Improve Your Flexibility & Fitness with the...

Ultimate Guide to STRETCHING & FLEXIBILITY

...for all ages, all sports and all fitness levels

THIRD EDITION

Brad Walker
Exercise Scientist and Sports Trainer
Improve Your Flexibility & Fitness with the...

Ultimate Guide to STRETCHING & FLEXIBILITY

...for all ages, all sports and all fitness levels.

Brad Walker
What are the experts saying about the Ultimate Guide to Stretching & Flexibility? (Formally the Stretching Handbook)

“An excellent, important guide to optimum health and peak performance. Read, learn, implement and enjoy the benefits of wellness and enhanced quality of life.”

Dr Denis Waitley (PhD)
Author & Past Chairman - US Olympic Committee

“Up to now, while there has been a plethora of books about, ‘How to…’ ‘The benefits of…’ exercise, there has not been much advice offered regarding stretching. I believe your book fills that gap very well. Stretching is a very important and often neglected part of exercise. I congratulate you on your efforts and look forward to recommending your publication to my patients.”

Dr John Flynn
Sports Medicine Australia

“The acceptance of the importance of flexibility and stretching for sport is commonplace, but appropriate and accessible information for athletes and coaches to use is not always easy to find. The Stretching Handbook is designed to be a very portable and quick reference for athletes and coaches rather than an academic reference. To this end it is a very practical text with concise chapters written in an easy-to-read manner but without being punctuated by research findings or scientific references. Overall, it is well laid out, user-friendly and very suitable for athletes and developing coaches. It is a welcome addition to the limited number of texts that deal with stretching for sport.”

Angela Calder
Performance Consultant - Australian Institute of Sport

“The Stretching Handbook has given me a greater understanding and appreciation of the importance of stretching. After reading The Stretching Handbook my coach and I decided to write specific stretching time into my program, thus taking stretching far more seriously. Thanks for allowing me to read The Stretching Handbook. It is definitely a book that anybody wanting to exercise and even more so, elite athletes, should have by their side.”

Greg Bennett
World Champion Triathlete

“The Stretching Handbook provides a comprehensive guide to the art of stretching. The detailed photographic catalogue of stretching exercises serves as an easy-to-follow reference guide for athletes and coaches alike.”

Wayne Pearce
Coach - Balmain Tigers RLFC

“Stretching is an important part of any exercise program to help prevent injury and to increase flexibility. The Stretching Handbook is a clear, concise guide to stretches for all areas of the body.”

Bob Fulton
Coach - Manly Sea Eagles RLFC & Australian Team Coach

“The Stretching Handbook is a useful resource for all coaches. The photographs and explanations are clear and concise. A much needed resource.”

Janet Bothwell
National Director of Coaching - Netball Australian
“A thoroughly professional and comprehensive book on a subject that previously was very much neglected. It will play an important role for coaches and athletes in preparation for their specific sports. The Stretching Handbook is a must for anybody in the health and fitness industry.”

Tony Green
Strength & Conditioning Coach - Gold Coast Chargers RLFC

“Overall The Stretching Handbook is a great resource for coaches and athletes. It offers a quick and easy reference to stretches for all areas of the body. Its size is an added bonus, making it easy to fit into a bag or back pocket.”

Jill McIntosh
Coach - Australian Netball Team

“A comprehensive, helpful and easy-to-read publication. Great for amateurs and professionals.”

Frank Farina
Australian Socceroo
Player / Coach - Brisbane Strikers

“As a sportsman and now in my role offering improved health and preventative health care, I see this as a very practical tool for people of all walks of life. May it encourage all people to stretch to new heights of health and well being.”

Brendan Long (B.Ed.)
General Manager - Camp Eden Health Retreat
Dedicated to JC: It’s all you!

