

Cheerleaders increase strength 300% for dynamic back handsprings and tumbling!

**Cheerleading: Conditioning for Back Handspring & Tumbling Success!**

**Buy The Complete Version of This Book at Booklocker.com:**

<http://www.booklocker.com/p/books/5194.html?s=pdf>

**YOUR FREE EXCERPT APPEARS BELOW. ENJOY!**

# **CHEERLEADING:**

## **Conditioning for Back Handspring & Tumbling Success!**



**RIK FEENEY**

*Cheerleading: Conditioning for Back Handspring & Tumbling Success!*

# **CHEERLEADING: Conditioning for Back Handspring & Tumbling Success!**

**Rik Feeney**

**Richardson Publishing**  
Altamonte Springs, Florida

## **“Cheerleading: Conditioning for Back Handspring & Tumbling Success!” - Rik Feeney**

Richardson Publishing, Inc.  
PO Box 162115  
Altamonte Springs, FL 32716  
[www.GymnasticsTrainingTips.com](http://www.GymnasticsTrainingTips.com)

Copyright © 2007 by Richardson Publishing, Inc. All Rights Reserved.  
Printed in the USA.

Version: PDF 8.5x11

No part of this publication may be reproduced, stored in a retrieval system, or transmitted, in any form or by any means, electronic, mechanical, photocopying, recording, or otherwise, without the prior permission of Richardson Publishing.

### **DISCLAIMER**

This book is written and intended for use as a guide only. The publisher and author are not engaged in the profession of rendering any form of legal, technical, medical, or accounting advice. If for any reason legal, technical, medical, or accounting advice is necessary, you should seek out qualified professionals.

The purpose of this book is to introduce and acquaint individuals with basic safety concepts and strength training methods used in cheerleading, acrobatics, gymnastics, and tumbling. Every effort has been made to provide complete and accurate information on this subject. Readers (athletes) of this book are strongly advised to first get a physical examination by a qualified medical doctor to be cleared for this activity, and then obtain guidance, instruction, and supervision from USAG Safety Certified Coaches or Instructors or Coaches with Risk Management Certifications through the USAG (USA Gymnastics) as well as Certification in First Aid and CPR.

The author and Richardson Publishing shall have neither liability nor responsibility to any person or entity with respect to any injury, loss, or damage caused or alleged to be caused directly or indirectly by the information contained in this book. Any activity, especially one with a high degree of motion, rotation, and height, many times in an inverted (upside-down) position, carries with it a greater potential for injury than normal daily activity. Landing on the head or neck could cause serious and irreparable harm with the potential for fatal consequences to the individual. For this reason, it is advised / demanded that you seek initial training from a Safety Certified gymnastics or cheer coach before using this material for any other purpose.

**Warning: Illustrations included with this text are approximations only. Adjustments to equipment, athlete, and training conditions may be required. In addition, all exercises/skills should be spotted by a competent and qualified gymnastics, cheerleading, or tumbling coach until the athlete is competent and confident to do the exercise/skill on her own. Whether an illustration depicts a spotter or not, use one for all athletes training these exercises/drills.**

## ***Cheerleading: Conditioning for Back Handspring & Tumbling Success!***

### **What others say...**

“As a Physical Therapist and former Certified Athletic Trainer, I feel promoting good mechanics with easy to follow directions provides for less likelihood of poor outcome or injury. I like the easy to apply techniques in this user friendly skill book. The knowledge behind the material encourages success. Great book.”

### **Jennifer Lutzyk, PT**

---

“Great book! I already had some of the cheerleaders read a few of the paragraphs out of the book aloud in class. Maybe they will get the hint, especially about the strength needed to do a back handspring.”

### **Jyl Brown, Elite Gymnastics**

---

“Hi Rik, as a new dance studio owner who teaches basic acrobatics and tumbling your guide provides me and my instructors with much needed information to keep my students safe and conditioned while learning! Thanks so much! “

### **Kay Terry, Rising Star Family Dance Center / Plaistow, NH**

---

“Great material. I have 2 younger cheer tumbling coaches that I shared it with and they ate it up. I am interested in ordering several copies for reference and pro shop.”

### **Tom Auer, Racine Gymnastics Center / WI**

---

“I thought the information provided in "Conditioning for Back Handspring Success" was great. I have several girls that do privates and I have done some of these exercises with them and I can see a bit of improvement in their back handsprings.

I am currently incorporating these techniques into my intermediate and advanced tumbling class this coming year. I know the kids will definitely benefit.

I think all of the information was presented in a clear, easy to follow format and that I made a wise choice in researching, finding and trying out your products. I am especially excited about the training course for instructors so please keep me informed as to when this one will be available. Keep up the good work.”

