HUNDREDS OF NATURAL REMEDIES
FOR NEARLY EVERY AILMENT



RALPH LA GUARDIA, M.D.

**THE BIBLE
OF
ALTERNATIVE
MEDICINE**

**HUNDREDS OF NATURAL REMEDIES
FOR NEARLY EVERY AILMENT**

Ralph La Guardia, M.D.

Copyright © 2017-2024 by Ralph La Guardia, M.D.

Print ISBN: 978-1-959620-32-7

E-book ISBN: 979-8-88531-782-5

All rights reserved. No part of this book may be reproduced in any form or by any electronic or mechanical means, including information storage and retrieval systems, without permission in writing from the publisher, except by reviewers, who may quote brief passages in a review.

This publication contains the opinions and ideas of its author. It is intended to provide helpful and informative material on the subjects addressed in the publication. The author and publisher specifically disclaim all responsibility for any liability, loss, or risk, personal or otherwise, which is incurred as a consequence, directly or indirectly, of the use and application of any of the contents of this book.

Library of Congress Cataloging in Publication Data

La Guardia, M.D., Ralph

The Bible of Alternative Medicine by Ralph La Guardia, M.D.

Library of Congress Control Number: 2024914820

2024

Mulberryman Publishing

For more information, e-mail all inquiries to gary@TechAgeOfCT.com.

DISCLAIMER FOR THE BIBLE OF ALTERNATIVE MEDICINE

The information given and the opinions voiced by the author in this volume are for educational and entertainment purposes only, and in no way does it constitute medical advice or the practice of medicine, nor does it establish any doctor–patient relationship either explicit or implied between the publisher, author, and the readers. This book is meant in no way to substitute or replace the advice of your personal physician or other health care provider. The author and the publisher strongly urge their readers to seek up-to-date, standard medical care from certified practitioners whenever possible. Medicine is always changing and many of the recommendations in this book might not be as effective as currently available treatments. The reader should never delay seeking medical advice or disregard or discontinue medical advice or treatment from their health care provider because of information in this book or any of the resources cited in this book.

This book is intended solely to stimulate discussion and learning. Some of the actions it describes may be illegal in your jurisdiction, while others are potentially dangerous. The reader has the total responsibility to use the information provided in this book wisely, safely, and legally. The medical information in this book is of a general nature and is not meant to substitute for the advice of a qualified professional such as a physician, dentist, nurse practitioner or physician's assistant, or any other health care provider. No actions should be taken based on the information provided in this book.

The opinions and information contained in this book are believed to be accurate and sound, based on the best information available to the author, but readers who fail to consult the appropriate health authorities assume the risk of any injuries or illness incurred from the use of this book. Medicine is a constantly growing and changing discipline and as such, the author and the publisher cannot be held responsible for perceived errors or omissions.

Although the author has carefully researched available sources to ensure accuracy and completeness, he assumes no responsibility for errors, omissions, and completeness about the information provided in this book (including doses, methods of mixing and preparing medications and treatments, treatment times, etc.). Neither does the author or publisher assume liability for any harm caused by the use or the misuse of any methods, products, instructions, or information in this book or any of the resources cited in this book, including but not exclusively other books, websites, or references.

No portion of this book may be reproduced by any electronic, mechanical, or other means without the written permission of the author. Any, and all, requests for such permission should be sent to the publisher, Mulberryman Publishing.

TABLE OF CONTENTS

INTRODUCTION

PART ONE: THE BASICS YOU NEED TO KNOW	1
CHAPTER ONE: Essential Health Practices	2
CHAPTER TWO: Soil To Self: The Key To Vigorous Good Health	44
CHAPTER THREE: Vitamins and Your Nutrition	59
CHAPTER FOUR: Seed Oils and Their Numerous Health Benefits	70
CHAPTER FIVE: Fermentation and Fermented Foods	90
PART TWO: SOME ESSENTIAL TOOLS	109
CHAPTER SIX: Baking Soda (Sodium Bicarbonate)	110
CHAPTER SEVEN: DMSO (Dimethyl Sulfoxide)	121
CHAPTER EIGHT: Epsom Salt, Alkaline Mineral, Alkaline Water And The Health Benefits Of An Alkaline Diet	126
CHAPTER NINE: Honey	134
CHAPTER TEN: Iodine	143
CHAPTER ELEVEN: Vinegar and Its Many Medicinal Uses	151
CHAPTER TWELVE: Wood Ash, Lye, Soap and Activated Charcoal	163
PART THREE: WHATS YOUR PROBLEM?	172
CHAPTER THIRTEEN: Fever	173
CHAPTER FOURTEEN: Concussions, Head Trauma, Strokes and Seizures	184
CHAPTER FIFTEEN: Fainting, Passing Out, Loss of Consciousness or Syncope	192
CHAPTER SIXTEEN: Headache	200
CHAPTER SEVENTEEN: The Eye	214
CHAPTER EIGHTEEN: The Ear	224
CHAPTER NINETEEN: Nosebleeds or Epistaxis	232
CHAPTER TWENTY: Oral Hygiene, Dental Care, Canker Sores, Throat Infections and Tonsillitis	238
CHAPTER TWENTY-ONE: Skin Problems	249
CHAPTER TWENTY-TWO: Bites: Animal, Human, Insect, Snake, and Scorpion	258
CHAPTER TWENTY-THREE: Burns	271
CHAPTER TWENTY-FOUR: Poison Ivy, Poison Oak, and Poison Sumac	287
CHAPTER TWENTY-FIVE: Wound Care	294
CHAPTER TWENTY-SIX: Constipation	306

CHAPTER TWENTY-SEVEN: Diarrhea and Its Treatment	322
CHAPTER TWENTY-EIGHT: Nausea and Vomiting	331
CHAPTER TWENTY-NINE: Dehydration	338
CHAPTER THIRTY: Arthritis, Joint Pain Muscle Aches, Ligament and Tendon Injuries, and Gout	344
CHAPTER THIRTY-ONE: Orthopedic Injuries: Broken Bones and Joint Injuries	366
CHAPTER THIRTY-TWO: Asthma and Allergies	381
CHAPTER THIRTY-THREE: Colds, Flu, and Respiratory Tract Infections.	396
CHAPTER THIRTY-FOUR: Anxiety and Depression	408
CHAPTER THIRTY-FIVE: Diabetes.	417
CHAPTER THIRTY-SIX: Hypertension or High Blood Pressure and Heart Disease	433
CHAPTER THIRTY-SEVEN: Foot: Care of Your Feet and Foot Problems.	447
CHAPTER THIRTY-EIGHT: Urinary Tract Infections, Herpes and Vaginal Yeast Infections	455
PART FOUR: ODDS AND ENDS.	467
CHAPTER THIRTY-NINE: Ebola.	468
CHAPTER FORTY: Alternative Medical Devices	484
PART FIVE: YOUR SURVIVAL MEDICINE CHEST	495
BIBLIOGRAPHY AND SUGGESTED READING LIST	531

Introduction

You have in your hands the most comprehensive guide to self-medical care that has ever been written. It is 544 pages and is chock full of pearls of medical wisdom that you can easily learn and use to treat yourself and your family.

The Bible of Alternative Medicine is written in a reader friendly style, written in plain English and full of drawings that help clarify each problem you may encounter. My name is Dr. Ralph La Guardia, the author of The Bible of Alternative Medicine.

My purpose in writing this book is to empower my readers to learn the principles of good health, the keys needed to provide your body with the most nutritious foods and how to grow them.

You will learn the secrets of the soil and how to enrich your soils to grow healthy plants that are bursting with vitamins, phytonutrients (nutrients from plants), minerals, and trace elements. You will learn the building blocks of good nutrition including the essential foods that every diet must have to maintain a healthy body free of disease.

Not only will you learn how to treat every problem but more importantly:

- *how to prevent them.

- *the importance of sunshine for your health, hydration, healthy carbohydrates that will enhance your health, and good fats that help you lose weight and supercharge your health.

- *The three foods that Native Americans grew that provided them with every essential amino acid.

I am a medical doctor who is triple specialized in Internal Medicine, Bariatrics, and Geriatrics. Yet my true love has always been alternative medicine, so I practice what is known as integrative medicine, meaning I combine what I have discovered to be the best of both worlds. I have been a country doctor for more than thirty years, practicing practical medicine, using things that work and discarding those that don't.

Many times, traditional medicine that is practiced by most doctors is the most powerful and lifesaving way to treat a problem. Yet, often times it falls far short of its goal. It is almost always based on artificial chemicals that are difficult for the body to detoxify (neutralize them). Consequently the body has two choices... attach a molecule to it and make it water soluble so it can be urinated out by your kidneys or bind it to a fat and store it (just what you need, right?).

All the countless toxins we are exposed to daily also have to be detoxed by your body in a similar fashion. Are you starting to see the toxic overload your poor body is exposed to daily? I am of the school of thought that as a physician I do not want to be contributing to that poisonous flood with a host of new chemicals all in the name of

making you better, not if I can help it. For that very reason for my entire medical career I have been searching for safer, natural ways to treat my patients.

Over the years I have studied every alternative medicine book I could get my hands on. I read countless medical journals from all over the world. I have done all the research for over thirty years, so you don't have to. From this mountain of alternative medical wisdom, I have gleaned the most useful tools that I have found, the ones that truly work.

Quite honestly, there are many alternative medical treatments that are just nonsense and do not work at all. The problem is you as a medical consumer have no idea what is a great cure and what is snake oil... now you can know and do not have to subject you or your family to a medical dice game of trial and error.

I do know what works. You will benefit from my inner nerd that drove me to do obscure alternative medicine research for decades. Now, all the answers are in one place, in one large easy to read reference book, unlike any book of its kind, anywhere.

Imagine this: you are starting to feel ill. You have no idea what is wrong. Your head feels weird and is starting to hurt. You are a little queasy or you are starting to cough and feeling congested. Normally you would have to wait until whatever you were suffering with came to a head... headache, diarrhea, nausea, aches all over, vomiting... whatever your problem, it doesn't matter what is causing it. You need to kick its butt and get back to your old self. Face it, who likes to feel like crap, waiting for the other shoe to drop.

That is where how I practice medicine is different from mainstream doctors. Medicine as it is currently practiced is overwhelmingly offensive... if something comes up and we have the diagnosis right, we will usually fix the problem. However, that presupposes a few things that often times do not happen, such as getting to the doctor in time, having it properly diagnosed and then properly treated with the right combination of meds.

I think there is a better way; in fact, one that can co-exist with the traditional way but needs to come first. That, in a word, is Prevention. I don't want you to wait to see what is going to happen. I want you to begin immediately to boost your body's immune system and ward off any sickness that is about to get you, before it overcomes your immune system making you as sick as a dog!

You will learn about the Hall of Fame of Immune Boosters, all of which are natural and without the need of a prescription. In fact, my entire book is full of the secrets of good health, none of which require a prescription of any kind; all of which you can find, grow, make yourself, or find in stores, farmers markets, and online.

You will learn about the immune boosters that are 6,000 x more powerful than vitamin C, the benefits of colostrum and Stolle's milk, garlic, and iodine. You will learn the most powerful teas and the differences between green tea and others. The importance of probiotics, and how to properly feed them with prebiotics so they thrive and better colonize your gut.

You will learn the wonders of fecal transplantation... yes, you heard right. It sounds gross, but if you are suffering with C. Diff infections, Crohn's disease, ulcerative colitis or just about any GI problem this could save your life.

Do you have an interest in the use of medicinal mushrooms but just never knew where to start? You will learn all about their uses, including their powerful stimulation of your body's inborn immunity. They are easy to use and are powerful medicinal agents that seem to be easily recognized by our body and readily absorbed, producing such wonderful effects.

I am sure you have heard of essential oils, but really how comfortable are you with taking them. You will learn all about the different types of essential oils and their uses and the best way to carry them across your skin so they can have the most benefits for you.

Some things are man-made but very useful in alternative treatments such as hydrogen peroxide. You will learn how to buy it at 35 percent, pure, without any heavy metal contamination and how to properly dilute it so you can safely use it for an entire host of medical problems.

You will learn the use of a powerful blood purifier, a mysterious mineral solution, and how to use it to treat almost any infectious illness. It is dramatic in its effect upon diseases of all types. It has been used to treat malaria and even viral illnesses, as well as fungal and yeast infections and even biofilm.

All of that is in chapter one, entitled essential health practices... we still have over 500 more pages!

In part one I also show you the reason why good health begins in the soil, I like to call that my "dirty little secret". There are substances that all good healthy soils have in common.

There are little known substances produced by healthy microorganisms that are taken up by plant roots and enter your body and open up your cells to the influx of healing nutrients of all kinds.

You will learn all about your soil and how to care for it, so it can care for you. Our health is really based on a partnership between good probiotic bacteria and fungi in

the soil and also within our bodies. Feeding the right bacteria has been shown to control not only our immunity, but also our weight and even our moods!

Do you think you know a lot about vitamins? I will bet that you have been taking vitamins and supplements for years, if not most of your life. Do you want to know a mind-blowing secret?

In my over thirty years of private practice, treating thousands of patients, I have learned one inescapable fact, almost all of them were taking their vitamins wrong and were not absorbing them at all!

You will learn why and how to best take your vitamins and supplements, so they are well absorbed, nurturing your body instead of adding to its toxic load. People have no idea, that vitamins taken wrong can be poisonous to your body.

Let's talk about something that I bet you think you know an awful lot about... it's the drink we all began this journey with... milk. I know you know all about 1 and 2 percent low fat milk, that you think is healthy.

I am talking about the secret health benefits of colostrum, raw milk and even a milk that can supercharge your immune system, treat arthritis and be used to deliver up to 26 different vaccines, safely without any of the toxins that are in injectable vaccines.

If you were ever interested in alternatives to routine vaccinations that are safe and non-toxic with no chance of producing autism or any other possible vaccine associated problems, then this is for you!

You know that organic food is good for you and I agree, but even organic foods are captives of their soil. If minerals and trace elements are not in the soil, they will not be in the plant.

You will learn how to best grow organic foods by nurturing your soil. It is fun, the food tastes great and your body absorbs all the minerals and trace elements it needs. What you eat is important, but what you absorb is what really counts. There are secrets to eating that optimize your absorption, I will tell you how.

Raw food is good for you... but why? You will learn the importance of raw foods and their abundance of enzymes and how that helps your body and the importance of not cooking wrong and otherwise destroying nutritious food.

You will learn about an experiment performed on cats almost a century ago that showed how over 4 generations of eating food devoid of enzymes, the cats became riddled with chronic diseases of all types and eventually became infertile and could

no longer reproduce. How many people do you know who are suffering with fertility problems?

Another source of outstanding nutrition are the seed oils. You will learn all about the best ones to use, everything from hemp oil, black seed oil, flaxseed oil, walnut, amaranth and my personal favorite olive oil.

Hey, I am Italian, I not only grew up with olive oil, but I lived in Italy for 8 years, so I really love it. Learn all about the different olive oils and how they are extracted and their impact on your health and which are the best for you and your family.

The section of fermentation is always a favorite of my readers. It teaches you the importance of eating traditional fermented foods, everything from kombucha, kimchi, yogurt, kefir, to pickles.

You will learn why pickling or lacto-fermentation is so health enhancing. The fun part is making your own. Each section includes how to make your own kefir, yogurt etc., as well as pickling of vegetables.

You will finally know the difference between brewers and bakers yeasts, and even nutritional yeasts. You will discover which breads are the best for you and why, as well as the importance of sprouting and why it is so important when it comes to absorbing nutrients from your breads.

Did you know that human blood and sea water are identical in their mineral and trace element content? I have always been fascinated by that fact and the many medicinal uses of sea water and its extracts.

You will read about the French scientist who over 120 years ago studied human health and marine biology and discovered the incredibly nutritious and life sustaining qualities of sea water extracted from huge plankton blooms that occur periodically in the world's oceans, and which are so important to the planets health that they are protected by the United Nations.

He opened clinics all over France treating patients with his sea water, they even totally drained the blood of a dog and replaced it with his "marine plasma" and the dogs lived!

The second part of the book are some of the basic "tools" I use. These have a variety of medicinal uses, some are natural, some man made, all are over the counter and powerful tools that you can use to utilize for a variety of problems that you may encounter.

Some of my favorites are included in this section, such as Baking Soda... what a useful substance that can be used to treat everything from an upset stomach to

cancer. You will learn how to use it for a whole bunch of different problems, how to mix it and how to apply it. Learn how to improve your pH and even why fever is your friend and how to use it to cure infections!

Have some sore joints, muscles that ache, stiff neck and headache... there is a natural substance discovered as a byproduct of wood manufacturing that crosses your skin and will alleviate your aches and pains... it does taste like garlic, but it works so well, you won't care.

You think you know a lot about water? Learn the uses of water to alkalize your body, raising your pH and helping alleviate fatigue and inflammation. You will learn how to use an old favorite... Epsom Salt in many new ways. Epsom salt is magnesium sulfate and you will learn its many uses to treat everything from a sore back to muscle cramps and an irregular heart!

You will learn about a food that doesn't spoil, even after a thousand years! Yes, you guessed it honey. You will learn why it never spoils and how to use it to heal wounds, treat allergies, upset stomach, and even your weight.

You will learn the difference between raw and pasteurized honey, the differences between strained, filtered, and creamed honeys. You will learn all about the wonderful healing properties of medicinal honey such as Manuka honey.

I personally love the different flavors and textures of different local honeys that I buy at local farmers markets. Now you can learn why they are so good for you.

You must have heard about the many health benefits of vinegar. Now you will learn why it is so good for you, for everything from obesity to better blood sugar control to an aid with your digestion.

It is so much fun to use, since it has so many wonderful uses, even for sunburn and other skin conditions! While I was on the subject, I had to show you how to make your own vinegar and even your own hard apple cider, an old New England favorite.

Activated Charcoal is one of the most versatile substances you can use to treat a wide variety of medical problems from drug overdoses to venomous snake bites. In the same section I discuss the uses of charcoal and wood ash, potash, and lye.

You will learn how to make your own poultices with activated charcoal and even how to make your own activated charcoal and soap.

The Third Part of the book is entitled What's Your Problem? This is the section of the book that you can reference for any medical problem that may arise. It starts with fevers and how to treat them, the different types of fevers and why they are so good

for you. In every section of the third part I list the problem, teach you about how the body works normally and how the problem affects it.

For example, for fever, you will learn where it arises in the brain and when and how to treat it. Besides Tylenol, rest, hydration, I go into how to use ice baths, cold compresses and alcohol rubdowns. I also give you ten different herbal treatments and how to use them for treating a fever.

This way the chance of you having one or finding one locally will be much easier. You can also try different treatments at different times and find out which ones work best for you.

The Bible of Alternative Medicine is an easy to access reference book that lists problems in a head to toe fashion making it easy to find the problem you are having and how to diagnose and then treat it.

Readers find this format very user friendly. It is also written for anyone regardless of their medical training or knowledge. If any terminology is used, it is explained in parentheses right after the term. What could be easier.

You don't have to search a glossary to figure out what I am saying, because I explain it in plain English. I am not looking to impress you with long medical terms that will only bewilder you. My sole purpose is to write a medical reference book for everyone to use regardless of their education. It is also full of anatomical drawings and explanations of how the eyes, or the heart or the lungs work, making it even easier to grasp the concepts I am describing.

Common everyday problems that arise are covered, such as headaches, constipation, diarrhea, nausea, and vomiting. Other problems such as skin rashes, poison ivy, bites, dehydration, foot care, and even the common cold are covered in great detail, giving you many treatment options for each condition.

I think one of the best parts of the book is that it teaches you how to treat chronic diseases such as diabetes, hypertension (high blood pressure), arthritis, anxiety, depression, and asthma.

There are sections on every medical problem that could possibly arise, such as nosebleeds, ear and eye problems, dental problems, urinary tract and vaginal infections, even athlete's foot.

You will have the most complete and up to date source for the treatment of virtually any problem that may afflict you and your family. There is no book like this anywhere.

The final section of the book is How to Make Your Own Alternative Medicine Chest. I include in an alphabetical order, all of the different treatments that I cover in the book. Readers love it, as a useful source of all alternative treatments.

There is no other book out there for any price that tells you what you need to cover any medical problem that you or your loved ones might encounter.

The current books are usually written by people who have an interest in the topic but are not medical doctors and have no training. They have not used these remedies for decades as I have with my patients, gleaming the best most effective treatments from the pack and jettisoning the others.

These other books, although I imagine are well intentioned, fall far short of the mark. They usually just list a few things you can do and skip over chronic diseases all together. It is like reading a book about how to play baseball by a guy who likes the game but has never played it, just watched it a lot on television!

Yes, it may be interesting, but the insights are not grounded in experience and thus are worthless to a person who wants to play baseball in real life. Trust me, the stuff in this book all works, I know because I have used them all, not only on patients but also on myself and my family.

I have tried many “alternative cures” that are worthless, so you don’t have to experiment. If it didn’t work, it is not in this book!

Listen to me when I tell you that I guarantee that you will find this book to be incredibly useful, easy and fun to read, and jam packed with practical advice for you and your family.

I have spent the last thirty years researching unusual, non-prescription ways to treat any problem that you will ever encounter. You don’t have to do the thousands of hours of research like I did or practice as a country doctor for 30 years, because you can find it all in the Bible of Alternative Medicine. I promise you this book will be the last alternative medicine book you will ever need!