Walker, Bradley E., 1971

ISBN: 978-0-9581093-3-8 (Ring-bound)

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Warning
The stretching exercises presented in this publication are intended as an educational resource and are not intended as a substitute for proper medical advice. Please consult your physician, physical therapist or sports coach before performing any of the stretching exercises described in this publication, particularly if you are pregnant, elderly or have any chronic or recurring muscle or joint pain. Discontinue any exercise that causes you pain or severe discomfort and consult a medical expert.

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Top 5 Stretches for each Sport
Top 5 Stretches for each Sports Injury
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Introduction

In the late 1980’s and early 1990’s I was competing as a professional triathlete and working in the sports coaching industry. I had the pleasure of working with a number of high profile coaches, athletes and sports doctors, and I started to notice a common theme among the injured athletes that I saw: A lack of flexibility.

At university I dedicated a large portion of my time to the study of stretching and flexibility training, and wherever possible chose the topic for my assignments and research papers.

Then in 1992 I was fortunate enough to work with an exceptional sports coach by the name of Col Stewart. Col is one of those rare coaches who can take just about any sport, and devise a specific training program that always produces outstanding improvements for the athlete. His coaching is largely responsible for the success of many of his world champion athletes: Including his son, Miles Stewart (World Triathlon Champion); Mick Doohan (World 500cc Motorcycle Champion); and countless others from sports as diverse as roller-skating, squash, and cycling.

During my time under his tuition, I noticed that his athletes were able to remain injury free while sustaining training loads that would cripple the average athlete. And one of the keys to his athletes’ success was stretching.

I was convinced that improved flexibility through the proper use of stretching was a key component to improving athletic performance and reducing susceptibility to sports injury. The problem was: I could not find a publication that was as serious about stretching as I was.

By 1995 I had become frustrated with the lack of information about stretching and was desperately seeking a comprehensive guide to flexibility training: A book that took stretching and flexibility seriously, with a detailed list and picture of every possible sports-related stretch a person could do. In my search I found many books where stretching got a mention, but nothing more than a page or two of vague generalizations and a few stick figures performing some very basic stretches. So I decided to stop searching and start writing.

In 1997, when the first edition of the Ultimate Guide to Stretching & Flexibility (Formally the Stretching Handbook) was released, there was only one other publication entirely dedicated to the topic of stretching. Today there are dozens, but the Ultimate Guide to Stretching & Flexibility continues to stand alone as the most user-friendly resource on stretching
and flexibility training for athletes, coaches, trainers, therapists and health care professionals.

The Ultimate Guide to Stretching & Flexibility is written as an easy-to-use, quick reference guide so you don’t have to read it from cover to cover to take advantage of the information within. It contains 135 unique stretching exercises for every muscle group in the body and has been designed so you can carry it with you and refer to it often. This is a back-pocket handbook not a sit-on-the-shelf text book.

If you want information on stretches for the back, look under that section; if you want to know what stretching can do for you, have a read through some of the benefits in chapter 2; or if you want to make sure you are stretching properly, refer to the Rules for Safe Stretching in chapter 5.

Whether you are a professional athlete or a fitness enthusiast; a sports coach or personal trainer; a physical therapist or sports doctor, the Ultimate Guide to Stretching & Flexibility will benefit you.

Yours in sport

Brad Walker
Chapter 1
An Overview of Stretching and Flexibility

What is flexibility?
Flexibility is commonly described as the range of motion, or movement, (ROM) around a particular joint or set of joints. In layman’s terms; how far we can reach, bend and turn.

When improving flexibility is the goal, the muscles and their fascia (sheath) should be the major focus of flexibility training. While bones, joints, ligaments, tendons and skin do contribute to overall flexibility, we have limited control over these factors.

What is stretching?
Stretching, as it relates to physical health and fitness, is the process of...
Chapter 2
The Benefits of Stretching

Stretching is a simple and effective activity that helps to enhance athletic performance, decrease the likelihood of sports injury and minimize muscle soreness. But how specifically is this accomplished?

