

ANATOMY of STRETCHING

A Guide to Increasing Your Flexibility



Craig Ramsay

with a foreword by
Jerry Mitchell

ANATOMY of STRETCHING

A Guide to Increasing Your Flexibility



Craig Ramsay

with a foreword by
Jerry Mitchell

ANATOMY of STRETCHING

General Disclaimer

The contents of this book are intended to provide useful information to the general public. All materials, including texts, graphics, and images, are for informational purposes only and are not a substitute for medical diagnosis, advice, or treatment for specific medical conditions. All readers should seek expert medical care and consult their own physicians before commencing any exercise program or for any general or specific health issues. The author and publishers do not recommend or endorse specific treatments, procedures, advice, or other information found in this book and specifically disclaim all responsibility for any and all liability, loss, or risk, personal or otherwise, which is incurred as a consequence, directly or indirectly, of the use or application of any of the material in this publication.



Thunder Bay Press
An imprint of the Baker & Taylor Publishing Group
10350 Barnes Canyon Road, San Diego, CA 92121
www.thunderbaybooks.com

Copyright © 2012 by Moseley Road Inc.

Copyright under International, Pan American, and Universal Copyright Conventions. All rights reserved. No part of this book may be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopying, recording, or by any information storage-and-retrieval system, without written permission from the copyright holder. Brief passages (not to exceed 1,000 words) may be quoted for reviews.

“Thunder Bay” is a registered trademark of Baker & Taylor. All rights reserved.

All notations of errors or omissions should be addressed to Thunder Bay Press, Editorial Department, at the above address. All other correspondence (author inquiries, permissions) concerning the content of this book should be addressed to Moseley Road, Inc., 123 Main Street, Irvington, NY 10533.
www.moseleyroad.com.

ISBN-13: 978-1-60710-524-4 (ebook)

ANATOMY of STRETCHING

A Guide to Increasing Your Flexibility



Craig Ramsay

with a foreword by
Jerry Mitchell



San Diego, California

CONTENTS

Foreword by Jerry Mitchell
Introduction: Stretching for a Better Life
Build a Stretching Routine
Full-Body Anatomy

The Stretching Session

Assisted Foot Stretches

Point

Flexion

Slope-Down

Slope-Up

Band-Assisted Stretches

Wing Stretch

Sickle Stretch

Seated Leg Cradle

Unilateral Seated Forward Bend

Bilateral Seated Forward Bend

Butterfly Stretches

Seated Butterfly

Folded Butterfly

Scoop Rhomboids

Front Deltoid Towel Stretch

Lying-Down Arch Stretch

Lying-Down Groin Stretch

Lying-Down Pretzel Stretch

Unilateral Leg Stretches

Unilateral Knee-to-Chest Stretch

Unilateral Leg Raise

Hip Adductor Stretch

Lying-Down Figure 4



Internal Hip Rotator Stretch

Happy Baby Stretch

Side-Lying Rib Stretch

Side-Lying Knee Bend

Cobra Stretch

Back Stretches

Child's Pose

Kneeling Lat Stretch

Cat Stretch

Pigeon Stretch

Shin Stretch

Frog Straddle

Half Straddle Stretches

Half Straddle

Side-Leaning Half Straddle

Double-Leg Straddle Split

Chest-to-Thigh Straddle Split

Chest-to-Floor Straddle Split

Toe Touch

Standing Back Roll

Good Morning Stretch

Scalp and Facial Stretches

Scalp Stretch

Lion Stretch

Eye Box Stretch

Neck Stretches

Side Neck Tilt

Downward Neck Tilt

Upward Neck Tilt

Neck and Head Turn

Back-of-the-Neck Stretch

Triceps Stretch

Biceps Stretch

Wall-Assisted Chest Stretch

Forearm Stretches

Wrist Flexion
Wrist Extension



Calf Stretches

Calf Heel Drop

Toe-Up Calf Stretch

Standing Quadriceps Stretch

Kneeling Sprinter Stretch

Sumo Squat

Side-Leaning Sumo Squat

Side-Lunge Stretch

Forward Lunge

Forward Lunge with Twist

Straight-Leg Lunge

Downward-Facing Dog

Wide-Legged Forward Bend

Partner Stretches

Assisted Butterfly Stretch

Assisted Happy Baby

Assisted Unilateral Thigh Stretch

Assisted Unilateral Leg Raise

Assisted Chest Stretch

Assisted Seated Forward Bend

Assisted Child's Pose

Assisted Pretzel Stretch

Russian Split Switch

Pregnancy Stretches

Torso Rotation

Hand-on-Knee Stretch
Lying Pelvic Tilt
Unilateral Good Morning Stretch
Cat Stretch
Downward-Facing Dog