Sincerely,

Dr. Ralph La Guardia

PART ONE

THE BASICS YOU NEED TO KNOW

CHAPTER ONE

ESSENTIAL HEALTH PRACTICES

INTRODUCTION

TABLE OF CONTENTS

The Argument for Prevention	6
Essential Practices for Good Health	7
Personal Hygiene	7
Hand Washing	8
Dental Care	8
Sleep	9
Exercise Sunshine	9
Building Blocks of Good Nutrition	10
Hydration	10
Minerals And Trace Elements	10
Essential Amino Acids	11
Essential Fatty Acids	11
Healthy Carbohydrates	12
Vitamins	14
Hall Of Fame of Immune System Boosters	14
Astaxanthin	14
Colostrum	15
Photo Comparing Bottles of Colostrum and Breast Milk	15
Stolle's Milk	16
Garlic	17
Iodine	18
Green Tea	21
White Tea	23
Probiotics	24
Benefits of Probiotic Supplementation	25
Fecal Transplantation	26

Fungal Probiotics	26
Lactoferrin	27
Mushrooms	28
Reishi Mushrooms	29
Shiitake Mushrooms	29
Photo of A Shiitake Mushroom Flowering On A Log.	30
Chaga Mushrooms	31
Maitake Mushrooms.	32
What To Do If You Think You Are Coming Down With An Infection	33
H y d r o g e n P e r o x i d e	33
How to Dilute 35 Percent Hydrogen Peroxide To 3.5 Percent	34
MMS or Master Mineral Solution	34
How to Properly Mix MMS.	35
Zinc Supplementation	36
Essential Oils and Their Effect upon Your Immunity and Infections	37
Lavender Oil	38
Geranium Oil	39
Tea Tree Oil	40
Photo of Tea Tree In Flower	40
Thyme Oil	41
Oregano Oil	41
Mountain Savory Oil	42
Lemongrass Oil	42
Lemon Myrtle Oil	43

In this first chapter you will learn all of the essential health practices that you need to know to keep yourself and your family healthy. Many of these are well known to most of you; however I want to insure that you understand all of these guiding principles for your health. They all are important in their own regard; the more of these you can follow and incorporate into your lifestyle the better your health will be.

One of the guiding principles of this book is to empower you the patient to better understand what is happening to you thus allowing you to immediately intervene in any problem that may arise, thereby shortening the illness and speeding up your recovery.

Infections of all types; viral, bacterial and fungal are by far the most common medical problems that you and your family will encounter, so let's start with health practices that will strengthen your immune system to prevent these and also to supercharge your immunity to wipe out any infection you might contract.

I will teach you all the current methods for non-antibiotic treatment of infections; some are very well known and accepted, others are controversial and/or relatively unknown to both physicians and the general public. I would stockpile as many of these as you can afford. Most are relatively inexpensive. Once your alternative medicine chest is fully loaded with these you will be able to treat almost any infection that may arise.

I have spent decades reading obscure medical books and journals to find many of these incredibly effective treatments. I have been a practicing physician "in the trenches" with sick patients for more than twenty-five years.

During that time I have been guilty, along with the vast majority of my colleagues, for the over-treatment of patients with antibiotics. Despite my awareness of antibiotic resistance as a growing problem, I am guilty of prescribing a Z Pak (Zithromax) for a patient calling up with cold symptoms who does not want to come in to be seen. More than likely this patient has a viral infection (viruses are not affected by antibiotics, only bacteria are) and the Z Pak will do nothing for them, but patients push physicians for antibiotics and all too often we give in. This is a major problem in the United States, but a much larger problem internationally, where too often patients do not even need a prescription but can go into any local pharmacy and buy antibiotics that they ask for or the local pharmacist suggests to them. This is compounded by patients who frequently stop taking their antibiotics when they feel better, not for the prescribed length of time. What this in effect is doing is selecting out the weak bacteria by quickly killing them and leaving bacteria that are resistant. Now these strong resistant bacteria that remain flourish and rapidly take over the infected area. This very quickly leads to bacterial resistance to the antibiotic in question and problems like MRSA (Methicillin Resistant Staphylococcus Aureus). MRSA (pronounced Murse-ah) is a growing problem in hospitals in the United States as well as internationally. It is very difficult to eradicate and has led to many serious infections and deaths of patients. It is made worse by inadequate hygiene on the part of doctors and nurses, who are not washing their hands and are thus spreading the infection. It has also been estimated that up to 4 percent of the health care workers are carriers of MRSA, usually in their noses, thus also contributing to its transmission to others.

Ironically, this has created a situation in which hospitals are one of the most dangerous places for patients in terms of contracting infectious diseases.

All of the above misuses of antibiotics on the part of patients and doctors pale in comparison to the abuse of antibiotics on the part of farmers and ranchers. Big Agribusiness is by far the greatest consumer of antibiotics in the United States; currently they are using over 70 percent of all antibiotics to feed their livestock. This misuse of antibiotics to protect their livestock is insane, and leading to antibiotic

resistance on a huge scale, pouring these resistant bugs into contaminated waterways and sending out contaminated meat to consumers nationwide. MRSA-contaminated pork has been routinely found in various studies from samples taken all over the United States. Whether this contamination is originally from the meat or from human handlers is unclear, but either way, we are being exposed to this on a routine basis. MRSA currently kills more than 18,000 Americans annually; this is more than the AIDS virus. One study at the University of Minnesota found that from 25 to 39 percent of the hogs carry MRSA, although as of yet there are no proven cases of humans getting MRSA from contaminated meat. It has been known to enter the ground water adjacent to hog farms and contaminate it with MRSA. There is also a new strain called ST398 that recently emerged that has been found on hog farms.

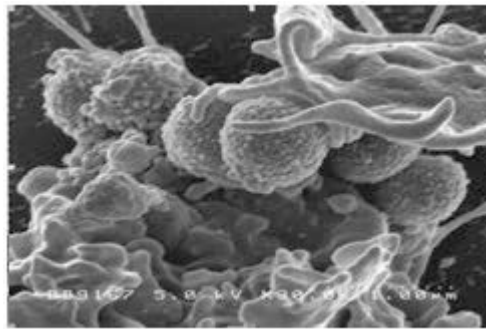


Photo above shows the interaction between a white blood cell and MRSA bacteria.

This all paints a very ominous picture of antibiotic resistant bacteria emerging much faster than new antibiotics can be developed. What does this mean for us? It means that we have to learn other methods for treating infections that do not involve the use of antibiotics. We have to be smarter and use all the means at our disposal, thus this chapter. In this chapter I will teach you all the methods currently available for the treatment of any infection that may rear its ugly head. Historically and continuing right up to present day, the major thrust by medicine for the treatment of infections has been purely offensive. We attack infections with antibiotics and hope to eradicate them. This has worked since World War II when the first antibiotics were released for use by the public after a horrific fire in a night club in Boston called the Coconut Grove.

A candle caught the curtains and the fake palm trees on fire and the crowd stampeded for the exits. Unfortunately, in those days the exit doors opened inward; the crowd pressed against the doors and kept anyone from opening the doors. The victims piled up like firewood against the doors and died in droves. The survivors were severely burned and required antibiotics to prevent overwhelming infections from killing them. Penicillin was released to the local hospitals and was hailed as a miracle drug. That began our war with the bacterial world, a world that includes the oldest living organisms on earth, and by far the most numerous. There is no niche on the planet not inhabited by some form of bacteria, from the coldest ice to the saltiest water, to volcanic vents on the ocean floor. They all reproduce the same way, by dividing themselves in two, thus one could make the argument that these current bacteria are descendants of the original organisms! They have outsmarted our every effort to eradicate them, and will continue to do so. Eradication of bacteria is an unobtainable goal and one that would be suicidal for mankind. We humans have co-evolved with bacteria and require them to survive.

They cover our entire skin and every orifice of our bodies. They live in our guts and are responsible for much of our immunity, our digestion, and our assimilation of foods. They produce vitamins

for us and in a limited way they help make minerals organic and thus we are able to absorb them . We could not live without bacteria, and our bodies harbor 100x more bacteria than human cells . Even our DNA includes many bacterial genes! We have to fight bacteria more intelligently than we currently are attempting. Our battle with bacteria has been going on about seventy years and we are starting to lose the war quite badly.

THE ARGUMENT FOR PREVENTION

We will always get infections, and we will have to deal with the ones we contract, but in the meantime a strategy that will best serve us is prevention. We have been purely on the offensive for almost seventy years and it is not working! It is time we add a defensive strategy to our game plan. Benjamin Franklin was right, “an ounce of prevention is worth a pound of cure”. That is just as true today as it was in Ben’s time and believe me it will be just as true tomorrow.



Prevention starts with good personal hygiene; hand washing, and isolation of infected patients to prevent transmission . That also means boosting our immune system with excellent nutrition, minerals, trace elements and vitamins all included with fresh clean water and lots of sunlight . The cornerstone to prevention is the immune system; anything that boosts the immune system is health-enhancing. Here I am going to give you an entire menu of ways to do just that!

Always keep this in mind... infection is only caused by a compromised immune system. A healthy individual with a robust immune system and a positive attitude will be impervious to even the most virulent infection . Diseases are the result of two processes going on simultaneously, depression of your immune system and cellular malfunction . Cells are dysfunctional (do not function like they should) as a consequence of several possible problems or a combination of several problems . For example, cells need adequate oxygen, hydration, and the proper pH. They also need a wide variety of vitamins, minerals, and trace elements.

We have evolved from the ancient oceans where we were literally immersed in a sea of nutrients that provided every mineral and trace element . Consequently our blood contains all of the same minerals and trace elements. This is not a weird coincidence, it is by design. To insure proper health and cellular function you need to provide your body with the same broad spectrum of those same minerals and trace elements. Think of it as arming your defense!

In this section I will teach you all the methods currently known to boost your immunity and augment your immune system’s fight against any possible invaders . I will also teach you all of the methods available other than Antibiotics for the treatment of any infections you might contract in this brave new world.

ESSENTIAL PRACTICES FOR GOOD HEALTH

There are several good health practices that if followed will always enhance your immunity and promote good health. These should be universally followed to enhance the health of your family and lower the transmission rate of any infections that they might be exposed to. If you want to be vigorously healthy follow as many of these as you can, all would be outstanding.

In the following section are all the fundamental ways for you to stay healthy. Some, like vitamins, I did not repeat in the section under what to do if you think you are coming down with an infection, assuming you will max out all of these suggestions such as hydration and vitamins, etc.

Personal Hygiene

Bathing a minimum of once a week should be mandatory, and this should involve scrubbing any dirt or grime off of your body with soap and a brush or a face cloth. It also involves cleaning yourself from head to toe and washing your hair with soap or a shampoo. That is a minimum; more often will be helpful. Daily bathing is a luxury and not a necessity. If water is an issue, use grey water from rain spouts and rain barrels, not sterile water, which is a waste of resources and unnecessary. Stream or lake water can also be used. Remember, this is not for drinking; only bathing.

As far as shampoos go, studies show the expensive ones are no different, just packaged nicer. Even dish detergent works just fine for shampoo and will do the intended job for a lot less money.

Bathing of your face and anus and genital areas more often is ideal, and should be done daily if you have the luxury of enough grey water and time, etc. This will keep many infections at bay and make you much more comfortable. Your body entrances such as your mouth and your anus are points of entry of bacterial, fungal, and viral infectious agents. Water and soap are highly underrated for cleansing the human body. Water also works to dissolve many toxins and dilute them as well as wash them away. Antiseptics, on the other hand, may help prevent infections but may delay adequate wound healing. Your first line should be old-fashioned soap and water, lathering up your skin from head to toe and rinsing it off thoroughly.



As far as antibiotic soaps go, they are not of much use, are more expensive, and are doing the same thing as injudicious use of antibiotics; they are selecting out for bacterial resistance. Stay away from them, they are not only unnecessary but are harmful and dangerous. Mothers who are busy

sterilizing every surface with antiseptic sprays, using antibacterial hand soaps, and keeping their children impeccably clean and off the “dirty” floor are not only wreaking havoc with the local bacteria, selecting out for resistance, but even more importantly they are harming the very children they are trying so hard to protect. What we have learned from studies of children worldwide with allergies

is that children brought up with more siblings, pets, and especially farm animals, and in less than hygienic conditions had significantly less problems with allergies and asthma . The reason is that their immune systems were challenged from birth with allergens and antigens and bacteria, viruses, fungi, and parasites ... exactly what your immune system was designed to handle, and guess what happened? They handled it wonderfully without problems and developed a robust immune system that was better able to determine self from foreign invader and had less of an allergic response.

Hand Washing

Frequent hand washing with soap is essential for the prevention of disease transmission as well as personal health.

After every bowel movement a patient should wash their hands. Many diseases are transmitted via the fecal to oral route. Also, before any food preparation, you should wash your hands thoroughly. Studies show that a good hand washing with soap will reduce diseases due to diarrhea by 50 percent, respiratory illness by 25 percent. Hand washing with soap will also significantly reduce the incidence of skin infections, eye infections, and the transmission of parasites. Hand washing for just these two situations will go a long way towards maintaining the health of your family. Also remember to have your family member's keep their nails relatively short and to clean beneath their nails routinely; this is often a hot spot for microbial growth.

Dental Care

There are no people with bad teeth in good health; the two just do not go together. There is a reason for that, if your mouth is full of rotten teeth, that means they are being colonized by pathogenic or disease causing bacteria, viruses, and even fungal infections such as thrush. Now instead of a mouth full of healthy, disease-preventing bacteria that are acting as your body's first line of defense, you have a mouth full of rotten teeth and bad bacteria. Disease-causing bacteria and viruses find a nice acidic home in mouths with poor dentition and will flourish there. Those same disease-causing pathogens, in turn, seed throughout your body and have to be dealt with by your immune system.



This constant barrage of bacteria and other pathogens on your immune system preoccupies it and squanders its scarce resources to fight off these infections . Your immune system will also be constantly attacking the infected mouth and attempting to regain that lost territory. Eventually the

bacteria begin to win and gain other footholds in your body and disease spreads as your body steadily weakens.

This can all easily be prevented by brushing your teeth vigorously at least once a day; more is even better. Rinsing your mouth out with a 50 percent solution of hydrogen peroxide and water and then flossing and brushing your teeth is the best method for cleansing your mouth . The hydrogen peroxide also helps prevent plaque formation on your teeth and will keep them nice and white.

I just recently re-watched the movie Papillon with Steve McQueen. There is one scene where he is put in solitary for two years for his first escape attempt. Upon being put in his cell, he immediately paces it off to figure out his exercise space and then spends time every day brushing his teeth with a strip of rag pulled off his tattered prison uniform. He intuitively knew the best way to keep himself healthy was to exercise and keep a positive attitude and also to keep his teeth healthy. Even if you have to chew the ends of a small branch, do it and make it into a toothbrush; your efforts will be well rewarded. Many of the infections we contract are done so through our mouths and eliminating this source will serve you all very well.

Sleep

Proper sleep for health maintenance is very under appreciated . The average American gets much less sleep than is needed, and this leads to all kinds of problems that you probably never imagined, such as obesity, strokes, sudden death, and many others . It also leads to innumerable deaths from accidents both in the work place and also at home, and especially on the roads. Americans as a group are chronically sleep deprived. You should aim for eight good hours of solid uninterrupted sleep.. A minimum of six hours and a maximum of nine hours of sleep nightly is the proper range. You should also practice good sleep hygiene, meaning you should not watch TV in bed, talk on the phone or stay on your computer, your bed should be for sex and sleep only.

Contrary to popular perceptions, a good night's sleep promotes weight loss not weight gain. This goes back to what your mother told you as a child about getting sleep so you would grow. As with many "old wives' tales", it has a factual basis. When you go into a nice, deep sleep you enter a level during which your body releases growth hormone . This, as the name implies, leads to growth in height (until you are an adult), the buildup of muscle, and the breakdown of fat. The result is a net weight loss, as well as a nice refreshed, rejuvenated feeling the next day.

When I was in medical school, we all studied around the clock. After a while I learned that pushing me to continue trying to absorb all that information when I was nodding out was counterproductive. It was not working at that point and I was just wasting my time. I learned that when I was nodding out, it was time to go to bed for the evening. My most productive time for the absorption of complex medical concepts with large amounts of information was first thing in the morning upon awakening. My well rested mind was like a sponge soaking up everything effortlessly.

Sunshine

The sun is good for you; ignore everything you have been told about avoiding the sun . Our ancestors were out in the sun all year round, without sunblock, and did not develop skin cancer like modern man.

The reason is they were always out there, so they were not getting burned. Sunburns are a modern problem, even for the fairest-skinned among us (excluding albinos, of course). Modern man is for the most part an indoor creature, and the last few generations have seen that accelerating as kids

watch TV and play video games rather than playing outside in the sun and fresh air (depending on where you live—I grew up in New Jersey, two miles from New York City, so there was no fresh air for us).

When they do go out and go to the beach their skin has not seen the sun since the previous August and they burn to a crisp. Most of our ancestors were involved in farming, hunting, fishing, and herding, which involved them being outside for most of the year.

When they weren't trying to produce food they were outside for festivals and for repairing of their homes and barns, etc. Their skin was well tanned and never burned. This also provided them with a nice, steady source of vitamin D for most of the year, which boosted their immune system and helped their bone health and prevented cancers, it also helps mood, although I am not claiming they were necessarily in good moods...!

In my practice here in New England it is rare that I see anyone with normal vitamin D levels from October to May, and for most not even during the summer months. For patients with dark skin types it is even worse; blacks and dark-skinned Hispanics are always vitamin D deficient due to large amounts of melanin, or skin pigment, which blocks the sunshine thus preventing vitamin D production from cholesterol. That brings up another little known fact, sunbathing causes a drop in your cholesterol levels by diverting that cholesterol to the production of vitamin D. Cholesterol is the skeleton used by the body for the production of vitamin D and many hormones.

BUILDING BLOCKS OF GOOD NUTRITION

Many times in this book I talk about the importance of good nutrition. You have to provide your body with all of its nutritional needs in order for it to build and repair itself and to maintain a vigorous immune system. The building blocks you will need include the following:

Hydration

Adequate hydration with fresh, clean water is critical. Ideally water with a slightly alkaline pH is best for you, high in minerals and trace elements also helps but is difficult to find. As long as you have clean water you can always supplement it by adding a complete mineral and trace element supplement such as Supreme Fulvic, which also contains fulvic acid (see following section for complete details).

Minerals and Trace Elements

A mineral source should contain all the minerals, and especially important is all of the trace elements. A humic shale source is best; this will contain both humic and fulvic acids, both of which are essential for good health.

Fulvic acid will make your body's cell membranes more permeable and facilitate the entry of those minerals, vitamins, and trace elements to the inside of the cell, where they can be used by the cell to produce the thousands of different chemicals that cells need and are capable of producing. A lack of any of these minerals or trace elements will result in some cellular dysfunction (not working properly) and eventually, disease.

Ideally you should get your minerals and trace elements from plants or animals (that eat plants) that you are eating, but since our food is grown on severely depleted soils that are missing many minerals and trace elements, we have no choice but to supplement our diets with a humic

shale-derived mineral source . Of course, the better option is to heal your soil by providing either rock dust or Azomite or some other form of minerals and feed those all-important soil microbes, and they will do their job and convert inorganic minerals to organic minerals to feed your garden plants, from which you will now get your minerals in an ideal formfrom plants.

Essential Amino Acids

Amino acids are building blocks to protein. Your body carries out the vast majority of its activities by way of proteins that it manufactures. Essential amino acids are amino acids that your body cannot synthesize on its own and must be obtained in your diet. There are nine essential amino acids and six conditionally essential amino acids, meaning that they become essential given the right conditions such as a premature birth.

Most of your body is built on protein . Your muscles and your enzymes are mostly proteins, so having the full complement of amino acids to build this immense variety of proteins is absolutely essential . Protein deficiencies affect all of the body's organs and systems, especially the developing brain (iodine is also essential for the developing brain, a lack of which leads to cretinism), immune system, the GI tract, heart, liver, and kidney function.

The Native Americans used the “three sisters” to meet all their amino acids needs. The three sisters were corn, beans, and squash. These three plants provided the full complement of amino acids that they needed in order to not only survive but thrive. Native Americans were vigorously healthy before they adopted an American diet; since then they have been ravaged by diabetes, hypertension, obesity, and many of the other degenerative illnesses.

Essential Fatty Acids

Essential Fatty Acids are fatty acids that cannot be made by your body and just like essential amino acids; they can only come from your diet.

There are only two essential fatty acids that your body needs and they are alpha-linolenic and linoleic acid. Alpha-linolenic acid is an omega-3 fatty acid and linoleic acid is an omega-6 fatty acid. Both of these fatty acids are found in plant food.

A good supply of good fats are fine; do not be afraid of animal fats, you just need a balance. Fish oil, hemp oil, black seed oil, flaxseed oil, walnut oil, olive oil, and coconut oil are all excellent sources of a broad spectrum of the fatty acids that your body needs.

Eczema is a classic example of the results of a diet deficient in essential fatty acids; giving patients with eczema a combination of a good fatty acid source, zinc, and sunshine will cure the vast majority of these patients. Depression, ADHD and other mental illnesses are all helped by a diet high in essential fatty acids and fish oil.

I am of the school of thought that these patients need to have all of these building blocks to good health before they are put on steroids and SSRIs (selective serotonin re-uptake inhibitors). If we did such nutritional interventions first or even concurrently with pharmaceuticals that hopefully later could be withdrawn, we would have a much greater success rate . This I have proven innumerable times in my practice.

Your body also needs a healthy balance of omega-3 and omega-6 fatty acids. Since fatty acids are essential to the production of many signaling molecules and messengers that control inflammation, mood, behavior, cell signaling and many other processes, if there is an imbalance of these fatty acids there will be problems with inflammation, cell function, and mental processes.

People are fat phobic and there is no need to be, you cannot survive without fats. I go into this further in the section on seed oils such as hemp oil and black seed oil. I would stockpile several of these oils in order to provide you and your group with a nice broad spectrum of essential fats.

The fat phobia that people have is because of the mistaken assumption that obesity is due to fat intake, they point out that a gram of fat has nine calories whereas protein and carbohydrates are four calories per gram. The difference is that carbohydrate ingestion causes insulin to be released. Insulin is essentially a fat storage hormone; it diverts excessive carbohydrate calories into new fat production as well as the protection of existing fat. Americans have been cutting their fat intake with low-fat and fat-free foods for the last several decades only to find themselves progressively more obese. If you look at a graph of high fructose corn syrup it can be superimposed on a graph of obesity during the same years. Carbohydrates are the problem, not fat.