### **Shawnte' Washington-Wrice, All Star Tumbling & Cheer / Atoka, OK**

---

"Every tumbler wants to learn a back handspring but doesn't have the strength and flexibility to achieve it. This book will enable you to improve your all around fitness thereby growing strong enough and flexible enough to do them safely! "

**Patti Komara / [www.pattisallamerican.com](http://www.pattisallamerican.com) / Dyer, IN**

# **CONTENTS**

<b>Warning</b>	<b>page 6</b>
<b>Introduction</b>	<b>page 7</b>
<b>Strength Training Basics</b>	<b>page 11</b>
<b>Suggested Exercises</b>	<b>page 18</b>
<b>Leg Exercises</b>	<b>page 19</b>
<b>Exercises for Arms &amp; Shoulder Girdle</b>	<b>page 26</b>
<b>Abdominal Exercises</b>	<b>page 35</b>
<b>Back &amp; Side Exercises</b>	<b>page 45</b>
<b>Planning the Work; Working the Plan</b>	<b>page 53</b>
<b>Strength / Flexibility Tracking Form</b>	<b>page 55</b>
<b>Sample Strength Circuit</b>	<b>page 56</b>
<b>Blank Strength Circuit Form</b>	<b>page 57</b>
<b>Flexibility</b>	<b>page 58</b>
<b>Home Workouts</b>	<b>page 65</b>
<b>Glossary of Terms</b>	<b>page 66</b>
<b>About the Author</b>	<b>page 68</b>

# Strength Training Basics

Several volumes the size of an average encyclopedia set would be required to discuss all aspects of strength training. As such, the following guidelines are presented in a significantly condensed version. The purpose of this guide is to introduce you to basic concepts and then allow you as the athlete (or coach) to research on your own for specific information applicable to your situation.<sup>4</sup>

## 1. Supervision

Supervision of the strength training program by qualified coaches and/or medical personnel is important. While many athletes will eventually be able to work this circuit on their own with minimal supervision, at the beginning of the program it is important to have knowledgeable personnel on hand:

- to train the correct techniques for each exercise;
- to make sure the athlete is isolating the proper muscle group<sup>5</sup>;
- to make sure appropriate safety conditions are met;
- to determine appropriate match-up of workout partners based on size, strength, and ability;
- to keep athletes “honest” in quantity and quality of exercises performed;
- to plan the strength circuit determining:
  - i. the exercises performed;
  - ii. the order of performance;
  - iii. traffic flow with other activities taking place;
  - iv. the number of sets;
  - v. the number of repetitions; and,
  - vi. when to increase, decrease, or maintain resistance levels;
- to ensure the safety and layout of equipment being used to perform the strength circuit (i.e., matting, specialty mats, spotting blocks, stall bars, uneven bars, Thera-bands, etc.).

---

<sup>4</sup> This book is not about weight loss. It is always best to see your doctor about weight loss concerns, body density, eating disorders or self-esteem issues.

<sup>5</sup> To see anatomical illustrations of muscles go to <http://www.getbodysmart.com/ap/muscularsystem/menu/menu.html>.

## **2. Specificity**

Strength and/or flexibility are specific to a particular muscle or joint.

Many times the muscles on the “dominant” side of your body are a ¼” to ½” inch bigger than the non-dominant side.

For instance, the leg you push off with into a round off is often slightly larger than your other leg since it is required to do more work during a tumbling workout. In most cases, the difference in strength and size is not noticeable but you should be aware of the possibility. This is one good reason to work not only strength, but as many tumbling skills as are safely possible, on both sides of the body creating what is called bilateral symmetry (a potential equality of strength/flexibility/skill on both sides of the body).

Due to injury, physiological abnormalities, and other factors, the strength and flexibility in one body part may not be the same on one side of the body as the other. For instance, due to a severe sprain on your right ankle the levels of strength and flexibility will be significantly different than your left ankle. Keep this information in mind and adapt strength and/or flexibility exercises with guidance from a sports medicine trained physician in conjunction with your coach.

## **3. Imbalance causes injury**

The muscular system is in many ways dualistic. For every flexor there is an extensor. For instance, to flex the hip joint of your right leg, the quadriceps (the four muscles on top of the thigh) contract lifting the knee of your right leg, while the hamstrings, on the opposite side of the leg act as a brake to slow the knee lift and keep the leg from going beyond its normal range of motion.

When the quadriceps become sufficiently stronger than the hamstrings, or the hamstrings become inflexible through poor training or neglect, a situation is created where the quadriceps can overpower the hamstrings and cause a strain or tear of the hamstrings muscle. This injury is most commonly seen in basketball players making a fast break to run down the court.

Another example would be quick flexion of the upper arm. The biceps cause the arm to flex while the triceps (through eccentric contraction) act as a brake to slow down the motion and prevent injury.