**Improved range of motion (ROM)**

By placing particular parts of the body in certain positions, we are able to increase the length of the muscles and their associated soft tissues. As a result of this, a reduction in general muscle tension is achieved and range of motion is increased.

By increasing range of motion we are increasing the distance our limbs can...
Chapter 3
A Stretching Story

Once upon a time there was an eager, young athlete ready to take on the world. He trained hard, ate right, got lots of rest and did all the things a budding young athlete should do.

His specialty was the 10 km run and he was quite good too. His personal best was 32 minutes and 4 seconds, which is pretty good for a seventeen year old kid. But he longed to break the 30 minute barrier; he had tried everything but nothing seemed to work.

His training program was well structured and very professional. He was disciplined and rarely wavered from his set training schedule. He incorporated long runs, tempo runs, interval training, weight training in the gym, hill running, cross country running, deep water running and various other training methods to try and improve his personal best. He even bought a mountain bike to introduce cross training into his program.

He always ate right, took extra vitamins and minerals to supplement his diet and always made sure that he drank plenty of water. He made sure he was well rested and even got the occasional massage to help his legs recover.

I met our budding young athlete at a local fun-run where he had a good race and achieved a time that most people would be happy with. Although it was close to his personal best, it was still nowhere near his goal of breaking 30 minutes.

We got to talking and I could tell he was disheartened and frustrated. He explained to me that he had tried everything and nothing he did seemed to improve his personal best. I asked if he would mind if I attended one of his training sessions and he welcomed the idea of getting some fresh advice.

As it turned out, the next session that I could get to was an interval session at the local 400 meter track. As I arrived he was just finishing his warm-up with a few run-throughs. For this session he was doing eight, 400 meter intervals with plenty of rest in between each one.

As soon as he started the first interval I could tell what was wrong. His hamstring and hip muscles were so tight that they restricted the normal range of motion of his legs to the extent that they shortened his stride length. For a tall guy with long legs his stride length was atrociously short.
After he finished his cool-down I asked him if he ever did any stretching. He replied quite honestly by saying he did none at all. Just to be sure we did a few flexibility tests for his back, hamstrings and calves. From these it was quite obvious that his flexibility was a major limiting factor in achieving his goal.

I went on to explain how his lack of flexibility was contributing to a shortened stride length, which in turn was making it difficult to improve his personal best time. Armed with this new bit of hope he eagerly wanted advice on how to incorporate stretching into his training program.

We sat down together and reviewed his training program for the next two weeks. We decided not to make any changes to the program itself, but simply add a general stretching workout to each session. The only advice I gave him was to add a few minutes of dynamic stretching before each training session, add another 15 minutes of static stretching after each session and at least 30 minutes of static stretching before going to bed each night.

The results did not happen straight away, but within two weeks his general flexibility improved considerably. We then incorporated a number of specific stretches to further increase the flexibility of his back, hamstrings, hips and calves.

The improvements over the next couple of months were remarkable. Not only did his times improve but his running style and technique also improved considerably.

The last time I spoke with our budding young athlete he still had not achieved his 30 minute goal, but his 400 meter time had dropped to less than 60 seconds. His 5 km personal best was right on 15 minutes and his 10 km personal best was now just under 31 minutes. I am positive it is only a matter of time before he achieves his goal of breaking 30 minutes for 10 km.

Remember, that except for adding stretching to his program, nothing else changed. We did not add anything to his program and we did not take anything away. All we did was incorporate a few basic stretching exercises as a regular part of his training and the results were remarkable.

Do not make the mistake of thinking that something as simple as stretching will not be effective. Stretching is a vital part of any exercise program and should be looked upon as being as important as any other part of your health and fitness.
Chapter 4
The Types of Stretching

Stretching is slightly more technical than swinging a leg over a park bench. There are methods and techniques that will maximize the benefits and minimize the risk of injury. In this chapter we will look at the different types of stretching, the particular benefits, risks and uses, plus a description of how each type is performed.