Intermittent fasting for sixteen-hour stretches and/or fasting for two days a week produce greater results in weight loss than any other dietary strategy I know of. I am not a novice in treating obesity, I am board certified in bariatrics, which is the science of weight loss. I have used many different kinds of diets on my patients over the course of my long career and I can say unequivocally that eating a diet of low glycemic foods, which are foods which do not release their sugar content rapidly and thus avoid spikes in your insulin levels, works better than any other diet yet devised. Two days a week, restrict yourself to 600 calories if you are a male and 500 calories if you are a female, of low glycemic foods; the other days eat pretty much whatever you normally would.

This will result in a profound change for the better in your body chemistry and steady, sustained weight loss due to basically two days a week with low insulin levels. It is simple, does not involve calorie counting, and is a realistic diet that can be sustained indefinitely. There is an excellent book outlining this diet called *The Fast Diet* by Dr. Michael Mosley and Mimi Spencer.

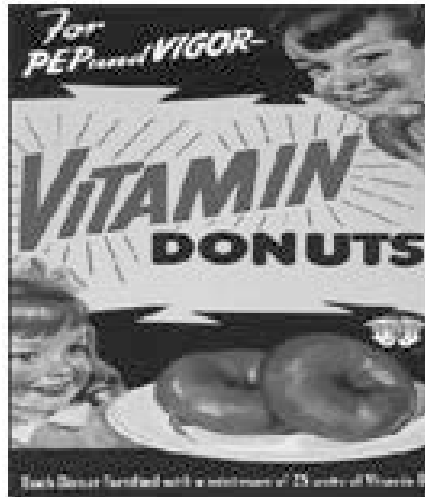
Healthy Carbohydrates

Healthy carbohydrates are ideally from organic fruits, vegetables, whole grains, and beans. Unhealthy carbohydrates are from processed foods and highly refined foods such as cakes, pastries, breads, pastas, and foods high in sugar. Whole grains are healthier due to their fiber content as well as other phytonutrients, vitamins, minerals and trace elements.

Beans are a healthy source of both soluble and insoluble fiber as well as being high in protein. Fruits and vegetables are also packaged with lots of fiber and other healthy plant-derived nutrients.

If you have to choose a bread or a pasta (and I fully understand this, being Italian), then stay away from white breads and pastas. Remember the saying, “the whiter the bread, the sooner you’re dead”. Choose whole grain pastas which have up to three times as much fiber as the white varieties. Multi-grain bread is much healthier for similar reasons in addition to which you get more nutrition from the multiple grain sources.

If you absolutely have to have a snack, then popcorn is one of the better choices since, believe it or not, it too is a whole grain. Some food manufacturers go to incredible lengths to make junk food sound healthy as evidenced by the ad for vitamin donuts below. Yes, the fortification with B1 is a good idea, but it is far outweighed by the refined sugar content, trans- fats, chemicals and preservatives in the rest of the donut.



We need to keep ourselves in good health and this will require healthy, organically grown fruits and vegetables as well as grass fed, free-range animals and livestock. Organic alone will not work if the soils are still depleted; you need to also feed the soil.

Growing plants in your garden or orchard and applying pesticides, herbicides, and chemical fertilizers is the most foolish thing you can do. The fungicides, herbicides, and pesticides kill off all that rich, wonderful microbial life in the soil.

That microbial world in your soil is filled with beneficial fungi and bacteria which break down all the leaves, branches, and other vegetable matter in the soil and change it into rich black dirt, filled with humic and fulvic acids, which are essential for health. These same microorganisms also convert inorganic minerals into an organic form so your body can assimilate them.

Our bodies cannot utilize minerals and trace elements in an inorganic form. The beneficial gut flora in your body convert some of these minerals into an organic form, they also produce essential vitamins for you and help your immune system as well as aiding in digestion. The conversion rate of inorganic minerals to organic by your gut is quite small.

Your body was designed in a jungle garden where there were large amounts of fruits, wild edible plant matter of various types, and nuts. Meat and fish were also in abundance. There is even a theory that the development of the brain of Homo sapiens (modern man) was kick-started by a movement to the shores of lakes and the ocean and the incorporation of large quantities of shellfish and other fish and along with them a very high omega-3 fatty acid content. Until the last hundred years or so we only had organically grown fruits and vegetables; then industrial farming, using chemicals of all types, began. With those organic vegetables and fruits came large doses of humic and fulvic acids. These humates also help the binding and elimination of toxins and heavy metals from our bodies. Currently our bodies are undergoing an unprecedented attack of toxins and heavy metals in our air, water, and food. We are also exposed to large quantities of toxins from seemingly “harmless” sources such as fire retardant chemicals on our rugs, bedspreads, and furniture, and toxins in your cosmetics and personal hygiene products. Many toxins come from plastic containers, leaching toxic chemicals and estrogen-like hormones that eventually enter our bodies and must be detoxified and eliminated.

This current toxic onslaught is new. Over millions of years as we evolved there were not any of the toxins we are currently exposed to. Our bodies need help in ridding themselves of these toxins, but the best way to help your body is to lower its toxic load exposure, and nothing does this better than

fresh, clean, organic food. Remember, health begins in the soil. If you are eating food that is grown in ground soaked in chemical pesticides, herbicides, and fungicides, it is devoid of microbial life and only provides you with a skeleton of a plant lacking in minerals and trace elements and humic and fulvic acids, all of which are essential for good health. Our bodies evolved with the full complement of amino acids, fatty acids, minerals, vitamins, humic acid (including fulvic acid) and trace elements; restoring these will restore health and prevent many of the acute and chronic degenerative diseases we currently are afflicted with.

We will only survive if we follow the ideal plan God has designed here on this incredible planet. Why try to recreate the wheel, it is a beautiful, balanced system designed to provide us with our every need.

Vitamins

Your body also needs the full spectrum of vitamins: Vitamins A, D, E, and K are fat soluble, and B complex and vitamin C are water soluble. Vitamins are best assimilated from organic sources, i.e. fruits, nuts, and vegetables. Remember, soluble means what they dissolve in. All vitamins are fat soluble except B and C which dissolve in water. All of the fat soluble vitamins need to be taken with a fatty meal in order to be absorbed, otherwise they are going straight through you. Vitamins B and C can be taken on an empty stomach because they are water soluble; since your body is mostly water, your GI tract always contains enough water to properly dissolve them.

I would certainly stockpile at least a year's worth of a good multivitamin and a year's worth of vitamin C for each member of your family. Vitamin C is so very essential to good health and helps boost your immune system as part of the antioxidant cascade, along with alpha lipoic acid, vitamin E, CoQ10 and glutathione. Alpha lipoic acid is an essential substance for your body's health; it is able to enter every cell of your body and cross barriers such as the blood-brain barrier and the cell membrane due to its unique property of being both fat and water soluble. ALA, as it is abbreviated, is the only substance known to have both fat and water solubility and I think this speaks volumes as to its importance in the body.

HALL OF FAME OF IMMUNE SYSTEM BOOSTERS

Here is a list of some of the most powerful nutrients to boost your immune system. These take prevention to an entirely new dimension. I have not included old classics like vitamin C and other antioxidant vitamins, since I reviewed them above. The assumption is that you have already maxed out all of the modalities above, and now we are taking it to another level. Keep in mind that these are mostly for prevention, but some also treat certain illnesses.

Here are the Hall of Famers:

Astaxanthin

Astaxanthin is pronounced asta-zan-thin. Astaxanthin is a carotenoid, similar to carotene which gives carrots their characteristic orange color, and it is this astaxanthin that gives krill and salmon their pink/red color. Like other carotenoids, astaxanthin is fat soluble; therefore you have to take it with fat to absorb it. Astaxanthin is also found in microalgae, yeast, trout, shrimp, crayfish, crustaceans, and the feathers of some birds. Unlike other carotenes, astaxanthin is not a precursor of vitamin A and therefore is not converted to vitamin A in humans.

The primary commercial source of astaxanthin is from a microalgae named *Haematococcus pluvialis*, which has the highest concentration of astaxanthin found in nature. Lobsters and crabs among other animals feed on this microalgae and get their characteristic red color from them.

Astaxanthin is a very powerful antioxidant and is 550 times stronger than vitamin E and 6,000 times stronger than vitamin C! It works as an anti-inflammatory as well interfering with five different inflammation-producing pathways. Astaxanthin therefore is very useful in the treatment of any inflammatory condition, and as a potent antioxidant it also boosts your immunity and will help prevent infections and fight off any you might contract. Since it is such a potent anti-inflammatory agent it also works to control pain. Astaxanthin works to block *cox2* enzymes and as such works like the *cox2* inhibitors such as Celebrex and Mobic that are used in the treatment of arthritis.

Astaxanthin also works for endurance; it is highly concentrated in the muscles of salmon, for example, and is responsible for their incredible feats of strength as they swim upstream to spawn annually. Incidentally, astaxanthin also works for vision, helping macular degeneration, diabetic retinopathy, eye fatigue, and strain. Astaxanthin also helps you recover from fatigue and even helps problems like sunburn.

Colostrum

Colostrum is also called first milk or bee stings. It is produced by mammals in late pregnancy and is the first milk they give to their offspring. It is lower in fat (infants have a hard time digesting fat) and higher in protein than normal breast milk and more importantly it is full of antibodies to protect the newborn from disease.



Colostrum (on the left) and Breast Milk

Colostrum from both cows and humans is thick, sticky, and yellowish in color; it is also chock full of carbohydrates, minerals, and vitamins. Bovine colostrum from pasture fed cows is full of antibodies to nineteen human pathogens such as *E. Coli*, staphylococcus, shigella, salmonella, cryptosporidium and rotavirus (which cause diarrhea in infants), and others.

Prior to the introduction of antibiotics in the 1940s the use of antibody-rich colostrum was one of the only means of fighting infections. Colostrum also contains lactoferrin, complement, lysosomes, lacto peroxidase, and proline-rich polypeptides (PRPs), all of which help fight infections.

PRPs are interesting due to their immune- modulating effect upon the immune system . PRPs have the ability to boost the immune system in one direction to fight an infection and also dampen it down in the other direction once the infection has passed, helping to prevent autoimmune diseases. That effect on the immune system in either direction is what is known as modulating.

Colostrum also contains antioxidants like hemopexin (which binds free heme in the body from damaged red blood cells) and lactoferrin (which binds iron, preventing bacterial infections because bacteria require iron to reproduce). It also has antifungal activity against many fungal infections including *Candida albicans*. Antibody levels in colostrum are one hundred times higher than breast or cow's milk! Colostrum can also be administered rectally to treat cases of colitis.

Researchers have injected cows with various disease-causing organisms, so they will develop antibodies to these diseases. The colostrum of these cows is known as Hyper-immune Bovine Colostrum. This sounds like a wonderful idea but in practice it has not proven to be as useful as physicians originally had hoped . If you have an allergy to cow's milk or dairy products you probably will be allergic to colostrum as well C. colostrum has proved very effective for the treatment of infectious diarrhea. The usual dose is 10 to 20 grams a day for approximately ten days. Colostrum also contains large amounts of the secretory immunoglobulin A which protects the newborns' throats, lungs, and intestinal tract from infections. Colostrum also has a mild laxative effect; this helps induce the infant's first bowel movement, or meconium. This meconium helps eliminate bilirubin, which is a by-product of the large quantity of dead red blood cells that are normally produced at birth; this helps prevent jaundice in newborns.

Colostrum also has a beneficial effect on the normal good bacteria in the intestinal tract allowing them to colonize your intestines . These beneficial bacteria are also known as probiotics, and they help the immune system, as well as competing with pathogenic or harmful bacteria and preventing them from colonizing your colon.

Colostrum is helpful for all babies, but is especially useful to help premature infants survive and thrive. Colostrum is only for prevention and will not treat any infections.

Stolle's Milk

Stolle's milk was originally developed by a business man named Ralph Stolle (yet another great Ralph) who was looking to improve his own health . He believed the best way to do so was by improving his immune system. Ralph Stolle owned a large dairy farm in Lebanon, Ohio, where he developed a method of injecting pathogens (germs) directly into the bloodstream of cows in order to stimulate their immune systems and to increase their production of specific antibodies to human diseases . He was wealthy and used his wealth to finance a large experiment where he gave away to over 8,000 patients his Stolle's milk. It was very successful in the treatment of a large variety of conditions. His patients reported a decrease in arthritic complaints, fatigue, and their cholesterol levels, as well as a boosting of their immune systems with resulting decrease in infections of all types. Apparently it is cheap to produce and can be done so even in third-world countries. It is completely safe to use and can be taken orally. It offers protection against a wide variety of different organisms including bacteria, yeasts, fungi, protozoa, viruses, rickettsia, amoeba, and parasites. It is also reported to accelerate healing of injuries and increases energy and stamina. It can easily be delivered as an oral vaccine.

Ralph Stolle eventually went into partnership with a company from New Zealand and around 1999 he was bought out and it is now produced by SMBI, or Stolle's Milk Biologics, Inc.

For newborn mammals of any type, colostrum and Stolle's milk will provide a huge survival advantage by providing an acquired or adaptive immunity. SMBI currently produces milk as a 26-in-1

polyvalent vaccine. They do this by producing in a laboratory the twenty-six most common human pathogens and then heat-killing them and then injecting this product into cows, thus producing antibodies in the cow to all twenty-six pathogens. SMBI also claims that this contains an anti-inflammatory factor that helps reduce inflammation from allergies and infections, thus reducing pain, swelling, itching, and redness.

Stolle's milk also contains macrophage-activating factor which activates macrophages which ingest bacteria and other invaders as well as boosting immunity. They also claim that it helps reduce atherosclerosis (hardening of the arteries) and therefore heart disease.

Keep in mind that both colostrum and Stolle's milk are for prevention only; they are useless in the treatment of a disease you have already been infected with. SMBI also has patents on their Stolle's milk to lower blood pressure, anti-aging effects, prevention of lung infections, prevention of tooth decay, prevention of rheumatoid arthritis, lung protection, gastrointestinal protection, and even the prevention of body odor!!!

Stolle's milk is currently freeze-dried by a patented method and is produced in a powder in packets that you rehydrate by adding either warm or cold water. Do not use hot water -- it will inactivate the antibodies.

Garlic

Garlic (or the Stinking Rose as it is sometimes referred to), or *Allium sativum* has many benefits for your health and your immune system; man has been using garlic for over five thousand years. Garlic is a member of the lily family that also includes onions, chives, and leeks.

To get the most health benefit from garlic you should eat it either as an aged extract (Kyolic), chopped, whole, or crushed. Garlic contains many health giving compounds, most of which are sulfur-rich compounds such as its most potent compound, allicin. Allicin is destroyed by cooking, especially greater than 350F, so either crush or chop your garlic or eat it whole.

If you do cook it, do so for as short a time as possible, ideally less than ten minutes and never greater than 250F, which will conserve the allicin. Allicin will remain viable if crushed or chopped for between two and a half days. If removed and purified as an extract it will last from two to sixteen hours at room temperature. Allicin is very unstable and will not last long once activated by crushing or chopping. The exception to this is Kyolic, which is an aged garlic extract that preserves garlic activity without any garlic smell.

Garlic is a seleniferous plant, meaning it will uptake selenium actively from the soil, even if the selenium is scarce; thus it is a great source of selenium. Selenium is important for hundreds of selenium-dependent enzyme systems in your body, including changing thyroid hormone from its inactive T4 form to its active T3 form. Selenium-poor diets are also notoriously high in cancer; perhaps this is the reason for some of garlic's reported anticancer benefits.

Garlic has many extraordinary health benefits, but one of its most useful for our needs is its strong antibacterial effects. It has been utilized down through time immemorial for the treatment of wounds and infections. It has been used as recently as both world wars; in fact, the Russians utilized it topically on wounds in the form of crushed garlic juice when their other antibiotics ran out; it was even called Russian Penicillin.

Garlic has been shown by researchers to slow the growth and sometimes kill outright over sixty species of mold and twenty species of bacteria, even MRSA. The chief antibiotic compound in garlic is allicin, it also gives garlic its strong smell. One milligram of allicin is equal to approximately fifteen standard units of penicillin. Using that formula, approximately 100 mg of allicin would be equivalent

to a single dose of penicillin . Allicin kills MRSA and many other super-bugs that have developed antibiotic resistance.

Garlic boosts your immune system and helps prevent as well as treat infections, has been used for generations for the common cold as well as more serious infections . Garlic works against both bacterial infections and viral infections as well as yeast and fungal infections, and intestinal parasites like worms.

Garlic also lowers your blood pressure by providing polysulfides (sulfur- rich compounds) that are utilized by the body's red blood cells to make hydrogen sulfide gas. Hydrogen sulfide gas causes the blood vessels to expand and therefore lowers blood pressure and has a cardio-protective effect. Fresh garlic is also an excellent source of vitamin C, B 6 and manganese (as well as the selenium I mentioned earlier) . Garlic is also an excellent source of the mineral sulfur, which is frequently deficient in the American diet and has many health benefits. Garlic also lowers bad fats in your blood like triglycerides and total cholesterol from 5 to 15 percent. Garlic is also a potent anti-inflammatory agent as well as being a good antioxidant. Inflammation is the basis for most noninfectious chronic diseases.

All of garlic's sister plants such as leeks, onion, and chives also have similar benefits as garlic, but to a lesser degree . All should be included in your survival garden and included in raw crushed or chopped form in your diet or taken as an extract form like Kyolic . I would keep several bottles of Kyolic in my alternative medicine chest to use for any bad colds or infections that may arise.

Kyolic also comes in powder form . Kyolic has no allicin, but has over 200 other beneficial sulfur-rich compounds found in garlic, and thus retains many of garlic's health benefits. Kyolic is also made from organic garlic without any exposure to pesticides, herbicides, fungicides, and chemical fertilizers, etc.

As always, you will get the most benefit from the raw form of garlic or any of its relatives such as chives, leeks, and onions; once cooked, the enzymes and other beneficial compounds in these raw vegetables are destroyed. Most enzymes in food are destroyed by cooking raw foods at 125 degrees F or greater for more than twenty minutes. Most foods are better for you when they are raw due to their enzyme, mineral, and phytonutrient content.

Iodine

It is the same old sad story; the wonderful microbial life and fertility of our soils get progressively depleted of all of their minerals and trace elements as they get poisoned with concentrated chemical fertilizers and pesticides of all sorts. Soil farmed in this manner is lifeless and dead. Unfortunately except for organic farms this describes the vast majority of farms in the United States today. Soil treated with those toxins cannot form humic acids and fulvic acid and consequently cannot process inorganic minerals into organic minerals and trace elements which your body can easily absorb. The humus content of the soil, which took millions of years to develop, is destroyed in a few decades, and along with it the fertility and productivity of the soil. Foods are grown that look okay but are nutritionally depleted and empty, and are lacking the fulvic acid from the soil that is so important in facilitating the human body to absorb all the nutrients it so desperately needs to function properly.

Consequently each successive generation of fruits and vegetables grown in these dead soils results in less and less mineral and trace element content. This is compounded by our modern methods of cooking and processing food, resulting in foods that are devoid of enzymes, vitamins, minerals, and most trace elements, but overflowing with high fructose corn syrup and other forms of sugar

and soaked in innumerable types of toxins. This doesn't even take into account the potential environmental disaster of GMO foods, and international corporations like Monsanto and their almost total control of seeds and the resulting means of food production. Seed companies are now selling hybrid seeds that produce plants that are sterile and cannot reproduce themselves like open-pollinated seeds can. Farmers around the world are jumping on this hybrid seed bandwagon due to the promise of increasing yields, along with pest and pesticide resistance, as well as larger-sized vegetables. However, this is done at the expense of the loss of several thousand years of local plant breeding that has developed local plants, known as landraces, which are perfectly matched to the local environment as well as the local insects, soils, and weather patterns. These plants contain DNA that has many different traits and characteristics that we do not want to squander and lose forever. Once lost, these varieties of plants will be gone forever.

As a gardener and alternative medicine advocate, you have to have a seed vault of heirloom seeds that are open-pollinated and thus will produce viable seed themselves for your next season.

In the bibliography there are many books on this subject that will help teach how to do so. One fabulous source for open-pollinated heirloom varieties of fruits and vegetables is the Seed Savers Exchange. This was started in 1975 by Kent Whealy and his wife, Diane, who just wanted to save some varieties of vegetables that they ate as children that they noticed were disappearing. Gardeners of all races and ethnicities had come from all over the world to the United States, bringing with them jars of seeds from their "old countries". These seeds were grown in backyards all over the country, but were being lost by the thousands before the Seed Savers Exchange became reality.

This idea has grown into a thick catalog of thousands of varieties of any fruit and vegetable you could imagine, and has resulted in the salvaging of an innumerable number of these plants that otherwise would have gone extinct. I highly recommend joining it and making a contribution if you have any unusual varieties.

For anyone interested in growing their own health enhancing foods and medicines it is a wonderful source of seeds at reasonable prices; currently the catalog has over 12,000 varieties of vegetables, herbs, and other plants. As a couple they have probably contributed more to saving the genetic diversity of our planet than any group or government.

Scientific American had a revealing article in April 2011 on the changes in nutritional content of some of the foods we grow.

From 1975 to 1997 the average calcium content in twelve fresh vegetables dropped 27 percent, iron levels 37 percent, vitamin A levels declined 21 percent and vitamin C levels dropped 30 percent! Wheat has half the protein content of one hundred years ago. We would have to eat eight of today's oranges to get the vitamin C content of one orange our grandparents ate. The calcium content of broccoli would require you to eat three heads of today's broccoli to get the same amount as one head in 1950. Alarming reports detailing the decline in nutritional content of our foods go as far back as 1935 when the Department of Agriculture began sounding the alarm, and things have gotten markedly worse since those bygone days. The quarter of the American population that eats the least fruit and vegetables has twice the cancer rate as the group that eats the most; that alone is a startling statistic.