Office Stretches

Workplace Stretch Routine
Seated Twists
Seated Figure 4
Forward Bend Hip Shift
Double-Leg Hinge
Supported Hamstrings Stretch

Foam Roller Stretches

Tennis Ball Foot Massage
ITB Roll
Foam Roller Lat Stretch
Foam Roller Back Stretch
Calf and Hamstrings Stretch
Foam Roller Shin Stretch

Extreme Challenge

Dancer's Lunge
Lying-Down Side Hamstring Stretch
Bilateral Quad Stretch
Front Split
Russian Splits
 Russian Split
 Roll-Through from Russian Split
Standing Extensions
 Assisted Side Tilt
 Standing Leg Extension

The Quick Stretch Program

Credits and Acknowledgments
About the Author

FOREWORD

Just saying the word *stretch* makes me want it to last forever. Stre-e-e-e-e-e-etch! Elongate! Expand! Lengthen!

To me, it's a word that means "make it last". Make it last for as long as possible.

Have you ever watched dogs when they awaken from a wonderful night of rest or a midday nap? They rise on all fours and before a minute passes, they're in a downward-dog position or some other fantastic move. They're stretching their bodies, waking up their muscles, getting ready for full-out movement.

Stretching is the first thing I do in the morning and last thing I do before I fall asleep. For me, stretching is one of the most important things I do on a daily basis. And I do a lot! I wish I did more. My body feels like I am giving it a wake-up call to snap to attention and prepare for the inconceivable things I will ask it to do today.

As a Broadway dancer, choreographer, and director, I am always in the rehearsal room inventing musicals. The shows I like to work on require, for the most part, lots of movement. Stretching before every session helps prepare the body for what lies ahead. A quick bend, jump, twirl, split, or kick without stretching first would mean a quick trip to the emergency room for me.



So what makes stretching so fantastic? I'll leave that expertise to Craig Ramsay.

I first became aware of Craig and his amazing body when he was appearing in the Broadway revival of *Fiddler on the Roof*. Watching a large, very muscular guy move with so much grace and flexibility, needless to say, caught my eye. I spend countless hours, days, weeks, and years working with some of the most amazing dancers, who all stay in top-notch physical condition. That's Craig! He's extremely flexible and that's directly connected to his muscle growth, maintenance, longevity, and stretching program.

Anatomy of Stretching will answer all your stretching questions. Craig will share all the technical reasons why you should stretch. Emotionally, what I can tell you is this: No one should go through a day without some form of stretching. It will make you feel better. It will make your body feel better. It's just that simple.

No one has to tell a dog to stretch. It is in their DNA to do it—and to do it before anything else. Stretching will lengthen not only your muscles, but also your mind and spirit. And in turn, your life. Yes, I believe stretching your muscles can lengthen your life. And it can, with the proper diet and exercise, make you look a whole lot better.

So what are you waiting for? Make it last! Let's stre-e-e-e-etch!

Jerry Mitchell

JERRY MITCHELL



Jerry Mitchell's choreography has been seen on Broadway in *Catch Me if You Can*, *Legally Blonde* (which he also directed), *Dirty Rotten Scoundrels*, *The Full Monty*, *Hairspray*, *La Cage* (TONY Award), *Never Gonna Dance*, *Gypsy*, *The Rocky Horror Show*, and *You're a Good Man, Charlie Brown*. For London's West End, he also choreographed *Legally Blonde* (which he also directed), *Hairspray*, and *Love Never Dies*. Jerry is also the conceiver/producer of Broadway Bares, an annual charity event for Broadway Cares, and producer/director/choreographer of its long-running Las Vegas counterpart, Peepshow.