When one muscle group, either the flexor or extensor becomes significantly stronger or less flexible than the opposing muscle group there is a strong potential for injury. Plan your strength circuit accordingly to make sure both the flexor and extensor of a body part receives appropriate attention to prevent potential injury.



#### **4. Exercise workout order**

Start with larger muscle groups in your strength circuit finishing with the smaller muscle groups (or multi-joint exercises to single-joint exercises).

Begin with: *(this is a simplified list)*

- Lower Body:
  - quads
  - hamstrings
  - calf muscles
  - front of lower leg
  - inner thigh
  - outer thigh
- Abdominals & Back:
  - stomach (upper, middle, lower)
  - hip flexors
  - back muscles
- Upper Body:
  - chest
  - shoulders
  - arms

#### **5. Resistance**

In almost all exercises represented in this book, the only resistance used will be some portion of the athlete's body weight. Shifting the athlete's body position to require the muscles being exercised to produce more effort will be the method most often employed to increase resistance.

No weights or machines will be used, except possibly surgical tubing, or Thera-bands<sup>6</sup> to provide some resistance. Equipment such as matting, or chin-up bars will be used to work around or on, or even used to stabilize body parts, however, the resistance will still be the athlete's own weight. The amount of resistance used will be determined based on how effectively that athlete can perform the exercise using proper form and technique.

#### **Increasing Resistance**

An example of increasing resistance might be starting your bent knee push-ups on an incline mat. Place your hands at the high end of the incline mat and your knees on the floor exercise carpet at the low end of the mat. Once you are able to effectively complete your sets at this level, you would increase resistance by moving your hands down the incline mat until (eventually) both hands and knees are on the floor. The next increase would be to straighten your legs. To continue increasing resistance as you

---

<sup>6</sup> <http://www.thera-band.com/>

grow stronger, you might put your feet up on one panel mat. To increase your range of motion on this exercise, place two panel mats in an ever widening “V” formation on the floor. Put both of your feet on the mats where they come together at the bottom of the “V” and both of your hands on the respective mats where they widen, so you can lower your chest down between the mats on each push-up working a wider range of motion.

**Note:** There will come a point when raising your legs by adding more mats changes the exercise from primarily a chest (pectorals) and arms exercise to a shoulder (anterior deltoid) and arms exercise. Consult with your coach to make sure you are still giving proper attention to all body parts as you reconfigure your strength circuits.

## **6. Repetitions**

A repetition is a single performance of an exercise, such as one pull-up.

In general, the athlete will work 8 to 12 repetitions of an exercise (one set) before increasing the resistance by shifting body angle to create increased resistance.

### **Repetitions vs. Time**

Sometimes your coach may recommend minimum repetitions of an exercise, such as 10 push-ups as your goal. Sometimes the coach may prescribe a time frame such as 15 to 30 seconds for you to complete as many of the exercises with form and technique as you can within the allotted time frame, whether it be 10, 15, or 20 repetitions. The key is form and technique. It also allows other squad members that are stronger to work within their capabilities and those that are weaker to work to the best of their current abilities.

## **7. Sets**

One “set” is comprised of the prescribed number of repetitions of an exercise you must complete. For instance, the coach may request that you do two sets of 10 push-ups. You do 10 push-ups, rest for 30 seconds, and then do 10 more push-ups to complete the second set.

In the beginning of the season, and for strength training purposes, the coach may prescribe 8 to 12 different exercises with one or two sets of repetitions as part of a strength circuit. Once the basic strength goal has been achieved by all athletes, the coach may then develop a shorter but still intense strength circuit to maintain the base level of strength but will often focus on more “sport-specific” training during workouts. Sport-specific training simply means using the actual skills being performed such as back handsprings or split leaps as the basis of developing appropriate levels of strength, timing, and sequence of movement patterns.

## **8. Frequency of Circuits**

Most fitness enthusiasts have the tendency to jump into the deep end of training and immerse themselves in several workouts a week without providing proper intervals of rest and recuperation. Enthusiasm must be applauded, but common sense and patience should prevail by starting with 2 workouts a week for one month, then progressing to 3 times a week (based on appropriate progress) for the following month.

Apologies to all involved for the next statement, but “*a lack of planning is not justification for an extreme conditioning program at the eleventh hour.*” A last minute, intense workout program presents a strong potential for injury.

### **48 Hours**

Some coaches may opt to train upper body exercises M-W-F, and lower body exercises T-Th-S, however, it may be best to start with a whole body circuit that incorporates a 48-hour rest period in between. So, if you do a strength circuit Monday at 7:00pm, your next strength workout would be Wednesday at 7:00pm or 48 hours later to allow for rest and recuperation.

### **Vacation Time**

Another good idea is to create an interval training system where every six to eight weeks you take a week off from conditioning or at the very least cut the intensity of the strength workouts by 50%.