A consequence of all of this is a drastic decline in the iodine content of soils, dropping as much as 50 percent in the last thirty years. The World Health Organization (WHO) estimates that over 2.2 billion people worldwide are at risk for iodine deficiency.

Iodine is essential for proper functioning of the thyroid gland, which in turn controls your metabolism and many other functions. Iodine, however, is not only essential for the thyroid but also is

found in the thymus, breast, salivary glands, pancreas, brain, cerebrospinal fluid (the fluid that your brain and spinal cord float in), stomach, and skin.

A woman's thyroid gland is twice the size of a man's and hence she will need more iodine, especially during pregnancy and breast feeding.

The developing fetus's brain is dependent on adequate iodine (along with essential fatty acids), without which the child will be born mentally deficient (before the current political correctness was imposed on all of us, in a time when speech used to be free and not censored, these children were called cretins . Try that now and see what happens to you!) . An utterly amazing fact is that just as the brain development in a fetus lacking iodine causes cretinism, the converse is that supplementing iodine during pregnancy has been shown to increase the baby's IQ by twenty points! Why we are not universally supplementing iodine in pregnant women is criminal in my opinion. One of the major reasons there is no supplementation is fear of lawsuits by money hungry lawyers. Doctors will not use anything in pregnant women for fear of litigation and that truly saddens me. That is also one of the reasons for this book, so you the health consumer can take actions into your own hands! Some of the non-thyroid side effects of iodine deficiency are easily traceable to its source in the body. In the salivary glands, dry mouth. In the brain, cretinism and slow mental development and slow brain functioning . In the skin, dry skin and a lack of sweating . In muscles and joints, fibromyalgia-type complaints of aches and pains. Iodine deficiency is also the cause of many of the cysts that develop in patients' breasts (fibrocystic breast disease) and other body organs. If you have ovarian, breast and other cysts you need to realize that you are deficient in iodine and need to start supplementing as soon as possible.

Iodine is essential to those parts of the body named above, but also its deficiency has been implicated in a large number of conditions and diseases such as ADHD, miscarriages, Multiple Sclerosis (M.S.) and Alzheimer's disease as well as Parkinson's disease and a large number of other neurological disorders.

Another major issue with getting enough iodine is a problem with competition with other halogens like fluorine, chlorine, and bromine. All of these halogens are adjacent to iodine on the periodic table of elements, and have similar structure and hence compete with iodine. With all the fluoride currently being placed in our drinking water, and all the bromine used for fire retardation and other chemical uses, this has caused a major problem . Bromine is also added to commercial breads and baked goods.

Standard laboratory tests will not pick up bromine or fluorine replacement of iodine in thyroid hormones and these hormones will be reported at levels which are wrong because they are inactive due to their replacement of iodine. Thyroid hormone without iodine that contains bromine or fluorine cannot function and is useless to the body's needs.

Lugol's solution, which is a liquid form of iodine and iodide combined, is very useful when one or two drops are placed in a small glass of water daily. Use this solution to rinse out your mouth once a day and then swallow it. This will provide enough iodine to your body and help displace any fluoride or bromide that might have displaced iodine in your thyroid and other tissues. Note: Too much iodine in a diet supposedly can lead to hypothyroidism or a slow thyroid. That being said, the Japanese have the highest intake of iodine of any population in the world, and do not have an epidemic of hypothyroidism, so as far as I am concerned, high iodine intakes have no serious adverse consequences and many benefits.

Another wonderful source for iodine is Nascent Iodine. Nascent Iodine comes as a liquid, it is iodine in its atomic or most basic form. Nascent Iodine is the form that is most readily recognized

by the body and most easily absorbed. It has a high electromagnetic charge on its surface and this makes it more readily absorbed by our bodies. Because of this easy absorption, Nascent Iodine helps displace bromine, chlorine, and fluorine and also prevents their uptake, thereby helping to detoxify the body. Nascent Iodine also stimulates the thyroid to produce more thyroid hormone such as T3 and T4. Nascent is the form that was used by dentists and doctors in the pre-antibiotic era to treat infections in the mouth, topically on the skin, and internally as well. Nascent Iodine is also the best form to protect yourself from radiation exposure due to its rapid absorption in a readily usable and recognized form to the body.

Nascent Iodine also has the following benefits:

- Supports and boosts the immune system
- Helps regulate metabolism
- Boosts energy levels (especially if you have an iodine deficiency, which many of us do)
- Maintain detoxification systems and help flush the body of toxins
- Fight off infections by its antiseptic properties

The usual dose of Nascent Iodine is from one to ten drops daily depending on your situation . Keep in mind that each drop of Nascent Iodine contains approximately 400 mcg (micrograms) of iodine. I take four to five drops daily to maintain good thyroid health. It can either be taken orally mixed with fruit juice or water, or the drops can be administered directly under your tongue. I personally like it in a small glass of cold water, I also swish it around my mouth to clean my mouth of any pathogens before I swallow it. You might as well disinfect your mouth while you are at it; there is no downside to that and lots of benefits as far as prevention of tooth decay.

Many diseases gain entry into our bodies through our mouths and thus the importance of good oral hygiene, so why not use an iodine water mix to cleanse and disinfect your mouth while at same time providing yourself with a steady flow of life-sustaining iodine.

Symptoms of hypothyroidism include fatigue, cold intolerance (you always feel cold), constipation, hair loss, bags under your eyes, and if severe enough, the thyroid gland will swell (goiter)

A goiter is evident when looking at a person you will see a swollen area at the front base of their neck, below their larynx or Adam's apple. There are other more far-reaching effects of hypothyroidism including stopping of ovulation and infertility in women, increased risk of other cancers including prostate, endometrial, breast, and ovarian.

Other sources of iodine are mostly from sea vegetables like kelp, seafood, and shellfish.

Note: the iodine content of iodized salt cannot be used as a source of iodine, since the amount you would need to raise your iodine levels in your blood would be fatal.

Green Tea

There are four varieties of tea: green, white, black, and oolong. All four come from the same tea plant, *Camellia Sinesis*; as the Latin botanical name suggests, it is originally from China . The differences between the varieties of tea lie in how they are processed . Black tea, that is the tea most Americans drink, is fully fermented; oolong is partially fermented. White tea is made from uncured and unfermented young tea leaves and silver flower buds, and might be the most potent of the different tea types. Black tea has two to three times the caffeine content of green tea. Green

tea is made from steamed, unfermented tea leaves which have many different health benefits not found in other teas.

The reason is that green tea has the highest concentration of plant compounds known as polyphenols. Polyphenols are very powerful antioxidants and thus protect you against the damaging effect of what is known as free radicals, which cause many health problems including arthritis, heart disease, and cancer. Polyphenols are able to neutralize many free radicals and therefore protect you from their damaging effects. The polyphenols in tea are classified as catechins. Green tea contains six primary catechin compounds, the most studied and active of which is known as EGCG.



Green Tea Leaves on a Tea Plant.

Green tea also contains alkaloids like caffeine, theobromine, and theophylline. These are all responsible for the stimulating effect of green tea. Theophylline is also a medicine used to dilate the lungs and allow asthmatics to breathe easier. The average cup of green tea contains between 50-150 mg of polyphenols.

Besides the loose leaves, green tea comes in capsules and also in an extract form. Green tea should not be made with boiling water; it will destroy too many of the healthy catechins. Instead, use water between 160 and 170 degrees F. Add lemon juice to your green tea, as the vitamin C content will help the absorption of the healthful catechins, whereas dairy products like milk will do the opposite and block the absorption of catechins. The catechin content of green teas varies, the loose teas have more than canned green tea. To maintain optimal health, drink about four cups daily, two with caffeine and later in the day two without caffeine to prevent any insomnia in those of you so predisposed.

Other reported benefits of green tea:

- Weight loss: Green tea has a positive effect on your metabolism and changes your metabolism to burn more fat. The weight loss effect of green tea is increased when caffeine is present.
- Anxiety and stress: Green tea has a calming effect due to an amino acid it contains named theanine, which helps calm the body. Theanine is very useful in the treatment of anxiety, panic attacks, and depression.
- Blood pressure lowering
- Lowering of total cholesterol and elevation of good cardio protective HDL cholesterol which helps prevent atherosclerosis (hardening of the arteries)
- Stabilizes blood glucose (sugar level) in diabetics.
- Improvement of memory and brain function.

- Helps treat inflammatory bowel diseases like ulcerative colitis and Crohn's disease.
- Prevents many types of cancers including skin cancer.
- Liver disease: Green tea protects the liver from toxins including alcohol, and may slow the progression of alcohol's damage to the liver and may even be helpful in the treatment of hepatitis.
- Prevention of dental cavities.

White Tea

White tea is the most potent of the tea types and has been shown to prevent the growth of all classes of microbes (viruses, bacteria, and fungi). This antiviral, antifungal, and antibacterial effect of white tea has been utilized by toothpaste manufacturers and is currently included in many toothpastes, including Aim, Aquafresh, Colgate, Crest, and Orajel. White tea also has the most potent anticancer properties of all teas, probably due to the fact that it has the highest antioxidant levels of all the teas. White tea also boosts your metabolism and curbs your appetite and therefore helps with weight loss. Since white tea is not processed like the other teas and only steamed, it has retained almost all of its original flavanoids and other potent plant compounds. White tea is hand-picked from silver buds and young tea leaves of selected tea plants, which are allowed to wither and dry in natural sunlight. The name "white tea" is derived from the silver-white hairs on the unopened tea buds.

Currently there are four varieties of white tea: Silver needle, white peony, long life eyebrow, and tribute eyebrow. Silver needle is the highest quality, with the others descending in quality in order from left to right. Here are a few white tea tips for you:

Loose-leaf tea is better quality than tea bags, which are usually made from the bottom of the tea barrel. Just like green tea, do not boil the water but use hot water in the 160 to 170 degree F range; this will preserve most of the beneficial plant ingredients such as the polyphenols, etc. Only brew it for three to five minutes and let it steep (sit in the cup) for a few more minutes than you would with green tea to get out all the beneficial secondary plant compounds.

You can re-steep the leaves a few times to extract all the beneficial plant compounds, and this will also make it cheaper for you and stretch your supply. Drink two to four cups a day of white tea to get all the beneficial health promoting effects of the tea.

If you have the luxury of time I would suggest making a little ceremony out of drinking your tea where you relax and get a few minutes of quiet, peaceful "downtime". This will very likely become one of the most relaxing and stress-relieving times of your day. Stress relief should not be overlooked; anything that gives you some relief will go a long way to maintaining yourself in good health and peak condition.

The best types of white tea come from close to their origin in China, especially Fujian province, which is considered the heartland of white tea. Another good province for white tea is Zhejiang province. Both white and green tea are excellent for your health and if possible you should include a large supply of both of these in your natural/alternative medicine chest. I would suggest changing over your current nonalcoholic beverage of choice to one or both of these tea types, for your overall health, as well as disease and cancer prevention.

A little note about caffeine content of various tea types: All tea that is made from the tea plant *Camelia Sinensis* contains caffeine. Usually the less fermented or processed a tea, the more caffeine remains in it, but this is not an iron clad rule. Herbal teas (or tisanes as they are also known) are made from cinnamon, chamomile, peppermint, and other plants, and do not come from the *Camelia*

Sinensis plant and also do not contain caffeine. To get a decaf tea from a *Camelia Sinensis* tea plant requires its removal via a chemical treatment of the tea leaves.

Probiotics

Probiotics are the opposite of antibiotics; it means taking beneficial bacteria to supplement the normal bacteria that you were born with in your gut. Roughly 80 percent of the bacteria that you are now carrying in your intestines have been inherited from your mother and other family members. These good bacteria are called your intestinal flora, without which you could not live. Your flora is responsible for colonizing the entire surface of your mouth and intestines, forming a continuous colony of beneficial bacteria that occupy that area, competing with harmful bacteria and preventing their colonization. These good bacteria actually outnumber the cells in your body by a ratio of ten to one.

Probiotics were previously thought to be passive little workers that helped change inorganic minerals into organic, digestible minerals, helped digest your food, and produce vitamins for your body such as vitamins K, B12 and folic acid. Recently these good bacteria have been found to be in constant communication with your body, aiding your immune system in a symbiotic relationship, one which benefits both the bacteria and the human body. As the hosts of these bacterial guests we benefit from their assistance and they find a warm, cozy home to thrive in, protected from the outside world and continuously fed by their human host. With the recent mapping of the human genome (the DNA on our twenty-three pairs of human chromosomes), it has come to light that we have a large number of bacterial genes actually inserted among our human genes!

Talk about a close working relationship. Unfortunately, just as the beneficial microbes in our soils are being eradicated by pesticides, herbicides, fungicides, and synthetic chemical fertilizers, so is our own flora under attack by antibiotics, toxins, and chemicals we ingest and are exposed to from our environment. When this occurs it allows the pathological (disease-causing) bacteria to gain the upper hand and colonize those areas where your flora has been destroyed. This overgrowth by pathological bacteria is called dysbiosis, and is the cause of many of man's diseases. The only sensible way to combat this is by becoming a good host for your flora, by eating healthily and reducing your ingestion of processed dead foods. Eating healthy includes avoiding processed, chemical-laden foods, eating organic as much as possible and providing a healthy balance of protein, fats, and carbohydrates along with a good supply of fiber in both soluble (dissolved) and insoluble form.

You can also ingest good bacteria or probiotics in order to aid your flora as allies in their fight with the bad bacteria. You can also nurture probiotics with good nutrition or what is known as prebiotics. Whenever you take in a probiotic mix of any type you need to eat at the same time in order to provide food for those strains of bacteria. Yogurt, milk, and bananas are good meals for them, but in a pinch most foods will help. Think of it as restocking a pond in your backyard with trout fingerlings; you would not just add them to the pond without any fish food. Think of your probiotics in the same fashion. You are simply restocking your gut with beneficial bacteria that will supplement your normal healthy bacterial flora. Ironically you want the pH of your gut to be acidic, the exact opposite of your body, which you want to be more alkaline. At first this seems to be a contradiction and is counter intuitive, but upon a second look it makes perfect sense.

You see the inside of your intestines or what is known as the intestinal lumen is outside of your body. Your gut is a hollow tube running from your mouth to your anus; things inside of it have not been absorbed into your body and therefore are outside of it

Probiotics are often harmless lactic acid-producing bacteria that by doing so decrease the pH of your intestinal surface and make it more acidic. This lower or more acid pH suppresses the growth

of harmful bacteria, and as such is one of the strategies these probiotics use to inhibit the growth of harmful bacteria. Acidophilus of yogurt fame is the most well-known probiotic, but there are several others that are major players, such as Bifidobacteria, which are found in the guts of breast-fed infants. Other important probiotics are Lactobacillus rhamnosus, Lactobacillus casei and Lactobacillus johnsonii, all of which are normal colonizers of human intestines. When you purchase probiotics make sure they are never in pill form but rather in a powder or a capsule, and they usually need refrigeration. The act of crushing live bacteria and compressing them into a pill with other chemical binders usually kills off the majority of these beneficial organisms. Avoidance of foods that will help harmful bacteria such as sugars and starches, artificially processed foods and fermented foods will also help control them better. Although when it comes to fermented foods, I feel they have so many other benefits that it outweighs their negatives.

Foods that benefit your good flora include rice bran, vegetables, beans, and inulin. Inulin comes from one of my favorite garden plants, the Jerusalem artichoke. All of these provide a framework of soluble and insoluble fiber that will help the probiotics form a colony. By the way, the Jerusalem artichoke has nothing to do with Jerusalem; it got its name from Italian immigrants to the United States where it is a native plant. It is in the sunflower family and hence the Italians called it Girasole (sunflower in Italian, which literally means turning to the sun) and this got bastardized by Americans hearing this name and it changed over time to Jerusalem. It is also not an artichoke. It does however have a little starch in it, but also a lot of inulin, which is a naturally occurring polysaccharide.

Plants store their carbohydrate chains, or polysaccharides, as either starch or inulin – not both. Inulin has been shown to help beneficial bacteria flourish in the gut and inhibit harmful bacterial growth. It also decreases the inflammation found in ulcerative colitis and Crohn's disease and lowers rates of colon cancer in experimental mice. Inulin is a soluble fiber and as such has been shown to decrease total cholesterol and triglyceride levels and thus helps your cardiovascular health. Jerusalem artichoke's root tuber is the edible part; the top of the plant is just a very tall, perennial sunflower.

It is a good plant to plant around your property, it grows naturally in most of the eastern United States from Maine as far south as Florida and in Texas as well. It is a very hardy plant and can even be invasive in a garden setting. The tubers or roots of the Jerusalem artichoke are eaten like a potato, but contain no harmful starches. Inulin cannot be digested by the usual enzymes ptyalin and amylase which digest starches in the human body; instead it gets metabolized by intestinal flora. This metabolism of inulin by the intestinal flora releases carbon dioxide, hydrogen, and methane gases as a by-product and thus produces a lot of intestinal gas or farting. This lack of digestion by the body also prevents the breakdown of inulin into sugars and therefore it is a good food for diabetics, not causing any spikes in their blood sugar levels.

BENEFITS OF PROBIOTIC SUPPLEMENTATION

1. Diarrhea, especially when induced by antibiotics. Diarrhea in infants was originally cured with the administration of probiotics. I have found that most diarrheas will respond to probiotics.
2. Crohn's disease and ulcerative colitis are both helped by probiotic administration. On a personal note, I had horrific ulcerative colitis that I was able to put into remission for almost two years with the use of VSL #3, which is the most potent probiotic on the market today.
3. Eczema has been shown to improve with probiotics. Eczema is also helped by sunshine, essential fatty acids, zinc, and vitamin D.

4. Vaginal infections. Probiotic administration during antibiotic use or even eating yogurt while on antibiotics will help prevent vaginal yeast infections and thrush (oral yeast infections), and for that reason I have been advising my patients to eat yogurt when they are treated with antibiotics.
5. Blood pressure has been shown to be lowered with the use of probiotics, and that seems to be because they release a substance which is similar to ACE inhibitors (a class of hypertensive or high blood pressure medications).
6. Improve immune function by aiding the immune system and thus decrease the rate of infection.
7. Decrease inflammation in the body which is always harmful.

Fecal Transplant

As disgusting as this sounds, fecal transplantation is an ingenious use of probiotic therapy. One of the most perplexing and intangible problems for scientists studying the various members of our human probiotic family was not only the wide variability between patients but also the constant changing of the probiotic mix in the same patient over time. That was also a huge hurdle to overcome when trying to determine what to put in a probiotic mix. It has been shown that even moderate changes in your daily diet directly affect the makeup of your gut flora. The confusion was made worse by a large number of minor players in the probiotic community that occupied small niches in your intestinal lining; these also varying widely over time.

Then someone came up with the idea of just taking a large sample of stool from a healthy person and putting it directly into your colon either by a nasogastric tube going down your nose into your stomach, in a capsule, or as an enema. In effect you are taking a great mix of bacteria that has been thriving in the steamy gut of a healthy person and instilling the entire shebang right into your colon. They are readily welcomed by their buddies that are already living there and are currently losing their war with the harmful bacteria. This works great for ulcerative colitis, Crohn's disease, and especially for *Clostridium difficile* infections, or what is also known as C . diff, which itself is almost always caused by the use of antibiotics.

(See the section on constipation for full details on fecal transplants.)

Fungal Probiotics

There is another type of nonbacterial probiotic that comes from yeast rather than bacteria . It also has the same benefits as bacterial probiotics. Its trade name is Florastor and the yeast it contains is called *Saccharomyces Boulardii*, which was originally found on the skins of lychee and mangosteen fruit in Southeast Asia. A very observant physician named Boullard noticed natives chewing the skin of these fruits to prevent cholera, and was able to isolate the fungus from its surface. *S. Boulardii* is used to treat the same conditions as other probiotics. Since it is of tropical origins it thrives at the 96.8-degree human body temperature, it does not leave the GI tract, and readily colonizes the small and large intestines.

Florastor should not be given to immuno-compromised patients because it might escape the intestines and invade their weakened bodies.

So as you have seen, there are both bacterial and fungal probiotics, and that begs the question as to the existence of viral probiotics . I think that viruses play an inordinate role in many human

diseases. Viruses cannot live outside of a host cell for long and need to invade a cell and take over the cell and have it produce more viruses. They also lie dormant in cells, sometimes for years before they reemerge (think genital Herpes and Herpes Zoster or shingles). I think it is very likely that in the future we will realize that many of the bacteria that cause our problems may also be colonized in turn with viruses of various types. The flip side of that theory is the existence of good viruses that colonize intestinal flora for the benefit of both the virus and its human host. In my opinion there are probably hundreds of different probiotic viruses invading bacteria and even human host cells. We know this is true because of the presence of a large number of viral genes incorporated into our human DNA or genome! I remember the first time I ever read that fact, it blew me away. I had to reread the sentence several times; viral genes mixed onto human chromosomes, wow!

For your alternative medicine chest you should have both bacterial and fungal probiotics. They are especially helpful with any GI problems that may arise, everything from diarrhea to colitis and have no real downside. They will boost your immune system and enhance your overall health. Practicing fermentation of foods making kefir, yogurt, vinegar, and even alcohol such as hard ciders will also enable you to have an ongoing supply of beneficial bacteria that you do not have to refrigerate. It will also supply you with healthy food and beverages that if done correctly will last for many years.

LACTOFERRIN

Lactoferrin is a protein found in both human and cow's milk, hence the lacto part of its name. The ferrin part stands for iron, and this is due to its iron-binding capacity. Medicine is beautiful that way; most names are not random and are derived either from Latin or Greek roots. Colostrum or the first milk has about seven times the lactoferrin content of regular milk. Human milk also contains more of it than cow's milk. Lactoferrin is also present in tears, nasal secretions, and saliva.

Lactoferrin is a potent antifungal and antibacterial agent. Our human bodies are amazing machines, perfectly designed by our creator. Think about it; the infant gets a huge dose of lactoferrin directly into its mouth via breast feeding from its mother. This lactoferrin binds up iron which is essential for the reproduction and growth of almost all bacteria and is present in milk, tears, saliva, and nasal secretions, therefore protecting all those surfaces from bacterial infections. Although lactoferrin binds up iron, making it unavailable to bacteria, it does at the same time make it more available to the body by increasing its rate of absorption.