STRETCHING FOR A BETTER LIFE

As a child, I had difficulty staying still. When doctors diagnosed my problems as attention-deficit/hyperactivity disorder (ADHD), they tried to convince my parents that the *only* way to keep me focused, still, and attentive would be through medication.

Medication has been proven to be effective with certain ADHD cases, but thanks to my parents, I'm a firm believer in utilizing sports and other physical activity to combat the inattention and hyperactive or impulsive behavior associated with ADHD.

My parents took notice that I could stay still and calm when I was trying to impress them with a gymnastics move or an incredibly demanding stretch. So, during family events, my dad would often encourage me to put on a show of my talents. Oh, the hours I needed to perfect my back walkover and my impressive splits. My dad knew that all that practicing was quiet time for his overenergized son. My mom also realized that stretching kept me focused, so she started to encourage me to do my homework sessions on the living room floor while doing my hour of routine stretching.

Soon my parents enrolled me in dance, gymnastics, and hockey—anything and everything that would keep me physically active and out of trouble. Their plan worked, too—my marks in school improved, as did my self-confidence.

I have a great deal of love for this book and its message, because I truly believe the time I put into my stretching helped me to manage my ADHD and boosted my physical capabilities, which enabled me to become such an asset on the ice rink, on school teams, and, most important, on the stage. It's no exaggeration to say that stretching helped me to achieve my successful Broadway dancing, singing, and acting career. It also helped to turn me into one of the most sought-after fitness experts in the world.

My hope is that the stretches and routines that follow go far beyond helping you stay agile and in shape. I hope that you are open to this book helping you to overcome whatever obstacles life may throw at you.

Craig Ramsay



BUILD A STRETCHING ROUTINE

While traveling on airplanes, we hear the safety advice to put on our own oxygen masks before helping loved ones or neighbors. In this case, taking care of yourself first is a necessity.

The same rule applies to your stretching session or exercise routine—and to life itself for that matter. Do not feel guilty for taking care of yourself. Make achieving self-worth and a healthy body new goals. You are no good to your loved ones if you are in poor health.

Types of Stretching

There are many forms and types of stretching, such as static, dynamic, passive, and active. You should be aware of the options, but segregating the types of stretching is not the most beneficial way of executing a stretching routine. Combine all of forms of stretching for an ideal routine.

Static stretching

consists of stretching a muscle to its farthest point and then holding that position.

Dynamic stretching consists of controlled movements to increase a particular body part's range of movement.

Isometric stretching, a type of static stretching, calls for the resistance of muscle groups through isometric contractions (tensing) of the stretched muscles.

Active stretching consists of assuming a position and then holding it with no assistance other than using the strength of your agonist, or opposing, muscles.

Passive stretching consists of an external force (either a person or an apparatus) bringing the joint of a relaxed person through its full range of motion.

Proprioceptive neuromuscular facilitation (PNF) stretching, originally developed as a form of physical therapy, combines passive and isometric stretching. It usually calls for a 10-second push phase followed by a 10-second relaxation phase.



This book calls for mostly static, passive, and active stretches. These forms of stretching are extremely important for anyone looking to gain flexibility and develop body awareness.

ADVICE FOR THE ATHLETE

A muscle must be flexible enough to have a slightly greater range of motion than what your sport requires, but not so much more that it diminishes your performance by becoming too loose and out of control.

A Full-Body Stretch

There are so many opinions on what constitutes the ideal order of stretches and how stretching sessions should be designed, but limited data exists to promote any one method. The Stretching Session included in this book ([pages 20-103](#)) is the result of taking into consideration a great deal of information from both the field of dance and the field of personal training. It covers all of the major muscle groups and their opposing muscles, offering a well-rounded stretch routine that guides you to discover your strengths and weaknesses. What are your problem areas? Which are your tightest muscles? Is one side stronger than the other? Just how flexible are you? What is holding you back from your full living and sports potential?

The Stretching Session begins at the feet—and for good reason. The ankles and feet are the base of your body. With 26 bones, the foot is a complex structure, and, as a dancer does, you should address this area first. The health of your feet can affect your whole body, including internal organs. Tight feet and ankles lead to tight hamstrings, calves, and hips. Addressing foot flexibility issues leads to stronger cardiovascular capabilities and lowers the risk of leg strain and pain during exercise.