### **Maintenance**

Once you reach a specific strength goal, your coach may design a strength circuit that is shorter but possibly more intense to cover all the major muscle groups to keep them in appropriate condition while adding more “sport-specific” exercises to the workout like multiple passes of back handsprings which are now not only skills but conditioning to build strength in the specific muscles used in the appropriate sequence and timing.

## **9. Breathing**

Based on some research of web sites, there may be some controversy over correct breathing technique. In this text, the suggestion for breathing during exercise will follow the guideline suggested at the Georgetown University Hospital site, “Exhale as you begin the movement.”<sup>7</sup> It seems to make sense, if you want the full range of motion on a sit up; you need to breathe out as you begin the movement.

---

<sup>7</sup> Proper breathing during exercise.

[http://www.georgetownuniversityhospital.org/body.cfm?id=555563&action=articleDetail&AEProductID=Adam2004\\_10&AEArticleID=000388](http://www.georgetownuniversityhospital.org/body.cfm?id=555563&action=articleDetail&AEProductID=Adam2004_10&AEArticleID=000388) Review Date: 10/3/2005. Reviewed By: A.D.A.M. Medical Illustration Team.

**Warning:** Do not hold your breath while straining to complete a repetition of an exercise or while holding an isometric (non-moving) exercise. It is possible to burst capillaries in your face, eyes, and ears by holding your breath while applying excessive strain or force to complete the exercise, which could lead to severe injury.

## **10. Positive & Negative Movement**

There are two types of movement in any exercise described as positive and negative movements. A **positive** movement is normally considered the action that actually causes movement and causes the muscle tissue to contract. A **negative** movement occurs when you return to the start position of the exercise usually through eccentric contraction or the controlled lengthening of muscle tissue.

For example, on a pull-up the positive motion would occur when you bend your arms and lift your chin above the bar. The negative motion would occur when you lower in a controlled fashion back to the long hang position ready to start another repetition.

### **Timing**

The key to any effective exercise is that it is safely performed. Toward that end you may want to consider using a timing sequence of 1 second for the positive movement and 3 seconds for the negative movement. For example, on the pull-up, take one second to pull-up, and then take three seconds to lower in a controlled fashion back to the start position.

This method may also help to reduce muscle soreness the day after a strength circuit by cutting down on the micro-tears that may occur in muscle tissue due to the effects of the myotic reflex. The “myotic” or stretch reflex is a safety mechanism designed to keep a muscle from going beyond its normal range of motion by quickly attempting to contract the muscle.

For instance, if you drop out of a pull-up too quickly, the myotic reflex may kick in to keep you from going beyond a normal range of motion; however, the force of the drop may cause the contracting muscle tissue to develop micro-tears as the force of the fall overpowers the contraction, resulting in sore muscles the next day.

### **Negatives can be Positive**

As stated above, a negative motion occurs when you return, in a controlled fashion, to the start position for another repetition of an exercise. A negative or **eccentric motion** occurs when a force or resistance causes a shortened or contracted muscle to extend, possibly while still attempting to contract. Slowly lowering from a pull-up is one example of eccentric motion.

When you were first evaluated, you may have been unable to do even one pull-up. At this point your body weight is too much resistance. You can adapt the pull-up exercise

by getting an assist from a spotter or by putting one foot on a lower bar and using it to assist in the pull-up, or you can start by doing negatives of the exercise. (See “Negative Pull-ups” on page 32.)

### **Negative Exercise**

A negative exercise simply means you start at the fully contracted position of the muscle being focused on, and then slowly lower (about 3 to 4 seconds) to the normal start position of the exercise.

For instance starting with a low bar, or by putting a spotting block next to a raised bar, you can reach out to the bar and start at the top of a pull-up by stepping off the block and briefly holding your chin above the bar, and then slowly lower your body by extending your arms to the count of thousand one..., thousand two..., thousand three..., thousand four..., until you are in a long hang position under the bar. Repeat the procedure for the full set of repetitions by putting your feet back on the block and climbing back into the “chin above the bar position.”

In future sets of pull-ups (or whatever exercise) see how many pull-ups you can do positively first, even if it is only one, before switching to the negative aspect of the exercise.

### **Consult your Coach**

Like the first day of school, you have been introduced to a variety of subjects – only these revolve around the concept of conditioning. This brief introduction cannot hope to cover every area of concern regarding the development of an appropriate strength circuit specific to your needs; only your coach or a doctor with a sports medicine background can do that. Remember to get a physical examination by your doctor, a physical evaluation by your coach, and keep records of your progress to track when changes need to be made.

Cheerleaders increase strength 300% for dynamic back handsprings and tumbling!

**Cheerleading: Conditioning for Back Handspring & Tumbling Success!**

**Buy The Complete Version of This Book at  
Booklocker.com:**

<http://www.booklocker.com/p/books/5194.html?s=pdf>