Besides absorbing free iron and denying its availability to the bacteria that need it, lactoferrin has a second ingenious method of fighting bacteria; it binds to the special receptors on the cell wall of bacteria that are there to soak up iron and kills the bacteria by producing hydrogen peroxide!

Lactoferrin also prevents the attachment of *Helicobacter pylori* to the stomach wall, helping to prevent ulcer formation. Could we have come up with a better system? I doubt we could have. Lactoferrin has recently been found to also be active against many types of viruses that are pathogenic (disease-causing) to man including herpes viruses, hepatitis, HIV, and others. It also has been reported to have anticancer and immune-enhancing effects.

When treating a patient, the dose of Lactoferrin that I recommend using is about 300 mg a day. It comes in convenient capsule form. Another useful trick to increase iron absorption by the body is to give a small amount of red meat with your iron supplement. Iron is found in two forms in your food; it is in heme or organic iron (in red meat) and nonheme or inorganic iron (in vegetables and grains). Iron absorption is low in both forms. The nonheme iron from vegetables and grains is about 10 percent, and the absorption of heme iron from red meat is about 30 percent. The exception to this rule is Shitake mushrooms, which have an easily absorbable form of nonheme iron. The interesting fact

is that iron in heme form helps increase the absorption of nonheme iron, that is why a little red meat added to the diet will enhance overall iron absorption and is probably the source of the old wives' tale that "a little red meat is good for the blood". I have found over the years that there is usually a pearl of wisdom in most old wives' tales, or they would not have persisted.

Iron absorption can also be inhibited by certain foods such as milk and dairy products, coffee, tea, soy products, and excessive calcium intake; for that reason it is best to not take any iron and calcium supplements together. Iron, on the other hand, may decrease the absorption of both zinc and thyroid supplements and thus should be taken separately from them.

Lactoferrin also has many benefits in the treatment of gastrointestinal diseases such as ulcers, Crohn's disease, and ulcerative colitis due to its beneficial effect on probiotic bacterial colonies in the flora of the gut and is probably one of the reasons it is in the colostrum, so an infant will have the mother's probiotic bacterial species to colonize its intestines and at the same time provide nourishment.

MUSHROOMS AS MEDICINE

Mushrooms as we know them are merely the above-ground fruiting part of a large underground organism known as a mycelium. Some of the oldest and largest organisms on Earth are huge mycelium that live and have spread underground for thousands of acres. Fungi do not need light to synthesize their own food and produce chemicals that dissolve the material that surround them and then simply absorb those compounds. Antibiotics are produced by fungi to kill their mortal enemy, bacteria. Bacteria and fungi are always competing for the same areas and in order to wage war on them, the fungi have developed antibiotics that they release into the immediate surroundings to kill off the competing bacteria.

Penicillin was the first antibiotic discovered and it is made by a fungus, the *Penicillium* fungi.

It is not surprising that mushrooms have been utilized to treat infections for thousands of years. We know this from ancient Chinese texts that refer to different medicinal mushrooms. We know they have been used just as long in Europe from the 1991 discovery of Otzi, the "Ice Man" found in the Italian Alps. Otzi was carrying a medicinal pouch at the time of his untimely death; in it were two types of mushrooms, Piptoporous *Bettulinus* and *Fomes Fomentarius*. Piptoporous B. is a fungus that grows on birch trees and is known to have antibacterial qualities. The second, *Fomes F.* was used as tinder to start fires. Otzi has been estimated to be over five thousand years old, living about 3,300 BCE (previously known as BC), proving the long history of medical mushroom use. Another amazing fact about Otzi is that he was found to have DNA of *Borrelia Burgdorferi* or Lyme disease and is thus its oldest known victim. I have a special interest in Lyme disease since I live and practice in Connecticut a short distance from where it was first discovered in Old Lyme. I have personally seen the havoc that Lyme disease can cause in patients, including my father, who was a small powerful man who came down with Lyme disease while on vacation in Europe and was unable to even carry his luggage!

Medicinal mushrooms produce substances known as beta-glucans, which are complex polysaccharides (chain of sugars, particularly of glucose molecules), similar to starch produced by plants and glycogen produced by animals. Beta-glucans are known as immune modulators, having properties that stimulate the immune system to fight infections and cancer. Various types of medicinal mushrooms produce these beta-glucans such as Reishi, Shitake, Chaga, and Maitake. Various types of grains also produce these beta-glucans in a soluble form, especially oats and bran. It has been shown that in addition to beneficial effects upon the immune system, beta-glucans also lower cholesterol.

Beta-glucans have been shown in many studies to protect against infections and to help shorten their length and severity; they have even been shown to be effective against anthrax. Anthrax is a favorite biological warfare weapon of the Soviets, and much loved by terrorists due to its lethality. While we are on the subject of terrorists, beta-glucans have also been shown to be helpful in the protection of your bone marrow after radiation exposure. Damage to the blood cell-producing bone marrow leads to many radiation-induced cancers such as leukemias; this damages the immune system and leads to death either from hemorrhage or from overwhelming infections.

For the best results medicinal mushrooms should be taken on an empty stomach. The intestinal cells will absorb them into the intestinal lymph and they will immediately interact with macrophages to activate your immune system.

Reishi Mushrooms (*Ganoderma lucidum*)

Reishi is a type of medicinal mushroom that has been used for thousands of years in traditional Chinese medicine. Reishi has been described as having a tough, woody taste.

As a medicine, both the mushroom which is the above-ground fruit of the fungus and the mycelium or underground fungus are utilized. Reishi has been used extensively to treat viral infections such as colds and the flu as well as bronchitis, asthma, and respiratory problems. It is also used to lower blood pressure, cholesterol, and to treat heart, liver, and kidney diseases. It has shown activity against cancer, HIV, and also helps chronic fatigue and insomnia.

Reishi use is usually free of any side effects of any significance, but it may cause some nausea and perhaps a rash. Taking vitamin C at the same time as the Reishi usually reduces its side effects by helping the absorption of Reishi. Drinking significant quantities of water will also help Reishi do its work.

Reishi comes in various colors, but only the red and the black Reishi have been shown to have health enhancing benefits. Wild Reishi is often another name given for black Reishi, which has less beta-glucan content and therefore is not as beneficial as the red Reishi. Reishi works best to prevent infections and cancer rather than to treat them. Raw Reishi is not beneficial for you, since it does not undergo a complex process of repeated high pressure boiling of the mushroom that activates the beta-glucans. This is known as hot water extraction.

Reishi is found in the wild on plum trees, but those are very rare. Fortunately, in the 1970s the Japanese developed a method of cultivation of these mushrooms. Besides the numerous positive effects I have listed above, Reishi mushrooms have also been found to have analgesic properties, anti-inflammatory effects; they boost the production of interferon and therefore have antiviral effects, reduce the effects of caffeine and reduce stress as well as enhancing the production of blood cells from the bone marrow (other than red blood cells). Reishi mushrooms are excellent to have in your alternative medicine chest along with the other mushrooms listed here.

Shiitake Mushrooms (*Lentinula edodes*)

Shiitake is a medicinal, edible mushroom from Asia, very popular in Japan. The name "Shiitake" comes from the Japanese word "Shii", which is the name for the tree *Castanopsis cuspidata* on whose dead logs the mushrooms are cultivated, and the second part, "Take" means mushroom in Japanese. Americans have discovered their rich, smoky flavor and are starting to enjoy these healthy mushrooms. Long consumed in Asia for their health-promoting and longevity-promoting qualities, the Chinese have been eating them for over 6,000 years; a good track record indeed!

Just like Reishi, Shiitake mushrooms contain a large variety of beta- glucans which stimulate the immune system in two ways . First, Shiitake activates macrophages, which helps your immunity to both infections and also cancer. Secondly, Shiitake suppresses excess immune activity so it helps with autoimmune problems of disease-causing free radicals.



Shiitake Mushroom Flowering on a Log

Shiitake mushrooms can also be easily grown by you in a medicinal garden of your own. There are many films available on line showing you how this can be done. Shiitake can be grown on sawdust blocks or any old hardwood logs, best done in a forest setting. This process is known as Forest Farming and has many applications for anyone interested in natural medicine and is a skill that you should acquire . Oak logs are perfect for this purpose as are most hardwood logs . You cannot use these logs for three or four weeks after they are cut; this will allow the natural fungicides (fungal killers) in the logs to disintegrate and thus not kill your spawn. You can buy wooden dowels that are inoculated with mushroom spawn, drill holes into the logs, and hammer in these inoculated dowels, cover them with wax, and let it grow! A damp spot off the ground in the shade will help; it will take from six months to two years for your crop to appear. Remember, a fungus only grows where it is wet and dark, so you need to keep these logs wet. During dry spells, water them. Another kinky fact is that you can sometimes induce their fruiting (production of mushrooms at the surface of the log) by immersing them in cold water like a pond or stream for twenty-four hours and then beating up the log with a mallet; why this works is anybody's guess.

This is a great project for you when you have some downtime; it will literally plant both some food and a medicinal source as well . Forest farming will allow you to grow medicinal herbs and mushrooms, as well as fruits of various kinds. Oyster mushrooms, which are also good for you and a good food source, can be grown on coffee grounds in a bucket with a sheet of plastic over them to keep the moisture in. As I have said before, compost when you can and save things like used coffee grounds for your garden and projects like this.

Grow your mushrooms organically without any herbicides, pesticides, or artificial chemical fertilizers. This is very important, because mushrooms absorb whatever they are grown in; that is how they eat.

So if you use any toxins they will wind up in your mushroom and subsequently in your body. Mushrooms come either raw (the best form) in which case cook them above as directed. They also come in an extract or concentrate which is made by extensive boiling of the mushrooms to extract the long chain polysaccharides and also as whole food mushroom in a powdered pill. This is better for you than the extract form. Take as directed on the bottle.

An excellent source for all information about mushrooms is a website called [Fungi Perfecti.com](http://FungiPerfecti.com): they sell a wide variety of mushroom spawn kits of various species and provide good growing information. Forest farming is easily done and is a lot of fun. If you have an unused piece of forest I would look into growing ginseng, huckleberries, and other types of shade-tolerant berries, medicinal herbs, and mushrooms. It is very easy to do and could save your life in the right situation. Ginseng growing is a lot of fun and can be quite profitable; the price of ginseng fluctuates like any commodity but always brings a pretty penny due to the demand from Asia. A good website with all the information you need to grow your own ginseng is Wildgrown.com. There are also many books on the subject; see the bibliography at the end of this book for some excellent sources.

All mushrooms readily absorb water, so cleaning them should not be done under running water or by soaking them; instead, wipe them down with a wet towel. Overcooking mushrooms destroys all the healthy benefits of them; instead, simmer them in a sauce pan or skillet. First add some broth and then once that is heated and starts to steam add the mushrooms and stir continuously. Do not cook them for longer than seven minutes. Onions and garlic can be added for more flavor and even more healthy benefits. Adding these sautéed mushrooms to your diet is the best way to get all of their benefits.

Weird fact: You can dramatically increase the vitamin D level of your mushrooms by placing them in the sun where just like the skin of mammals, exposure to sunlight will convert vitamin D precursors to vitamin D. Even cut up mushrooms will soak up sunlight and convert it to vitamin D. This is best done with the mushrooms upside down; that is, gills facing skyward, and takes about six hours a day of sunlight during the June to September window here in the United States. Do this for two consecutive days, covering the mushrooms with cardboard at night to keep them dry. After two days place them in a food dehydrator or just dry them out naturally and then place them in a glass jar or sealed container for storage with a tablespoon of rice to absorb moisture. The increased vitamin D levels will last an incredible year! Dried, pulverized mushrooms will also be very efficient at absorbing Ultraviolet B light from a lamp and converting that to vitamin D. In fact, six times as much vitamin D is produced by this method as compared to natural sunlight; it also sterilizes the surface of the mushrooms.

One word of caution; when using these UVB light lamps be careful not to expose your eyes or your skin, due to their harmful effects. Please refer to the [Fungi Perfecti](http://FungiPerfecti.com) site for very detailed instructions, and with their excellent product line for all things needed to grow mushrooms, I am sure you will find them an excellent resource.

As practitioners of natural and alternative health, the more versatility we have the greater our chances of not just surviving, but thriving in robust health, and that is the underlying premise of this book, to teach you all the varied methods of maintaining your health and vigor.

Chaga Mushrooms (*Inonotus obliquus*)

Unlike most mushrooms, Chaga mushrooms are not soft, but are hard as wood and almost black in color due to its very high melanin content (the same pigment that is responsible for human skin color). Chaga only grows on birch trees (sometimes on alder, chestnut, and hornbeam trees but infrequently) mostly in Siberia and northern Japan, the United States as far south as North Carolina, usually in very harsh climates where the fungus has to produce many compounds to help it survive, as well as helping its tree host. Eventually it will kill off the host and fungus-eating insects and the wind will help spread its spores to another host plant.

Fungi seem to do this a lot; think of the mycorrhizal fungi that are symbiotic (their growth not only benefits themselves, but also their host, nature's win-win so to speak) with plant roots, providing

them with water and minerals converted to an organic form the plant can use in return for sugars from the plant to help the fungus survive . Chaga, in its effort to both survive and nourish its tree host, will produce a large number of phytochemicals (phyto means from plants) . Those same phytochemicals are what gives Chaga such strong, health- giving properties and have led to its Chinese name, the “king of plants”, which is impressive, considering the long history the Chinese have of using medicinal herbs and plants of all kinds going back about six thousand years! The Siberians, who are not a bunch of wimps by any standards, refer to Chaga as “a gift from God” and the “mushroom of immortality”.

You get the idea; this mushroom has some outstanding benefits. Let’s take a look at some of them. Chaga contains large concentrations of B vitamins, minerals, enzymes, phenols, and flavonoids, all of which are health-enhancing. Chaga is a very potent antioxidant due to its large concentration of the enzyme SOD (superoxide dismutase); in fact, it has the highest concentration found anywhere in nature. The Russians did a lot of research on plants to see which ones helped with promoting strength and vigor and warding off diseases – they named those plants adaptogens and they found Chaga to be the most potent adaptogen known . In Japan ,Korea, and China . Chaga is known for producing longevity by fighting stress and increasing vigor, and so is widely used in those countries.

The extraction of the active phytonutrients from Chaga needs to be done in order to get their full benefit. Most of these phytochemicals or phytonutrients are encased in a chitin wall for which humans lack the necessary digestive enzymes. The most common extraction method is to make a tea using ground up Chaga.

This will release all of the water soluble phytonutrients, but none of the fat soluble ones . Then the Chaga is exposed to ethanol (the kind of alcohol we drink for fun); this gets out the fat soluble phytonutrients. Some people ferment the Chaga, but this is complicated and produces varied results.

The best results come from the combination of hot water or room temperature water and ethanol extraction .Many people take Chaga in its various forms, such as a tea, beverage, syrup, emulsified drops, and also in supplement form . You will find it invigorating, and it will give you increased strength and vigor; that is why the Russians mandated its use in their Olympic athletes and their astronauts. For our purposes it is a very useful nutrient to use for maintaining health and vigor as well as helping your body ward off infections. It has been touted as a cancer treatment, and studies have shown that it is very effective against flu and other viruses.

Maitake Mushroom (*Grifola frundosa*)

Maitake mushrooms are also known as Hen of the Woods, ram’s head, sheep’s head and, among Italian-American communities in the northeastern United States, as “signorina”. Maitake typically grows in large clusters at the base of trees, especially oak species. Maitake is a perennial fungus and will therefore grow for years on the base of trees; in the United States it will grow from the northeast as far west as Idaho. In Japan it sometimes grows as large as 50 pounds, and is widely used for cooking and medicinal purposes. Maitake is very rich in minerals, B vitamins, fiber, and amino acids (the building blocks of proteins) . As with all medicinal mushrooms, maitake are high in beta-glucans which help boost the immune system and treat inflammation as well as infections. Maitake is purported to have strong anticancer effects; it also helps control blood glucose levels and therefore diabetics should use it with caution since it might lower their blood sugar or glucose levels too much. Maitake also lowers cholesterol and triglyceride levels and has been used to treat cancer as well as help patients deal with the side effects of chemotherapy. It has been used to treat HIV, hepatitis, polycystic ovarian syndrome, hay fever, chronic fatigue, and hypertension.

As a food, Maitake is 25 percent protein, 28 percent fiber, has no cholesterol (cholesterol is only contained in animal products), and it is high in potassium, minerals, B vitamins, and enzymes. It is 60 percent carbohydrate and the vast majority of those are complex carbohydrates. Maitake is a wonderful, health-promoting food as well as being a useful medicinal plant to acquaint yourself with, and should be part of your Alternative medicine chest as well as your forest farm, where it can serve as a good emergency food stash.

WHAT TO DO IF YOU THINK YOU ARE COMING DOWN WITH AN INFECTION

You have to act fast; in addition to all the ways you can boost your immune system listed above, you now have to send in the Marines. Here are some excellent ways to stave off an impending infection or treat one that is starting to take hold.

Hydrogen Peroxide (H₂O₂)

Hydrogen peroxide is a wonderful way to treat infections anywhere, but especially in areas to which you can apply it directly, such as your skin and mouth, etc. Hydrogen peroxide is inexpensive and readily available. I would purchase the food grade peroxide and dilute it down to the 3.5 percent you need. Never use the full 35 percent strength of hydrogen peroxide; it is too strong and will burn your skin, and certainly never take it internally where it will cause serious harm. These formulations are mostly free of any toxic metal contaminants that may or may not be present in the store-bought variety. If you are using it topically it doesn't really matter which one you choose, but the 35 percent strength is dangerous and can never, ever be used undiluted, whether externally or internally. It will cause serious burns to your skin and will be like drinking acid if you take it orally, causing serious damage to your mouth and throat. Hydrogen peroxide is essentially what your body's white blood cells release to kill microbial invaders. Hydrogen peroxide foams up when you put it on a cut or open sore because of the presence inside of cells of an enzyme called catalase. Catalase converts hydrogen peroxide into its water and oxygen parts at an amazing rate of 200,000 molecules per second, and it is that production of oxygen that causes the foaming. That is the same reason why when you put hydrogen peroxide on the skin's surface there is no foaming, because there is no catalase present on the surface, it is inside the cell. I should say that there sometimes is foaming on the surface of the body, but this comes from hydrogen peroxide's contact with bacteria and is slight. Hydrogen peroxide is easily destroyed by light, so must be stored in dark bottles to keep it from breaking down, which also limits the time it can work on the surface of your skin. For that reason it is best to apply peroxide and then cover the area with an opaque dressing (one that you cannot see through). Hydrogen peroxide's chemical formula is H₂O₂, which is essentially H₂O or water and an extra oxygen atom. Hydrogen peroxide gets its medicinal powers from its ability to oxidize, or donate that extra oxygen atom upon demand, leaving pure water behind as a by-product. Here is the interesting part; most diseases and cancers thrive in an anaerobic (without oxygen) environment, so by hydrogen peroxide donating oxygen molecules it is capable of killing many microbes and infections.

Many people think for the same reason it can be useful against cancer, but that is another book's worth of debates. If you suspect you have a mouth or throat infection or simply an infected tooth, then use some of your diluted hydrogen peroxide mix (3.5 percent); mix it in a glass half-filled with water or use it straight without any further dilution.

Swish it around your mouth vigorously and then gargle it and allow it to remain in your throat as long as you can, and then expectorate it (spit it out). Repeat the above process up to four times a day until the infection resolves.

How To Dilute 35 Percent Food Grade Hydrogen Peroxide To 3.5 Percent Hydrogen Peroxide

The simplest way is to mix nine parts of water with one part of the 35 percent hydrogen peroxide. To use a simple example, mix 1 ounce of 35 percent hydrogen peroxide with 9 ounces of water. If you are comfortable with the metric system you can mix 100 ml of the 35 percent hydrogen peroxide with 900 ml of water to get a liter of 3.5 percent hydrogen peroxide. Any amount will work on one side of the formula as long as there is nine times as much water on the opposite side.

WARNING: Never use undiluted 35 percent hydrogen peroxide anywhere in or on your body; IT WILL SEVERELY BURN YOU. It needs to always be diluted to a less potent dilution. See the photo below of the effects of a very brief exposure of some fingers to 35 percent hydrogen peroxide.



MMS Or Master Mineral Solution (Formerly Known As Miracle Mineral Supplement)

This is a very effective antimicrobial substance to have in your medicine chest to treat most infections that may rear their ugly heads. However, its use is very controversial. I am not recommending its use; I am just providing information on how it works and how it has been used in the past. There are reports of its toxicity by the governments of the United States and Canada, however, many people have used it for many years without any problems, at least according to anecdotal reports all over the Internet.

Here is the basic science behind this powerful medicine. MMS is chlorine dioxide. It is produced by mixing sodium chlorite with equal parts of 50 percent citric acid as an activator. Mixing these two produces the chlorine dioxide that is the active ingredient, which is then mixed with water, and drank. The taste takes some getting used to and it smells similar to bleach; in fact it often causes nausea due to its strong odor.

There are newer alternative methods of producing chlorine dioxide using some simple chemical tubing and beakers. There are films on YouTube about how to produce this CDS or Chlorine Dioxide solution, but that is beyond the scope of this book.

How does MMS work? It is a very potent oxidizer, just as we discussed with hydrogen peroxide. This means it donates oxygen to kill off pathogens of many types including bacteria, viruses, molds, yeast, fungus, and biofilms. Biofilms are what many bacteria produce in order to protect themselves from the body's defenses. Biofilms are essentially domes of biological material that the bacteria produce to cover themselves and produce a powerful shield from the body's defenses, thus making eradication of these infections very difficult. Chlorine has been used for over a hundred years to purify water by water companies, and is still in use by the majority of them today. If used properly it is safe and very effective.