Many of the stretches in this book target the back, the inner thighs, and the

hamstrings, all areas that are susceptible to tightness. The hamstrings are a group of three muscles located at the back of the leg. These muscles—the biceps femoris, semitendinosus, and semimembranosus—are the major knee flexors. The hamstrings are typically the tightest muscles in the lower body.



One or Both Legs?

The nervous system’s protective blockage begins much sooner bilaterally (both legs at the same time) than unilaterally (one leg at a time). The range of motion is therefore more restricted. We must not forget to stretch unilaterally, as this form of stretching increases range of motion. Ask any dancer and she will admit that we all have one leg that is more flexible for high kicking than the other.

How Often Should You Stretch?

In a perfect world, you could stretch every day; unlike weight training, you don’t need a rest day in between sessions to heal and repair the muscles. Aim to make stretching part of your daily routine. Don’t, however, beat yourself up when you don’t fulfill your daily stretching goals. In this imperfect world, every day just might not work for you. Just include extra “me time” in the next day’s schedule. Keep the commitment to yourself, just as you would be sure to keep a commitment to a client, or as you would never miss your child’s sporting event.

WORKING WARM

Your body works best when your internal temperature is high: your muscles are

warmer and therefore more relaxed, your quick response time is up, your perceived exertion is low, and your heart rate is lower.

Find out when your body temperature is typically at its highest. Most of us peak in the late afternoon, with our morning temperatures the lowest of the day; therefore, stretching in the afternoon may be ideal.

Important note: If the weather is very cold, or if you are feeling very stiff, take extra care to warm up properly before you stretch in order to reduce your risk of injury.



Between sets, light stretching of your target muscles enhances a strength-training workout. If you are working on your biceps, try the Biceps Stretch ([page 79](#)).

Performing a stretching session four or more times a week will make an incredible impact on your life. Even doing it once a week will yield benefits in ways that will surprise you.

Once you start stretching regularly, you'll feel those benefits. Remember that even when you feel stressed, going through your stretches is a good thing. I've worked with clients with stressful lives who sometimes go through the stretching session featured in this book twice a day. It helps, and it works.

No Excuses!

Don't waste time finding excuses for why you can't stretch. Learn the stretches in this book so that you can perform them anywhere and everywhere. You will find the appropriate stretches to perform:

- first thing in the morning, and last thing at night;
- in front of the television during family movie night or during your favorite one-hour

- TV program;
- with a friend;
 - during long periods in front of the computer;
 - while taking a short break between loads of laundry;
 - during a long plane flight in the comfort of your seat;
 - and anytime you are feeling stiff, sore, or stressed!

Just remember to fulfill your new goal of taking care of yourself, and fit in the stretches where and when you can.

BENEFITS OF STRETCHING

The benefits of stretching are many. Here are a few:

Increases flexibility and energy. Becoming more flexible can improve your physical performance and decrease your risk of injury. A flexible muscle is far more resistant to injury than an inflexible one. Stretching produces a slight rise in muscle-tissue temperature; this raises the point at which the fiber breaks. Stretching improves the efficiency of energy-generating enzymes that can provide you with more energy during your workout.

Burns calories. An extensive dynamic/active stretching program can help you increase your rate of calorie burn.

Improves cardiorespiratory endurance. Stretching helps develop the body's ability to supply fuel and oxygen during sustained physical activity. It also raises your fatigue threshold.

Combats the effects of aging. As you get older, you lose flexibility, but a proper stretching program can help you regain and maintain it. Improving circulation to your muscles shortens recovery time if you have suffered muscle injuries. Stretching helps you achieve your healthiest range of joint motion, which keeps you in better balance. Better balance is important as you grow older, because it decreases the chance of injury from falls.

Relieves stress. Stretching relaxes the tense, tight muscles that are often associated with stress. You can use a stretching regimen to alleviate emotional disruptions and improve your focus and concentration.

Improves muscle coordination. Regular stretching reduces the time it takes for messages to travel from the muscles to the brain.

Relieves lower-back pain. Stretching your hip flexor, hamstrings, and gluteal muscles, along with the lumbar region of your spine, increases the range of movement in your pelvis and lumbar spine. This increased mobility reduces lower-back pain.