Chlorine does lead to the production of some carcinogens and has been phased out in favor of chlorine dioxide (MMS), which does not.

A clarification of how MMS actually oxidizes pathogens (disease-causing organisms like bacteria, fungi, and viruses) is not actually from the donation of the oxygen atom that it has on its surface, but rather by using the power of this oxygen atom to pull off other atoms from the microbe and tear it apart. It is important to remember that chlorine dioxide does not chlorinate pathogens to kill them, chlorination involves the donation of a chlorine atom that combines with the target molecule and forms new chemical compounds that sometimes are carcinogenic (cancer-causing). MMS as well as oxygen itself are powerful oxidizers against invading microbes but do not damage healthy cells because of their voltage. Chlorine dioxide has a oxidation potential of 0.95 volts and pure oxygen only of 1.28 volts (The two remaining oxidizers that can be used inside of the body are hydrogen peroxide at 1.8 volts, and ozone, the strongest oxidizer of all, at 2.07 volts). None of these voltages are strong enough to overcome the opposing voltages of healthy cells and tissues, therefore they have no effect upon them in any way, and that is very good news.

How To Properly Mix MMS

First of all, the mix depends on the strength of the citric acid activator you use. If you have 50 percent citric acid then you mix it one-to-one with the MMS. If you are using 10 percent citric acid, then you need five drops mixed with every drop of MMS. So, the first thing you should do is check the percentage of the citric acid activator you have.

The first time you use MMS you need to take only a few drops as a test solution to insure that it does not upset your stomach.

The chemical reaction between the MMS and the citric acid activator solution takes one minute at the 50 percent strength and three minutes for the 10 percent strength . You will smell a strong bleach-like odor from the glass, this is normal.

Now pour the new mixture into a glass of water. Don't be concerned about diluting it, it doesn't matter how much water you mix it with, the potency of the MMS will not be altered. You can also use apple juice for flavor; the mix does not taste very good.

Note: Do not mix it with any vitamin C-containing juices like orange juice or other juices with vitamin C added to them, vitamin C will react with the MMS and reduce its effectiveness. You can slowly build up your dose of MMS as tolerated . In the beginning you may feel ill for a short time with some stomach upset, this is especially true if you have a serious infection with bacteria, viruses, or fungi, due to the killing off of these organisms and the release of all the toxins involved with their death.

This is usually a short-term phenomenon and will not last very long; the length of time depends on the patient as well as their tolerance and the extent of their microbial infection . Once you feel okay then slowly titrate up the dose until you reach a maximum of fifteen drops of MMS daily. It is

best given in divided doses, and is better tolerated at bedtime. Most conditions will improve before you reach the maximum dose of fifteen drops daily. MMS can be taken to treat infections or can be used daily to rid the body of pathogens. The beautiful part about taking MMS is that it is selective for pathogens only and will not harm normal cells or the beneficial bacteria that live within our bodies.

Note: MMS is very controversial, and is banned for human use in the United States and recently, in Canada, where it has been seized and removed from store shelves. The governments of both countries warn of its toxicity and for that reason have banned it.

I AM NOT RECOMMENDING ITS USE HERE, I am only describing to you how it works and how some people take it . This should not be construed as medical advice and is only for informational purposes.

Zinc Supplementation

Zinc is an essential mineral that also has other health-enhancing and immune-enhancing properties as well as being essential for over a hundred enzyme reactions in the human body. Zinc is also involved in wound and tissue healing as well as normal growth. I routinely use zinc for canker sores in the mouth or what are known as aphthous ulcers. Using zinc lozenges for this has worked every time for me in over twenty-five years of medical practice. Zinc promotes healing by playing an essential role in protein synthesis, immune function, DNA synthesis, and cellular reproduction. As with most minerals and trace elements, zinc is sorely lacking in our current diets. This lack of zinc in our foods is due to the use of chemical fertilizers, herbicides, pesticides, and fungicides, destroying the microbial life of soils and thus their conversion of inorganic minerals to usable organic forms, exhausting soils of their zinc. The processing of foods during preparation also strips out much of the zinc.

Unlike many nutrients, the body has no way to store zinc for future use and must get a constant supply of it in our daily diets . Vegetarians, alcoholics, and patients with chronic digestive problems and low stomach acid (especially caused by taking medications to reduce stomach acid such as Prilosec, Prevacid, Zantac, Pepcid, and others) all will have problems with zinc deficiency.

Some of the early signs of zinc deficiency are white flecks in your fingernails, slow wound healing, increasing allergies, and when it is severe, there will develop a lack of the ability to taste foods. Zinc is involved in many bodily processes and its deficiency will lead to low libido (low sex drive) and also can cause infertility in both women and men . Zinc works against all types of infections by its positive effect on all lines of white blood cells, boosting their function and enabling them to fight off microbial invaders of all types. Zinc also plays a very important role in fighting off viral infections of all types, famously used for the common cold in various preparations. Zinc is a powerful antioxidant and also plays a role in decreasing inflammation.

If you have a child with ADD or ADHD, zinc supplementation is also very helpful (along with B complex, magnesium, and omega-3 fatty acids or fish oils). The mechanism by which zinc helps in these children is by its essential role in neurotransmitter function (these are the chemicals that control the way the brain communicates and performs its various functions), as well as its break down and utilization of fatty acids that are essential for proper brain function. Zinc given to children with ADD and ADHD at a dose of 150 mg of zinc sulfate a day showed marked improvement in their behavior and their hyperactivity. Zinc has also been shown to elevate mood and help depression. Zinc also plays a role in the detoxification of heavy metals from the body, especially the brain.

Zinc is also essential for the metabolism of melatonin and most hormones in the body and is also necessary for the production and function of insulin and therefore plays a large role in diabetic patients. Zinc also plays an important role in eye health and is used in cases of macular degeneration,

night blindness, and cataracts. Zinc is also essential for skin health and is useful in eczema, psoriasis, acne, and other skin conditions; you can apply it topically as zinc oxide. That is the same stuff you saw the lifeguards using over their noses and cheek bones, it works well to protect against sun damage to the skin. In the section on burns I explain how to make your own sunblock with non-nano zinc oxide.

The daily dose of zinc for men is 11 mg and for women is 8 mg daily. Men need more due to its use in the production of the male hormone testosterone. In fact, testosterone levels can be increased significantly with zinc supplementation (The trace element boron also helps significantly raise testosterone, lower estrogen and C-reactive protein levels, raise DHEA, decrease inflammation, and build rock hard bones . The dose of boron daily should be about 3 mg .), and this is much less expensive than using testosterone supplements. Zinc is absolutely essential for male sexual health and adequate sperm production and motility (how well the little bastards swim towards that egg), approximately 5 mg of zinc is lost in each ejaculation!

Knowing that figure, it is surprising that all high school boys are not deficient!

Zinc is also involved with a healthy prostate gland and in fact, other than bone, the prostate contains a higher concentration of zinc than any other of the body's tissues . For that reason, zinc deficiencies may lead to BPH (benign prostatic hyperplasia) and inflammation of the prostate, or prostatitis. Zinc toxicity can easily develop and for that reason you should not exceed 20 mg of zinc daily.

Caution: Long-term supplementation with zinc may lead to a copper deficiency. You should take a 1 mg copper supplement along with zinc if you are using it for any length of time.

ESSENTIAL OILS AND THEIR EFFECT UPON YOUR IMMUNITY AND INFECTIONS

In the days before antibiotics, essential oils were one of the primary ways to treat infections, and were very useful and surprisingly potent in the eradication of bacterial infections of many kinds as well as fungal and parasitic infections. Currently there is a great need for healers who are knowledgeable in the production and use of essential oils. The use of essential oils as medicine is known as Aromatherapy. I personally do not like that name very much; it sounds like you are treating illnesses with certain smells or aromas, and nothing could be further from the truth. Many scientific studies at major universities worldwide have shown the effectiveness of essential oils in eradicating even serious infections such as MRSA (Methicillin-resistant staphylococcus aureus) and VRE (Vancomycin-resistant enterococcus).

The knowledge of how to make these oils as well as tinctures and other preparations, it is beyond the scope of this book. There are several good books on the market and you can easily find them on Amazon or even eBay if you are lucky. One of my favorites is by Kurt Schnaubelt, called *The Healing Intelligence of Essential Oils*. It is an easy read for someone with little or no medical training and contains a wealth of information.

Life originated in the oceans of the earth and eventually those simple, Single-celled life-forms became more complex and eventually developed into sea creatures. These sea creatures eventually left the world's oceans and evolved on land. As plant life developed on land, it too became more complex, and eventually started producing what are known as secondary plant metabolites . These secondary plant metabolites perform all of the specialized functions for the plant, such as repelling certain animals from eating them as well as communication between plants and their environment . As animals co-evolved with plants they had to develop systems to handle these complex chemicals that they were ingesting

from plants without being poisoned by them. Animals eventually developed the cytochrome P450 system of enzymes in their livers to break down these secondary plant metabolites that include essential oils, and make them harmless to the animal, but at the same time keeping their beneficial effects.

Iron is one of the minerals that is essential for this cytochrome P450 system to function; just thought I would mention that since we just covered the importance of iron for your health. In fact, we have enzyme systems in our bodies that have evolved specifically for the removal of essential oils that were previously considered to be toxic. For that reason most essential oils are not harmful to humans when used properly and real toxicity from essential oils is quite rare.

The secondary metabolites made by plants usually target proteins that are common to many types of microorganisms and are not species specific. This non-selective targeting of proteins by these secondary metabolites makes the development of resistance practically impossible; hence these essential oils have not become obsolete over time. Microorganisms may be able to resist an attack on one of their proteins, but not on several proteins at once. This nonspecific targeting also is the reason for the broad spectrum of activity by most essential oils against numerous types of bacteria. The flip side of this is one of the reasons for physicians to not feel comfortable with the use of essential oils for a specific type of infection. Modern medicine likes reductionism, where one medicine is used specifically for one type of infection: the proverbial magic bullet.

I will teach you the best essential oils to use for the treatment of infections both on your skin as well as internal infections. A few words of caution, many of the topical oils used to treat skin infections will need to be diluted or they will irritate the skin. The dilution of these essential oils for topical use is usually done with a carrier oil that will also help penetrate the skin. The final word of caution; do not use essential oils if you are pregnant or breast feeding.

Lavender Oil (*Lavandula angustifolia*)

Lavender oil has been used medicinally since before ancient Rome. It was renowned for its healing of both wounds and burns and its antiseptic properties. It also works very well as an insect repellent. It is very useful to wash and clean out wounds and had been used for that purpose right up until WWII. Lavender oil is very mild and is the only essential oil that does not need to be diluted with a carrier oil. Lavender can also be made into a tea, by using the fresh or dried flowers that is useful for internal use. The recommended dose is about one and a half teaspoons of dried flowers in an 8-ounce glass of water. Lavender oil is made by steam distillation of the plant's flowers. It is easy to make and even easier to grow. You should not use lavender oil internally on your cats or dogs; it may cause liver and kidney damage; it is not a problem in humans. In young boys lavender oil and tea tree oil have been linked with gynecomastia, which essentially means the boys developed some big boobs, so use it with caution with them. No father really likes hearing, "good looking boy you have there, that's quite a rack on him". The good news is that the gynecomastia in these boys disappeared when they stopped using the lavender oil. Life is stressful enough for teenage boys these days without them having to deal with breasts!

Medically, lavender oil has many uses such as an excellent topical antiseptic as well as a mild anesthetic (pain reliever), so it is very useful for cuts, burns, scrapes, insect bites, bee stings, sunburn, eczema, psoriasis, poison ivy oak and sumac, and skin infections. Lavender is said to be useful for head lice either as a hair rinse or applying it to a comb to comb out the nits. Lavender oil works as a bronchodilator (it opens up your large airways) and a few drops can be added to a vaporizer, or it can be rubbed directly on a patient's chest. Lavender oil is also reported to help with anxiety and stress and is used frequently for that in Germany, where they are light years ahead of us in the use of medicinal plants and oils.

Lavender tea has been found to be useful against internal pathogens and works very well for *Candida* infections. Lavender oil will also help infections including strep throat, pneumonia, bronchitis, diphtheria, laryngitis, and even toothaches. The tea can be drunk up to four times daily. For children with ear infections, put a few drops of lavender oil, undiluted, into their ear canals and have them tilt their head so it will go in further. Instead of making a tea, a few drops of lavender oil can be placed in a glass of water to gargle for a sore throat. Lavender oil also normalizes blood sugar output from the liver. Lavender oil also has a benefit with appetite control; a few drops under your tongue will decrease your hunger in about fifteen minutes. Hunger control is a useful benefit of lavender oil if you are trying to lose weight, and how many of us are not looking to shed a few unwanted pounds.

Lavender oil is oftentimes combined with geranium oil. The two together seem to have a synergistic effect and are very potent.

Geranium oil (*Pelargonium odorantissimum*)

Geranium oil is made from a *Pelargonium* species of geranium from South Africa, not the garden variety you are used to, which is a European geranium. Since the seventeenth century it has been grown extensively in France, Italy, Spain, Egypt, Morocco, and Madagascar. The best geranium oil in the world comes from Madagascar and Egypt. In those countries it is grown in hedge rows of about three feet in height. The oil is steam-distilled from the aromatic green leaves before the plant flowers. It takes a lot of leaves to make the oil and for that reason it is a rather expensive oil, and there are many adulterated oils for sale. Geranium oil comes in a variety of colors ranging from brownish yellow to light green; this is due to the different distillation methods used in various countries. The medicinal uses of Geranium oil are many, including as an antiseptic, antibiotic, diuretic (makes you urinate), haemostatic (stops bleeding) and an antispasmodic (prevents muscle spasm). It also has been used to treat depression. It is very useful for skin conditions ranging from eczema, poison ivy, cuts, scrapes, burns, athlete's foot, and even frostbite. To prevent wound infections apply it to a wound (diluted by at least half with a carrier oil) and cover it with a gauze and then reapply and change gauze daily.

Geranium oil is also an astringent (it will shrink something); that quality along with its haemostatic effects will work nicely to shrink hemorrhoids and control their bleeding.

When used for hemorrhoids it has to be mixed in a carrier oil to dilute it and also to allow deeper penetration. The carrier oils can be wheat germ oil, for example, at a mixture of one drop of geranium oil to one teaspoon or 5 ml of wheat germ oil and cover it with gauze. There are many carrier oils that can be used such as coconut oil, avocado oil, black seed oil, jojoba oil, and others. One of geranium oil's greatest effects is its antimicrobial effect. It will prevent bacteria and other microbes from growing in a wound and is excellent as a wound wash, in addition to which, it boosts the immune system. Geranium oil also prevents scar formation and is thus useful after surgery to promote healing without excessive scar formation and skin discoloration. It will help prevent and treat lesions such as boils and acne.

Geranium oil helps wounds keep from bleeding excessively by two methods. First, it causes the blood vessels to contract and secondly, it assists in the clotting process, helping to plug the hole in you that is bleeding. It is very effective in doing both of these things and that why it is so useful for wounds and even hemorrhoids. Geranium oil also promotes and accelerates the healing of wounds.

Another benefit of geranium oil is its effect upon parasites such as intestinal worms. This is especially helpful in children; it will rid their body of parasitic worms. Geranium oil is also helpful for acne, eczema, and other skin conditions; it can also be used for infections of the nose and throat.

Geranium oil contains a large amount of esters and for this reason it is very active against fungal infections of all types including *Candida Albicans*. It also works on women suffering with mastalgia

(breast pain) that often accompanies menstruation. When using it on a woman's breast, mix it in a ratio of 10:1 of carrier oil to geranium oil, so for those of you who are math-challenged, this means 100 ml of carrier oil mixed with 10 ml of geranium oil. It is a sad commentary on our schools that most people cannot carry out such simple calculations.

Tea Tree Oil (*Melaleuca alternifolia*)

This wonderful oil from Australia got its name from Captain Cook, who upon landing in Australia made a tea from its leaves. Tea tree oil is renowned for its exceptional antimicrobial properties, and was even put in first aid kits for Australian troops fighting in WWII . Tea tree oil contains a large amount of terpenes, and this is what gives tea tree oil its strong pine scent . Tea tree oil is distilled from its leaves and terminal branches, and this distillation produces a clear to pale yellow oil with a strong musk-like smell.



A Tea Tree in Flower

Tea tree oil's outstanding antimicrobial activity works against bacteria, fungi, and viruses . In tests done by the Australians it was able to dissolve pus and other wound debris and get down to the wound itself where it was an excellent antimicrobial. Tea tree oil also seems to promote wound healing; it is used quite extensively for wounds as well as burns and for all types of skin infections and ailments.

The good news is that tea tree oil does not harm healthy tissue, for all those reasons it is an essential ingredient for your natural/alternative medicine chest.

Tea tree oil is very potent as an antiseptic to clean surfaces such as a cutting board for meat or any surface you want to disinfect. Using a ratio of 4 parts of tea tree oil to 1000 parts of water, it made an outstanding antiseptic, wiping out both *Staphylococcus Aureus* and *Candida Albicans* for up to thirty-five days after its application.

Tea tree oil can also be used for vaginal infections such as *Trichomonas* as well as others. It can be inhaled in a vaporized form and made into a mouth wash for mouth and throat infections. Tea tree oil also works very well for acne, naturally applied topically. A word of caution: Tea tree oil is a very potent germ killer, however, if diluted too far and weakened, it can result in the development of bacterial resistance. This only occurs when it is mistakenly used over-diluted with too much carrier oil. Tea tree oil, just like lavender oil, has been known to cause young males to develop gynecomastia (breasts).

Thyme oil (*Thymus labiatae*)

Thyme oil comes from over 300 species of plants that grow primarily in the Mediterranean region. Due to its popularity it has spread all over the world, and is now grown as far north as Iceland, however the strongest oils are made from those plants grown in its original Mediterranean climate. The name “thyme” derives from the Greek word *thumos* or smell, and is so named for its very aromatic leaves. Thyme oil is steam-distilled from the leaves and flower tops, and can be either white or red in color. Thyme oil contains several substances that have strong antimicrobial activity and has been used as an antimicrobial agent as far back as the ancient Egyptians.

It has one of the strongest killing powers against MRSA and VRE infections and even has been reported to work on anthrax, tuberculosis, typhoid, and meningococcal infections. Like tea tree oil, thyme is a strong disinfectant and will kill germs on most surfaces, including *E. coli*. Thyme also works for fungal infections topically and *Candida Albicans* internally. Thyme oil will also work for aches and pains when about fifteen drops are infused into a bath mixed with two tablespoons of baking soda. Thyme oil can also be used topically for acne; boil a pinch of thyme in two cups of water for fifteen minutes, allow it to steep for five minutes, and then mix in some lemon juice and apply it to the acne several times a day. Thyme oil can be used by mouth for respiratory infections such as bronchitis, sinus, and ear infections. It also works for intestinal and stomach infections and disorders such as diarrhea. It also works on infections from parasites such as worms, urinary tract infections, and skin disorders. It can be applied topically to ear infections and also to the larynx for hoarseness. Thyme can be made into a mouth rinse for mouth and throat infections, including dental infections and abscesses.

Oregano Oil (*Oreganum vulgare*)

Oregano oil is not made from the oregano used for cooking, but rather a rare wild herb from the eastern part of the Mediterranean called *Oreganum Vulgare*. It is famous for its very potent antiseptic and antimicrobial effects against bacteria, viruses, intestinal parasites, fungi, yeasts, and molds. It not only is bactericidal (kills bacteria) but also prevents their regrowth for some time. If that wasn't good enough, oregano oil is also a powerful antioxidant, helping to protect your body from toxins and cancer. Oregano oil is made by steam distillation of its leaves.

Oregano oil works wonders for sore throats and mouth infections, and can also be inhaled via a vaporizer for coughs, croup, asthma, and lung infections. It can be used topically but be careful on broken skin where it can be very irritating.

Oregano oil is very strong and cannot be used without a carrier oil. A good general formula is one part oregano oil to three parts carrier oil. When using it on the skin, mix ten to twelve drops of oregano oil per ounce of a carrier oil such as jojoba, sweet almond, olive, or grapeseed. The same mix can be rubbed into sore, tired muscles to help rejuvenate them. It is antifungal, so it will also work when applied to athlete's foot, jock itch, ringworm, and other topical fungal infections.

Orally it works against *Candida Albicans* and other internal fungal infections. Adding a few drops of oregano oil to juice or water and then gargling it and swallowing it will work to treat a sore throat. Be prepared for a very strong bad taste; oregano oil is so much more concentrated than oregano, that it has a very potent flavor. One of the compounds that oregano oil contains is Carvacrol, which acts as a natural insect repellent which is also present in mint and thyme.

A little interesting tidbit about mint that I always found fascinating -- it is the only plant with a square stem. Okay, so I admit I am a nerd. Odd facts excite me, That is probably why my wife, Lynne, calls me the King of Useless Knowledge.

Oregano oil also helps with digestion by increasing the flow of bile, which is used to emulsify and digest fats and oils. It also works against intestinal infections and parasites, including intestinal worms. Most infections that are being treated with oregano oil can be eradicated using four to six drops of oil for seven to ten days. Oregano oil is too strong for infants and small children and naturally, like almost everything, it cannot be used in pregnant or breast-feeding women.

Mountain Savory Oil (*Satureja Montana*)

Mountain savory oil is made from the plant of the same name; it is also sometimes referred to as winter savory. Mountain savory oil has been used as early as Roman times. The Romans referred to it as Satyr's herb because of its reported sexual stimulation and enhancing effects; in other words they believed it was an aphrodisiac.

A satyr, for my readers who do not know Greek or Roman mythology, is a woodlands god who is typically depicted as half-man and either half-goat (Roman) or half-horse (Greek), who is often drunk and always horny. Mountain savory also has strong antibacterial, antifungal, antiviral, and anti-parasitic effects, as well as being a stimulant of the immune system. Mountain savory is also a strong antioxidant, helping nullify the harmful effects of free radicals. In aromatherapy it is also used as a strong mental stimulator and a motivator.

Mountain savory is made by steam distillation of the entire herb and usually is golden to pale yellow in color. It is primarily produced in Hungary, Spain, and France, and originates from the southern Mediterranean region. Mountain savory oil, like most essential oils other than lavender oil, has to be diluted with a carrier oil before it is applied to the skin. Mountain oil should not be used in children younger than eighteen months and should not be used in pregnant or breast-feeding women. Mountain savory may also be toxic to the liver if used long-term, but there have been no definitive studies on this. Mountain savory can also be an irritant to the mucous membranes lining your mouth and should be used with caution, hence the importance of dilution with a carrier liquid.

Mountain savory oil should be diluted with a carrier oil at a 1:4 ratio, meaning one part of mountain savory oil to four parts of a carrier oil.

It can also be used topically to treat burns, bacterial and fungal infections. It can be used internally to treat a large number of infections and conditions including digestive disorders. Mountain savory oil can also be put in a vaporizer and inhaled to treat upper and lower respiratory tract infections and cough.

When taken internally it can be mixed with rice or soy milk or another liquid at a rate of one drop of mountain savory oil per 4 ounces of carrier liquid. Mountain savory is very useful for gastrointestinal (GI) infections as well as genital infections in both men and women. Mountain savory can also be mixed with honey at a rate of one drop of mountain savory oil per two teaspoons of honey.

Lemongrass Oil (*Cymbopogon Flexuosus*)

Lemongrass oil is made from a grass species which has a distinctive scent of lemon. Lemongrass oil has been known to have antibacterial, antifungal, anti-inflammatory, and antiseptic qualities, as well as being a vasodilator (enlarges blood vessels) and a stimulant to lymphatic flow – and if that wasn't enough, it also improves circulation. This improvement in blood circulation and lymphatic flow both help it to improve edema (swelling) in the legs.

Lemongrass oil, like almost all essential oils, needs to be diluted in a carrier oil; the usual ratio is one part of lemon oil to four parts of carrier oil. Lemongrass oil is very useful for the repair of

connective tissue, therefore it is very useful in joint, rib, tendon, and ligament injuries and can be applied as a liniment. It also repels insects and soothes the skin and is in the same family as citronella, just like those citronella candles your parents lit in the backyard to ward off those swarms of insects during your summer barbecues.

Lemon Myrtle Oil (*Backhousia citriodora*)

Lemon myrtle oil is made from the steam distillation of the leaves of an Australian tree of the same name. Lemon myrtle oil is an antibacterial, antifungal, antiviral agent as well as being a strong antiseptic. It is frequently used in atomizers or vaporizers to disinfect an entire household. It has very potent germicidal properties and eradicates many types of household germs on contact. Lemon myrtle derives its name from the strong lemon scent of its crushed leaves; it has a golden yellow color.

It is also very useful in a household if one member of the family is sick and you are trying to keep the others from becoming infected. Placing a few drops in a pan of water on a wood stove will also work just fine.

Lemon myrtle oil has also been used for skin infections and especially for treating acne. For acne, a drop of lemon myrtle oil can be added to a cotton ball that has been soaked in distilled water, and dabbed directly on the involved skin. Lemon myrtle oil cannot be used on broken skin due to its potential to irritate skin; of all of the essential oils, it is the most irritating. Lemon myrtle oil also cannot be used in pregnant or nursing women.

CHAPTER TWO

SOIL TO SELF: THE KEY TO VIGOROUS GOOD HEALTH

INTRODUCTION

TABLE OF CONTENTS:

A Look at Some of the Most Deadly Diseases In History	46
The “Dirty” Secret to Good Health	47
How To Build Healthy Soil	49
Soil Life	49
Organic Matter and Soil Ph	49
Earthworms	51
Humus	52
Mycorrhizal Fungi	52
Minerals and Trace Elements	53
Direct Mineralization of Your Body	54
What Does Your Body Actually Need?	56
Ten Essential Amino Acids	56
The Three Sisters	57
Two Types Of Fat	57
Thirteen Vitamins, Nineteen Minerals and Carbohydrates	58
Water, Fresh Air, Enzymes, and Exercise	58

I am a true believer in the concept of maintaining your body's natural state of health and vigor by several methods that I will outline in this discussion. Think of your body as a plant; for example, a plant grown in good healthy soil and given all the nutrients and minerals and trace elements it needs, will develop into a rigorous, healthy strong plant. This plant will not require pesticides and fertilizers and antifungal sprays to keep it healthy, its cells are healthy and therefore the entire plant is healthy. Only weak, malfunctioning cells become infected, since they are easy targets for microorganisms that want to infect them. When a plant or human cell is healthy, it has the right pH and the correct nutrients for all its needs, is able to get rid of waste, it is able to mount a vigorous defense and is vibrating at the right frequencies, it is impregnable and cannot become infected. Nature is no fool. Nothing your body does or contains is without a reason. Millions of years of evolution have molded and transformed us into the human beings we are today. Nothing was by chance. As Albert Einstein was fond of saying, "god does not play dice with the universe". Neither does mother nature; everything in this world is by design. I feel it is the hand of God, you may disagree.

Either way, the human body is an incredibly well designed system that only needs the right building blocks in the form of minerals, trace elements, phytonutrients, enzymes, vitamins, essential amino acids, and essential fatty acids in order to construct a strong body and immune system that will resist all diseases. When those proper ingredients and conditions are not available, the cell's pH becomes more acidic, its oxygen levels drop, it vibrates at a different frequency, waste builds up, its immunity weakens, all the processes that take place within the cell begin to malfunction and it becomes susceptible to infection. It is easier if you think of the cell as a small fort. The fort's soldiers make up your immunity; the more of them, the stronger your immunity. When you are weak you have hardly anyone guarding the wall and soon there are foreign soldiers making it over the wall into the fort, and you are infected. The best way to avoid infection is to build a higher wall and man it with Special Forces; no foreign soldiers will even make it close to the wall, much less over it and into the fort (your cell). As patients who want to take their health into their own hands, that is what we need to do; we need to become the people who do not get infected, and I will teach you the building blocks to construct that fort.

Think about it; every day you are exposed to an entire host of germs from viruses, bacteria, and fungal organisms, yet you do not catch any of these infections. No epidemic in history has infected 100 percent of humans exposed to it; there are always people who, despite the same conditions as everyone else, Remain stubbornly immune.

Why some people get infected and others don't is not a question that is usually asked by physicians. Physicians are trained to attack problems, they usually do not concern themselves with prevention; they are concerned with how to wipe out the flu or whatever other infection they find themselves treating.

Physicians and most other scientists obsess over what organism causes which disease, not why those cells became infected. I think we need to take it back one more step and find out why cells become infected. Once we do that we will not need all the other treatments.



Hospital Ward During The Spanish Flu Epidemic of 1918

A LOOK AT SOME OF THE MOST DEADLY DISEASES IN HISTORY

The Black Death, or Plague, at its peak killed about 60 percent of the population; we don't know how many were infected and survived. All attempts to control it, including quarantine, did not work. The word quarantine is from the Italian *quarentina* meaning forty days. There was no scientific basis to that number. It was based on the Bible's description of the time Christ spent in the wilderness. Ships suspected of being contaminated were quarantined in port for forty days, families of the sick and healthy together were actually sealed in their homes and left to starve to death in an attempt to control the disease, all to no avail. The disease is carried by fleas that infect rats.

The rats simply climbed down the mooring ropes or scurried out of the homes of infected patients and went on their merry way infecting new victims. Infected rats became progressively more sick and weak until they died, at which point the fleas would leave them and look for another warm-blooded host, like the nearest human. Considering their size, fleas are the greatest Olympic long jumpers ever; they could jump an incredible six feet looking for another host! Hence, the plague spread across Asia and Europe, killing millions in its deadly wake, but not everyone.

The Spanish Flu of 1918 was airborne and incredibly virulent; it spread rapidly among large groups of people, like soldiers, and killed so many of them that it effectively put a halt to World War I.

We now know that it was the first instance of the deadly H1N1 flu virus. It infected one third of the world's population and killed 20 percent of those infected! At one point there were so many sick and dying people that it became difficult to dispose of the dead bodies. Think about those numbers; they are staggering. The United States currently has a population of roughly 300 million. That would mean 100 million infected Americans with 20 million of them dying!

The current Ebola outbreak in Africa (and likely coming to the United States soon) has a mortality rate of between 25 and 90 percent, with an average mortality of approximately 50 percent. The mortality rates vary from country to country. There are persistent, disturbing reports of airborne transmission; if that is the case you can expect this to possibly become a pandemic, spreading over the entire world. Ebola is a virus on the move; the first known cases were in 1976. The current outbreak, which began in March 2014, already has more cases and deaths than all the other outbreaks combined, and it is not even close to becoming controlled.

As you can see from history, no epidemic infects everyone or kills all of its hosts, for two reasons. The first reason is from an evolutionary point of view; it is a dead end for a disease-causing virus,

for example, to kill all of its hosts within a short time. Like all life-forms, the virus's entire reason for existence is to reproduce and spread; this guarantees its survival. If a virus makes you so sick so quickly that you immediately wind up in bed and then die, it will not allow enough time for the virus to spread to its next victim.

Ideally, a virus will incubate for several days in the host, taking over its cellular machinery, and then reach critical mass and explode out of the infected cells, spewing out millions of viral particles ready to infect the first person they reach whose immune system is not able to kill it. They now gain entry into the new host's cells and the deadly process repeats itself.

That defense by the immune system and healthy cells is the second reason (and I think the more important of the two), why viruses do not infect everyone they come in contact with. Now we need to figure out how to keep our cells so vibrantly healthy that they will naturally resist most if not all infections. The answer lies right below your feet, it is your soil.

THE "DIRTY" SECRET TO GOOD HEALTH

If you are interested in building a vibrantly healthy body that is impervious to disease then you need to build strong bodies literally from the ground up. This is the only way we can guarantee ourselves good, long-lasting, disease free bodies that will resist the inevitable waves of viral, bacterial and fungal diseases that spread through our communities. It is also the only way we will be able to bear children who are healthy both mentally and physically, and who are better able to survive in this ever more toxic world.

When I say from the ground up I mean it literally, the "dirty" secret to good health lies in the dirt or soil of our gardens, fields, and orchards. It is the only way to build healthy bodies and immune systems that will be able to resist everything thrown at them.

Our bodies are incredible machines that will build remarkably strong bodies if provided with the proper environment or terrain and all the building blocks they need. In the above paragraphs I alluded to the mistake that modern medicine is making by attacking the organisms that they feel are causing diseases. This idea of one germ causing one disease state is known as Germ Theory. Don't mistake what I am saying. Germ Theory has served us well, but in my opinion its time has come and gone. The endless war we have waged against germs has been lost. We have to face facts, antibiotics worked for years but now the bacteria have outsmarted us and resistance is spreading faster than new, novel antibiotics can be developed. It has been an arms race of sorts since the 1940s and we are losing it. That leaves us with two options, double down and try as hard as we can to come up with new antibiotics, or try option two build healthier cells and immerse them in a healthier environment that will be able to handily resist infections.

Louis Pasteur was the father of Germ Theory, but by the time of his death he saw its futility and on his deathbed he recanted and proclaimed, "It is the terrain that is most important". The terrain is the area between cells and all around them it is also known as the ECM or extracellular matrix. This is not a dead zone at all; it is the way cells get their nutrients by diffusion of nutrients between cells. Oxygen is also delivered through the terrain, waste products are removed, and cells communicate with each other through it.

Cells send messages to each other through the terrain, which also provides a structure to embed the cells into and allows the cells to adhere or stick to each other. Growth factors that control cell behavior such as hormones and other protein molecules lie within the terrain and await activation so they can control cell functions. As you can see, this is not a glue merely holding cells together but rather it is the key to controlling cell health and in turn human health.

To ignore its importance in favor of finding new ways to attack germs is utter madness. Why do we continuously try to reinvent the wheel?

The idea that the environment or “the Terrain” the cells are immersed in predisposes cells to become sick or diseased was abandoned in favor of Germ Theory almost a hundred years ago by modern medicine and unfortunately new theories take a long time to become accepted as truths. Modern medicine is still on the attack, embracing germ theory to the exclusion of evidence to the contrary and its continual failure to permanently conquer germs with ever more toxic antibiotics. Even recent progress that has been made in studying and identifying the human microbiome (the beneficial bacteria and fungi that live and breed in our intestines) and its incredible contribution to our health and our immunity has been ignored in favor of ever stronger antibiotics that devastate these wonderful probiotics.

The evidence continues to mount in favor of the terrain, yet it is continually ignored or played down. Healthy cells produce healthy tissues and organs and healthy bodies, plain and simple. These cells require all the building blocks I mentioned above, plus the right pH (slightly alkaline), and plentiful oxygen provided by good blood flow (which also removes waste products that are acidic). These healthy cells actually vibrate at certain frequencies, “buzzing” together, having the correct pH, well oxygenated and also the correct electrical voltage all adding up to vibrantly healthy tissue. These cells will never become infected by any germ that tries to attack them. The germs will be repelled by the electric charge and will not find a receptive environment due to the alkaline pH and will not be able to penetrate the cell membrane that is strong and healthy, in good repair, and strongly vibrating, and fully capable of resisting any germ assaults.

Germs cannot overcome this collective electric charge of healthy cells which repels them, they cannot survive in an alkaline pH, and they cannot gain entry into cells that are strong and healthy. Germs need low oxygen, acidic environments to grow and reproduce and be able to spread. They need a certain frequency of vibration to be able to enter a cell. Think of it like an FM radio dial ...if you want to listen to a certain channel, you can only gain entry to that channel at the correct frequency. The wrong frequency number on the dial and you get static and you can never pick up or enter that station.

It is the same for germs; these microorganisms are alive and as living organisms they too vibrate at a certain frequency, they need cells which are “sick” and whose electrical charge and vibratory frequency are compromised enough to allow them to enter; if not, it is like searching for an FM station at the wrong frequency.

The blueprint for perfect, healthy, disease-resistant bodies is already encoded in our DNA. We have recently discovered epigenetic (literally meaning around or outside the genes) mechanisms that in turn are the on and off signals for our genes. Many of these epigenetic influences are negative and disease-promoting, but not all. We are rapidly learning how to better control negative epigenetic influences, and the good news is that they can be overcome. The messengers for this epigenetic control come in the form of microRNA. We can provide our bodies with all the proper building blocks to construct the perfect body but this needs to be done in the context of the right terrain with the proper pH and also by providing microRNA to send the correct signals to our genes so they can correctly choreograph this amazing construction project.

In order to build healthy cells as I described above, you need to start in your dirt or soil; that is the “dirty” secret to good health. Healthy soils will grow healthy plants, animals grazing on healthy plants will build healthy, strong bodies and humans eating these plants and animals will in turn become strong, robust, and very disease resistant. In effect, to develop our own healthy

terrain we need to start with healthy terrains in our gardens, fields, orchards, lakes, rivers, and pastures.

HOW TO BUILD HEALTHY SOIL

Bear with me here. Before you start to think you mistakenly bought a gardening manual, know this; you and your family's destiny depends on your soil. If you want to not only survive but to be healthy, free of chronic diseases, infections, and reproduce sane robustly healthy children then you better pay attention to what I have to say. Your health begins in your gardens dirt or soil.

Your soil, if properly nourished and maintained, will prove to be the "goose that laid the golden egg", and will feed you through its plants with an unending stream of essential amino acids, essential fatty acids, protein, healthy carbohydrates, vitamins, enzymes, minerals, trace elements, and phytonutrients. God made it possible, our job is to take all of his blessings and utilize them as they were intended for us, return to the garden.

First of all this entire process by necessity needs to be organic, meaning no artificial fertilizers, herbicides, pesticides, or fungicides of any type.

No man-made chemicals are to be added to the soil at any time, recognizing that these are poisons and will kill the extensive web of life contained in the soil. A soil devoid of life is worthless for nutritional purposes. In lifeless soils it is impossible to grow healthy plants.

Soil Life

Healthy soil is alive and teeming with life of all kinds. Healthy soils contain large amounts of bacteria and fungi that help convert inorganic minerals(which plants cannot utilize) into organically chelated minerals that plants can readily uptake. That is an important distinction to understand; plants and animals (including us humans) cannot absorb inorganic minerals, except for a very small amount that can be made by the intestinal bacteria. We can, however, readily absorb organic materials, since they are usually wrapped in proteins that we can absorb; that process of enclosing the mineral in a protein or humic acid matrix is called chelation.

We absorb organic minerals and other organic compounds by eating plants that have absorbed those organic minerals and trace elements from the soil. If soils are deficient in any mineral or trace element, then it is impossible for the plants to obtain them for their needs, and in turn the animals that eat the plants, including us humans, will not be able to get the minerals and trace elements that we need to correctly construct our complex bodies.

Organic Matter And Soil Ph

The bacteria and fungi in the soils live by virtue of the organic content of the soil; in other words they live by eating the decomposing organic matter in the soil such as decomposing plants and animals and other microorganisms . If the bacteria and fungi did not do this we would have mountains of dead and decaying plant materials. You need to supply lots of organic material to help these microorganisms flourish. Other living organisms in the soil such as nematodes, protozoa, mites, springtails, and earthworms also need this organic material to flourish and add to the goodness of the soil.

Some excellent sources of organic matter can readily be made by composting. We should try to never waste any materials, including food that we do not consume, or parts of food discarded from food preparation. All the vegetable matter should be put in a compost bin or compost pile. These do

not have to be elaborate store-bought contraptions. You can easily make a compost bin as I have done with a handful of old wooden pallets and some wire.

Learn to improvise, learn to think outside of the box and you can come up with some wonderful, simple solutions for not only composting but many of the problems that life will inevitably throw at you.

Another easy way to increase the organic content, especially the carbon content of soil, is by making Biochar. Biochar is made by partially burning vegetable matter of any type then putting out the fire when it is only partially carbonized (looking like coal). This is an ancient method of fertilizing soil that was used by Native Americans to increase the fertility of their soil. It creates a finely grained, porous charcoal that is home to many soil microbes and increases both fertility and water retention capacities of soils. It is a wonderful way to convert garden and woodland waste into a valuable soil amendment.

Biochar is made when wood, bones, leaves, or manure (or any vegetable matter) is heated or burned at low temperatures in a kiln, this is done by limiting oxygen to the process and keeping the temperature below 700 F. The resulting half-burned charcoal-looking material is biochar, and is ready to be added to your soil. Biochar like wood ash is alkaline and works best when used as a soil amendment on acidic soils. Mixing biochar with compost works best by helping to properly age the biochar and add the fertility boosting effects of compost.

As with any composting system, you cannot use meat, fats, or dairy products, which will ruin the compost and attract insects and mice and other vermin as well as stinking up your house. You can use newspaper, cardboard, fruit, vegetable matter, bread, teabags, and coffee grounds.

Soil can be improved by using a variety of readily available organic materials. As mentioned above, composting is a wonderful idea and will provide you with a steady supply of "black gold" for your garden.

Other sources of organic materials are coffee grounds (I go to my local Starbucks and they are very nice about providing buckets of their coffee grounds); cover crops such as legumes, buckwheat, and cereal rye can be grown and then gently turned under and buried in the top layer of soil (it is a good policy never to leave your soil bare and open to the elements); dried manure (you cannot use fresh manure, it will burn your plants). Peat moss, wood chips, sawdust, grass clippings, leaf mold, and shredded and composted leaves are all wonderful sources of organic material for your garden; these all will lower your pH and make your garden more acidic.

You can raise your pH by the addition of crushed rocks (rock dust), ashes from your fireplace or any wood burning, bone meal, and crushed oyster shells. If you live near the ocean, lakes or any body of water that can be used for fishing you can use dead fish to improve your garden soils. Salt water fish are better than fresh water but both will suffice.

Bury any fish or fish parts that you are not eating into your garden; they are wonderful sources for many minerals and trace elements and have been used for centuries to enhance garden soils. Dried seaweed such as kelp is also an excellent source of minerals, nutrients, and phytonutrients such as growth hormones.

The ideal pH of your garden should be between 6.5 and 6.8, which is very mildly acidic. That pH range has been found to be optimal for plants to be able to uptake minerals and other charged particles from the soil. Lower or higher pH levels result in a binding of the nutrients and results in them being unavailable for uptake by your garden plants. Simple soil pH kits are available in any garden center and I would buy several of them to have on hand. Growing plants in the wrong pH will result in disaster. Most soils found east of the Mississippi river are slightly acidic in nature.

Soils that are too acidic can be sweetened by the addition of powdered limestone (lime), which is alkaline and will raise the pH into your target range of 6.5 to 6.8. You can also use wood ashes from your fireplace if no lime is available, which also contains potassium and many trace elements. Do not use more than 2 pounds of ashes per hundred square feet of garden (for those of you who are math-challenged, this means a ten foot by ten foot garden space, or twenty feet by five feet, etc.). Another formula to use to sweeten your soil is to add 4 pounds of lime per one hundred square feet for every one point of pH below 6.5.

If you have alkaline soils (which are much less common) you can use sulphur on it to make it more acidic and you can also use pine needles or other acidic materials. The formula for the addition of sulphur to alkaline soils is 1 pound of Sulphur per one hundred square feet (for each point of pH above 7.5).



Earthworm Porn: Photo of Two Earthworms Copulating

Earthworms

Earthworms are one of the most important contributors to soil fertility, they add their “castings” (their feces) to the soil, which is loved by all plants and makes them flourish . They also create tons of castings annually and aerate the soil and help bring organic matter from the upper layers, mixing it with the lower soil layers with their digging. If you have 500,000 earthworms living in an acre of soil they will create an incredible fifty tons of castings! The burrowing and digging done by the same 500,000 earthworms will create a drainage system equivalent to 2,000 feet of six-inch pipe! Worms actively convert large pieces of organic matter into humus, also helping to build soils. Earthworms need lots of nitrogen-rich organic material to eat, but adding nitrogen-rich fertilizers will not work and in fact will drive away earthworms that tend to get burnt by these man-made chemical fertilizers.