Elongates muscles. Longer muscles have greater growth potential. Combining a stretching program with a proper weight-resistance workout will help you develop larger, more impressive-looking muscles.

Taking time for stretching means taking time for yourself. Taking time for yourself is liberating—it can help you clear your mind, gain self-confidence, and organize and focus on your goals and aspirations. It can also help you sleep better, and a well-rested you is better equipped to achieve your goals!

When Not to Stretch: Lessons from a Dancer

When building a stretching routine, it is crucial to find the appropriate balance between muscle tension and muscle flexibility. All cardiovascular and weight-resistance exercises need a proper stretch and contraction. Think of a muscle as an elastic band: overstretch it and it loses its ability to properly contract, thus decreasing its strength.

A fitting example of improper stretching technique comes from an unlikely source: dancers. Unfortunately, some dancers misuse their extraordinary flexibility when preparing for a cardiovascular or strength-training workout. Quite a few dancers warm up with excessive stretching prior to a workout.

Yet, however impressive the ability to perform a full straddle split may be, the key to a successful stretching routine is knowing when to go for the big stretches and when to focus on the smaller ones. Overstretched muscles respond like loose noodles,

leaving them susceptible to injury. Dancers with overstretched muscles limit the weight they can lift, and this limitation impairs their form.

WHEN TO STRETCH

A stretching program can alleviate or prevent the following muscle conditions or injuries.

Muscle cramping. Muscle cramping results from poor hydration, a diet low in magnesium and sodium, incorrect positioning, and/or inappropriate movement or exercise. Excessive alcohol intake, diabetes-related problems, and narrowing of the arteries due to plaque buildup are also known to cause cramping. Nighttime cramps have been linked to deficiencies in B vitamins, magnesium, and calcium. To relieve or eliminate a cramp, stretch the cramped muscle to force it to immediately relax.

Stiff muscles. A day or two after intense exercise, you may experience stiff muscles, which can last from a few days to more than a week. Stretching lightly during workouts, after workouts, and during the days following a workout can prevent or lessen muscle stiffness.

Muscle spasms. A muscle spasm is a symptom of fatigue and may signal possible injury. It usually shows up as a painful knot in the muscle. Spasms can take days to control and resolve. To lessen and even prevent muscle spasms, stretch the area in which you most often experience spasms prior to and during exercise.

Pulled muscles. Stretching a muscle too forcefully or beyond its normal length can result in an extremely painful injury known as a pulled muscle. Rest is absolutely necessary to heal a pulled muscle, but stretching properly is the best way to prevent one.

Muscle tears. A muscle tear can occur if you push yourself too hard when your muscles are already injured or extremely fatigued. A torn muscle is a serious injury—it can sideline an athlete for up to six months, for example, and even worse, it can affect an athlete's entire career.

Muscle ruptures. A muscle rupture occurs when a large group of fibers inside the muscle is damaged. You are at the highest risk for a rupture when your muscles are fatigued, and you then push them beyond their limits. Combining a stretching program with a proper bodybuilding or weight-resistance program is the best way to protect your muscles from possible ruptures.

Learn from these dancers' mistakes. Light stretching is acceptable before and during exercise; for example, during strength training, lightly stretching your target muscles between sets loosens the muscles and makes for a better pump. But remember to save your intense stretching routine for *after* your workout.

A Proper Warm-up

To get the most from your stretching session, you need to warm up properly. And keep in mind that stretching is not warming up! For example, every Broadway show has a "half-hour" call, warning all the performers that they have 30 minutes to get into their places. But responsible Broadway dancers know they need more than a half hour to prepare, physically and mentally. They know they need to leave ample time for a head-to-toe warm-up before they even begin the stretches that will keep them limber for a performance.

You should begin as dancers do, rotating all of your joints to get them lubricated, starting with your toes and working up to your fingers.

- 1 Wiggle all of your toes for 5 to 10 seconds.
- 2 Rotate each ankle 5 to 10 times.
- 3 Bend each knee for 5 to 10 seconds.
- 4 Rotate your hips for 5 to 10 rotations on each side.
- 5 Twist your torso back and forth for 5 to 10 seconds.