Vermiculture, or the raising of earthworms, is a very good idea for anyone interested in becoming healthy through sustainable, organic gardening ..It is very easy to do, and is done basically with a composting bin and will provide you with compost that is very rich in worm castings. Each worm will defecate their body weight daily in these rich organic castings. Kept in a cool dark place like your basement and kept moist, it will work not only to compost your vegetable waste from your kitchen but will also be a great source of earthworms for your garden. Many of the commercial bins made for vermiculture have a catch basin system on the bottom of the bins with spigots that can be used to

dispense “worm tea” that is a wonderful natural fertilizer for your garden plants, and should never be wasted.

Humus

Humus is the brown/black material without any trace of plant cells left in it. It is made by bacterial and fungal action upon decaying plant materials; you can make it by composting. It is the life force of the soil and feeds much of the soil life. Humus does not decay, and permanently adds to the fertility and the water retention capacities of the soil. Humus is made of organic material that is wrapped in soil minerals and particles protecting it from further decomposition. Humus is capable of retaining moisture in soils since it will hold approximately 90 percent of its own weight in water.

Humus is the lifeblood of the soil and is vital to any soil’s health and slowly increases from the activity of microorganisms in the soil upon the decaying organic material in the soil.

These microorganisms take the minerals in the soil and add humic acid and proteins (amino acids) and chelate or wrap these minerals in these materials to make them accessible to plants. Without the presence of these bacteria and fungi there would not be any organic or chelated minerals available to plants, so you can see the importance of keeping your soil alive. These microorganisms supply all kinds of nutrients -- proteins, hormones, vitamins, minerals, and trace elements - to the roots of the plants and in return the plant roots exude sugars as a food source for these soil microorganisms.

Mycorrhizal Fungi

The roots of most plants also live in a symbiotic relationship with soil fungi known as mycorrhizal fungi that began more than 400 million years ago. These mycorrhizal fungi are the “godfathers” of the soil. They attach themselves to plant roots and “make them an offer they can’t refuse”. Each plant root has an entire network of fungal tendons called hyphae that reach out into the surrounding soil, vastly increasing the surface area of each root, helping to absorb water, minerals, and other nutrients from the soil and supplying them all to the plant’s hungry roots. The hyphae are much smaller than the smallest plant roots and extend deeply into the surrounding soil. The hyphae release organic acids that dissolve minerals and trace elements in the soil and then chelate them and absorb them and pass them on to the plant. In turn the plant gives sugars for the fungus to live upon, a really beautiful symbiotic relationship that is used by most plants of the world.

The only plants that do not like mycorrhizal fungi are the brassicas, which are members of the mustard family, including turnips and radishes. The extended surface area of hyphae also helps fuel growth and also confers greater resistance to drought and disease. The mycorrhizal fungi also improve the soil; they help make clumps of soil that hold water and air and make them available to plant roots on demand. The fungal hyphae do this by secreting a form of sticky carbon particles, known as glomalin, which acts like a sticky glue holding soil together, giving structure to the soil, helping to resist erosion and loss of nutrients.

You can buy mycorrhizal fungi online or in your local garden supply store. I always sprinkle them onto the roots of all my plants. They help to jump-start growth and spread through soils making their nutrients much more accessible. You have to make sure they come in direct contact with the roots of the plant you are inoculating.

There are several things you can do to help foster the growth of mycorrhizia in your garden soil.

First, dig and/or rototill as little as possible. This snaps off the hyphae and inhibits their spread in the soil. Keep as diverse a group of plants as you can in your garden, since mycorrhizae need live plant roots to develop. Rotation of crops helps this goal, but make sure you don't use the brassicas (plants in the mustard family and cabbage). Rotating crops also helps because it provides a variety of different types of plant roots, which is important because different types of plant roots support diverse types of mycorrhizae subspecies. Avoid high phosphorus fertilizers like manures, because high phosphorus levels prevent the association of the mycorrhizae with plant roots. Leave some weeds in your garden since weed roots also support diverse colonies of mycorrhizae. The last recommendation is to mulch your garden in the winter and plant a cover crop that will provide live plant roots as food for your mycorrhizae.

Minerals and Trace Elements

Now that we have built a soil with the correct pH, full of organic matter, teeming with microorganisms of all types, full of earthworms and loaded with humus, we need to insure that it is full of the entire spectrum of minerals and trace elements that our bodies so desperately need. By supplementing our soil with the full spectrum of these minerals, we are in effect feeding the microorganisms in our soil that will hungrily devour these minerals and chelate them from their present inorganic state by binding them with humic acids and proteins and thus rendering them organic and thus able for the plants to also utilize for their nutritional needs. Inorganic minerals are not taken up by plants and cannot be used by them.

Keep in mind that human blood has all the minerals and trace elements that are found in the world's oceans.

The reason for that is quite simple, it is where we evolved from. Our blood is incredibly close to ocean water in its composition. The only difference is the world's oceans currently are moderately more salty than our blood. However, when life first developed in the sea its salt content was identical to ours; over the centuries mineral salts have leached out of land, carried by fresh water to the world's oceans, slowly increasing their salinity.

I have studied the human body my entire adult life and its beauty and complexity never cease to amaze me. One thing I have noticed is, nothing is done by accident. If there is a chemical substance created by the body it is for a predetermined function or a series of functions. All the minerals and trace elements are in our blood because each has a definite purpose and function.

Science has consistently supported this theory by continuously discovering new functions for these little known trace elements.

The only way we can guarantee their presence in our bodies is to make sure they are present in our food, and this can only be done by supplementing them in our soil.

Mineralization of your garden is the only way to guarantee the presence of the full complement of minerals and trace elements; extra will not hurt, a deficiency eventually could be devastating for your health. There are many options for mineralizing your soils. In the 1950s several different scientist/ authors wrote books on the amazing benefits of using sea solids (minerals, trace elements, and other factors removed from sea water) to fertilize crops. Their results were amazing, growing bumper crops of large, healthy vegetables that were chock-full of minerals of all types and trace elements. I have listed several of the books in the bibliography at the end of this text; they make for fascinating reading and can easily be found online. For our purposes it will very likely not be practical to utilize sea solids for our garden needs, but fortunately we have several other viable options.

Utilizing the same theme of using sea solids brings us to a wonderful product mined from an ancient seabed in Utah called Azomite. Azomite is an acronym for A to Z Of Minerals Including Trace Elements. Azomite contains over seventy minerals and trace elements. Scientists have determined that thirty million years ago a local volcano erupted and deposited all these minerals directly into an ancient sea where it combined with the seawater and settled to the bottom over years and collected in these unique deposits. Azomite also contains many rare earth elements that have become depleted in soils worldwide. Adding this fine powder to your soil will guarantee the full complement of minerals for your plants' needs. For plants to achieve their full potential and be strong and disease resistant they need the full complement of minerals and trace elements.

I add it to my garden soil annually, since I want to progressively build up the minerals and trace elements sequestered (stored) there for later use by the plants. The addition of Azomite to soils will produce larger fruit and vegetables that are tastier and more disease and pest resistant. Many fruit trees that are old and starting to wane in production will come alive the year after treatment with Azomite, and produce much larger bumper crops of tasty fruit.

Azomite is safe for humans and animals and many people take a teaspoon of the powder daily in a large glass of water to guarantee they get all the minerals and trace elements they need directly. This will provide some, but I do not recommend it because Azomite is inorganic and needs to be chelated to organic form by soil microbes so you can assimilate it properly.

Feed it to your soil through which it will be chelated for your plants, then you eat the plants that are chock-full of all the minerals they assimilated from your mineral rich soil.

Note, each plant will only take up a certain number of minerals and trace elements they specifically need, but eating a diverse group of garden plants grown in such soils will eventually get you all you need.

You can also take Supreme Fulvic orally to get your mineral and trace elements. Supreme Fulvic is fully explained in chapter 3. It is a wonderful mineral and trace element supplement along with many other nutrients. It can be found on line at www.supremefulvic.com.

Azomite is often added to animal feed up to 2 percent and results in larger, healthier, and tastier animals. You can find it online from the company, that lists all their dealers of it nationwide, or buy it on Amazon or eBay.

Azomite comes in three forms: Micronized, which is a fine powder; a more affordable type known as field grade; and finally, a granulated form that can be applied using a spreader. You can mix Azomite with compost and spread it on your soil, which sometimes is easier since it is such a fine powder.

There are other products on the market that work very well to remineralize your garden, pasture, and orchard soils. Rock dust is one and comes either from quarries from pulverized rock powder or is mined from glacial deposits. The difference between Azomite and rock dust is that Azomite is volcanic in origin then combined with sea water, whereas rock dusts are primarily glacial deposits formed by the actions of ancient glaciers slowly grinding rock down as these huge masses of ice passed over them. Rock dust is used in the same way as Azomite.

DIRECT MINERALIZATION OF YOUR BODY

The best way to feed and maintain your body's extracellular fluid (terrain) as well as its microbial populations (microbiome) is to get back to evolutionary basics. We humans began our journey to our present state from very humble beginnings in the seas and oceans of Earth. At the time that the first unicellular (one cell) organisms developed, they did so in a sea almost identical to our present blood

plasma and extracellular fluids (the fluid of our body's terrain). That primordial sea was chock-full of minerals, trace elements, and amino acids (building blocks to proteins) in a perfect pH solution thus maximizing nutrient absorption and uptake.

As evolution took place over millions of years, a full complement of sea creatures developed . Eventually these creatures left the sea behind for a land-based existence. They now had self-enclosed bodies that were no longer bathed in seawater's primordial soup of nutrients, minerals, and trace elements that they previously enjoyed.

However, inside these self-enclosed bodies each cell swam in a sea of the same composition . Clearly this internal sea, or extracellular fluid, and blood plasma have the same composition for a reason. Remember me saying that nature does not do anything without a reason. Your body, in order to properly function, needs every one of those minerals and trace elements, without which the chain of health is broken and the body is unable to produce the enzymes, proteins, and hormones, or activate the vitamins it needs to fully thrive.

Fortunately for mankind, a French scientist named Rene Quinton in the late 1800s became obsessed with this idea of the sea acting as an incubator for life and providing all sea life with not only the proper mix of minerals and trace elements, but also in the right ratios and in an organic form for life to thrive. He did extensive research and discovered that at any given time there were approximately seven huge vortices in the oceans. These vortices (think huge twisters in the ocean) extend with their narrow end on the ocean bottom and their mouths hundreds of miles wide at the surface. The spinning action of these vortices scooped up large amounts of minerals and trace elements and organic materials from the oceans' floors and sent them up in giant, nutrient-rich spirals towards the surface of the ocean . Inside of this, phytoplankton (plant plankton) thrives and reproduce in huge schools; these in turn are fed upon by zooplankton (animal plankton) . These zooplankton release large amounts of nutrients from their digestion of the phytoplankton. This results in a soup chock-full of nutrients including DNA, RNA, organic proteins and carbohydrates, as well as all minerals and trace elements. This "plankton milk", as it is called, is the source of much of the life in our oceans. Sea creatures of all sizes ranging from microscopic to whales come into these vortices to feed on this nutritious substance.

Dr. Quinton made a way to cold-filter and process this water to remove the plankton, leaving just the nutritious soup.

He named this Quinton's Marine Plasma, and he formed hundreds of free clinics to treat the poor and destitute all over Europe . He was a huge success in treating all types of diseases and afflictions suffered by his patients . The company still exists to this day and is currently in Spain . You can order online or through participating health care practitioners . It comes in two forms, an isotonic form and a hypertonic form . I recommend the isotonic form as best for most patients' needs . It is a clear, salty-tasting drink, and 1 ounce a day should suffice over time to completely rebuild your terrain and restock it and recharge it with the beneficial substances your body desperately needs . This will probably take several months . Quinton's Marine Plasma will also serve as a wonderful pre-biotic for your body's probiotic bacteria, feeding them and nurturing them . You can purchase it at www.purative.com.

Other than Quinton's Marine Plasma there are several other options. You can mix a teaspoon of Azomite in a large glass of water and drink that daily, but as I stated earlier, since it is inorganic I am not sure about the wisdom of going this route. However, there is no denying that giving it in animal feed produced larger, healthier animals. In a pinch if I had no other mult-mineral and trace element source, I would try using the Azomite.

There are also several other mineral and trace element drinks on the market. You should look for a colloidal mineral mix. A colloid is a mixture in which, due to their electrical charges, the substances contained in it are in permanent suspension and cannot settle out of the mixture. Think Jell-O; it never settles or comes out of mixture. Milk is another example, but that will eventually develop into cheese. Most plants produce their proteins and fats along with their minerals as colloids. Colloids are easily digested and assimilated by the human body and do not require extensive transformations like non-colloids. For several years I was sending my patients to GNC. Up until recently they had a wonderful Colloidal Mineral drink that is no longer in production.

One pioneer of good health and a healthy terrain is Dr. Wallach. He produced a very popular book and audiobook called *Dead Doctors Don't Lie*. As much as I hate the title and the premise, it is an excellent book and will give you some valuable insight into the necessity of having proper minerals and trace elements for good health. He grew up on a farm and was first a veterinarian and then trained as a medical doctor. He witnessed firsthand what the lack of soil nutrients did for his herds and how supplying those nutrients prevented miscarriages and diseases in his animals. Once he trained as a physician, he applied the same principles of nutrition and healing through minerals and trace elements to his fortunate patients. He too has a line of mineral drinks that I highly recommend.

You can get them through a company called Youngevity. They have powders and colloidal mineral drinks like Majestic Earth Plant Derived Minerals

As I said, it also comes in a powdered form which has the advantage of being much easier to store and carry. Either one is fine for our needs. Another source of the same product is T.J. Clark's Original Colloidal Trace Minerals. You can easily find either one on the web and order it from them. They both will supply all of the minerals and trace elements we need to properly function. Note: In order to maintain your body's terrain you will need fresh, clean water and proper nutrition to supply the necessary proteins (and their constituent amino acids, many of which are essential for health), fats, and carbohydrates. Presently our diets are full of carbohydrates and bad fats and lacking in proteins (especially those with a broad spectrum of amino acids).

We need fats – they are essential to our health. They have gotten a bad name over the last few decades and most Americans are fat-phobic. We need good fats in the form of omega-3 fatty acids; presently our diets are out of balance with too many omega-6 fatty acids and too few of the omega-3s. Omega-3 fatty acids are anti-inflammatory and health-promoting and should be consumed in adequate quantities to provide your body with the essential fats we need. They come in various forms such as fish oil, krill oil, flaxseed oil, and walnut oils. All of these are beneficial and contain different ratios of good fats in various forms.

WHAT DOES YOUR BODY ACTUALLY NEED?

Your body needs about forty-five known essential nutrients plus enzymes. The breakdown is as follows:

10 ESSENTIAL AMINOACIDS

The ten essential amino acids are arginine, histidine, isoleucine, leucine, lysine, methionine, phenylalanine, threonine, tryptophan and valine.

Humans can make the other amino acids, but do not have the enzymes necessary to produce these; that is why they are considered essential and must therefore be included in your diet. Failure to provide all of these will result in the failure of your body to construct proteins it needs for its various functions. Almost all of the body's functions are controlled by proteins. Food sources of these

essential amino acids include eggs (which contains all of them), soy protein, seeds of various types, tofu, peanuts, parmesan cheese, beef, sesame seeds, winged beans, whitefish, and pork.

The Three Sisters

An easier way, if you are planting a garden, is to follow what our Native American tribes utilized for agriculture to obtain all their essential amino acids, called the three sisters method of agriculture.

Native American tribes out of necessity developed an agricultural system that they referred to as the three sisters. It was utilized all over the continent with some minor variations.

It encompassed the use of three main agricultural crops: squash, maize (corn), and climbing beans (typically tepary beans or common beans). They used what became known as companion planting to maximize their crop outputs and to minimize their work input.

They made flat-topped mounds of soil about a foot high and twenty inches wide. Several maize seeds were planted close to each other in the center of the mound. In the Northeastern United States the tribes added rotten fish or eels to help increase the fertility of the soil. When the corn or maize reached a height of six inches tall, beans and squash were planted in an alternating pattern.



2009 Native American Dollar Coin

The idea was simple and ingenious. The corn grew tall and acted as a rigid structure for the climbing beans to grow upon, the squash shaded both the base of the corn and the beans and prevented weed growth and kept the soil cool and moist, creating a perfect micro-climate. The squash also had prickly hairs on the stem which prevented insect pests from climbing upon the plants. Together all three of these agricultural crops provided all the essential amino acids humans require.

I would suggest mimicking the three sisters as a minimum in your family garden, that way you are getting all the essential amino acids. The remaining crops you plant can be according to your diet and tastes without worries over their amino acid content. One variation of the three sisters agriculture was in the southwestern United States where indigenous tribes used a fourth sister known as the "rocky mountain bee plant" (*Cleome serrulata*), which attracts bees to help pollinate the crops.

Two Types of Fat

The two types of fat required in your diet are also called essential because, just like the above amino acids, your body cannot construct them and must get them in its diet. The two essential fatty acids are: alpha-Linolenic acid (an omega-3 fatty acid) and Linoleic acid (an omega-6 fatty acid). Some of the foods that contain these essential fatty acids are: fish oil, krill oil, shellfish, fish, canola oil, hemp

seed oil, green leafy vegetables, seeds (chia, pumpkin and sunflower seeds), soya oil (from soy sauce, soybeans, natto, etc.) and walnuts.

Thirteen Vitamins, Nineteen Minerals, and Carbohydrates

Your body needs all the known vitamins, both fat and water soluble . They have to be in the foods you eat, although some can be manufactured by your gut bacteria and vitamin D can be obtained by exposing your skin to sunlight . Most of the minerals can be obtained by mineralization of the soil or taking a mineral supplement directly. Carbohydrates are needed for fuel production and energy needs and are easily met by fruits and vegetables in our diet. Those natural carbohydrates are much better for you than man-made carbs because they are packaged with significant quantities of soluble and insoluble fiber as well as vitamins, enzymes, minerals, and those all-important phytonutrients. Unlike proteins and fats there are no essential carbohydrates, since your body is able to manufacture carbs from proteins and fats.

Water, Fresh Air, Enzymes and Exercise

This list does not include water (fresh and mineralized is best), all the trace elements, and as many enzymes from plant sources as you can get in your diet. This means raw fruits and vegetables since cooking at above 120F destroys the enzyme content of foods . All raw foods are supplied with all the enzymes you require to digest them, but no extra enzymes. Therefore it is important to supplement your body's enzymes with oral enzymes when eating cooked or processed foods. Contrary to prevailing opinion, enzymes are not destroyed in the stomach and are absorbed in the small intestine. Your body has an enzyme potential, and drawing down on that leads to poor health and chronic diseases. Humans and our unfortunate pets are the only animals on Earth that eat cooked foods.

Fermented foods are good for you because they are loaded with enzymes from the fermentation process . Vinegar has hundreds of wonderful uses and is very good for your health . Other health giving fermented foods are sauerkraut, kimchi, yogurt, soy sauce, natto, kefir, and pickled foods.

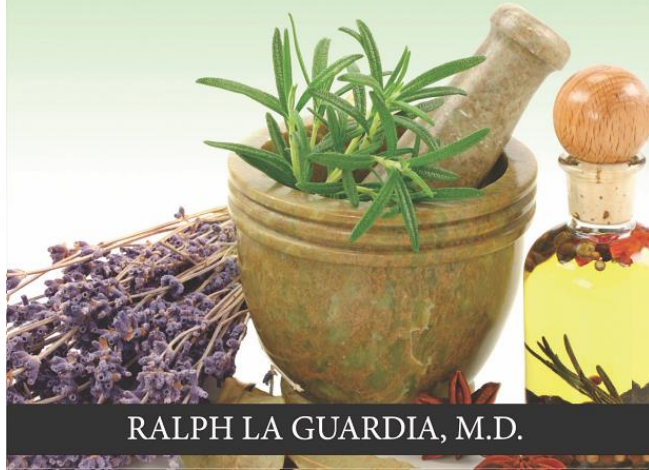
Exercise is a very important component of maintaining excellent health. We have become a very sedentary society and it shows. Obesity has become a major problem, not only in the United States but worldwide. Our children no longer go out and play like we did. Most of us stayed outside playing until it got dark every night or we had to come in for dinner. We ran, swam, and biked for hours every day. In addition to which, we had gym class for an hour a day in school. Gym is essential in our schools and has been thumbed down and/or eliminated over the years.

We would not have the astronomical levels of Attention Deficit Disorder and hyperactivity, especially among our boys, if they had an hour of gym every morning to burn up that energy (along with less sugar and chemicals in their diet and more of the essential nutrients and trace elements, etc. listed above).

I would highly recommend daily exercises to maintain muscle tone and strength, which you will eventually need . A simple routine of stretching first for a few minutes (watch your dog or cat, no animal gets up and starts exercising, they always stretch to limber up their muscles .) . Follow your stretching with a routine of knee bends, sit-ups, and the most important, push-ups . Push-ups, if done correctly, tone your entire body. Push-ups should be done slowly, exhaling as you push up and making sure your head is up looking straight ahead and your chest touches the floor. You will be amazed how this tightens up your chest, abdomen, back, neck, and legs. You will also be amazed at how fast your strength grows and the number you do keeps going slowly up. Psychologically, this will also help you by releasing endorphins and helping your mood.

THE BIBLE OF ALTERNATIVE MEDICINE

HUNDREDS OF NATURAL REMEDIES
FOR NEARLY EVERY AILMENT



The Bible of Alternative Medicine is your resource for alternative ways to treat almost any medical problem. It covers information on every medical problem from head to toe, and multiple ways of treating each, all without a prescription!

The Bible of Alternative Medicine

By Ralph La Guardia MD

Order the book from the publisher Booklocker.com

<https://www.booklocker.com/p/books/13613.html?s=pdf>

**or from your favorite neighborhood
or online bookstore.**