Just as there are many different ways to strength train, there are also many different ways to stretch. However, it is important to note that although there are many different ways to stretch, no one way, or no one type of stretching is better than another. Each type has its own advantages and disadvantages, and the key to getting the most out of stretching lies in being able to match the right type of stretching to the purpose, or goal trying to be achieved.

For example; PNF and passive stretching are great for creating permanent improvements in flexibility, but they are not very useful for warming up or preparing the body for activity. Dynamic stretching, on the other hand, is great for warming up but can be dangerous if used in the initial stages of injury rehabilitation.

Although there are many different ways to stretch, they can all be grouped into one of two categories; static or dynamic.

**Static Stretches**

The term static stretches refers to stretching exercises that are performed without movement. In other words, the individual gets into the stretch position and holds the stretch for a specific amount of time. Listed below are five different types of static stretching exercises.

**Static Stretching**

Static stretching is performed by placing the body into a position whereby the muscle (or group of muscles) to be stretched is under tension. Both the antagonist, or opposing muscle group and the agonist, or muscles to be stretched are relaxed. Then slowly and cautiously the body is moved to increase the tension on the stretched muscle (or group of muscles). At this point the position is held or maintained to allow the muscles to relax and lengthen.
The stretch to the right is a classic example of a static stretch in which the opposing muscles and the hamstring and back muscles are relaxed.

A minimum hold time of about 20 seconds is required for the muscles to relax and start to lengthen, while diminishing returns are experienced after 45 to 60 seconds.

Static stretching is a very safe and effective form of stretching with a limited threat of injury. It is a good choice for beginners and sedentary individuals.

**Passive (or Assisted) Stretching**

This form of stretching is very similar to static stretching; however another person or apparatus is used to help further stretch the muscles. Due to the greater force applied to the muscles, this form of stretching can be slightly more hazardous. Therefore it is very important that any apparatus used is both solid and stable. When using a partner it is imperative that no jerky or bouncing force is applied to the stretched muscles. So, choose a partner carefully; the partner is responsible for the safety of the muscles and joints while you are performing the stretching exercises.

The stretch on the left is an example of a passive stretch in which a partner is used to stretch the chest and shoulder muscles.

Passive stretching is useful in helping to attain a greater range of motion, but carries with it a slightly higher risk of injury. It can also be used effectively as part of a rehabilitation program or as part of a cool-down.

**Active Stretching**

Active stretching is performed without any aid or assistance from an external force. This form of stretching involves using only the strength of the
The Types of Stretching

opposing muscles (antagonist) to generate a stretch within the target muscle group (agonist). The contraction of the opposing muscles helps to relax the stretched muscles.

A classic example of an active stretch is one where an individual raises one leg straight out in front, as high as possible, and then maintains that fixed position without any assistance from a partner or object.

Active stretching is useful as a rehabilitation tool and very effective as a form of conditioning before moving onto dynamic stretches. This type of stretching exercise is usually quite difficult to hold and maintain for long periods of time and therefore the stretch position is usually only held for 10 to 15 seconds.

PNF Stretching

PNF stretching (Proprioceptive Neuromuscular Facilitation), sometimes referred to as Facilitated Stretching, is a more advanced form of flexibility training that involves both the stretching and contracting of the muscle group being targeted. PNF stretching was originally developed as a form of rehabilitation and for that function it is very effective. It is also excellent for targeting specific muscle groups, and as well as increasing flexibility, it also improves muscular strength.

There are many different variations of the PNF stretching principle and sometimes it is referred to as Contract-Relax stretching or Hold-Relax stretching. Post Isometric Relaxation (PIR) is another variation of the PNF technique.

To perform a PNF stretch, the area to be stretched is positioned so that the muscle (or group of muscles) is under tension. The individual then contracts the stretched muscle group for 5 to 6 seconds while a partner (or immovable object) applies sufficient resistance to inhibit movement. The force of contraction should be relative to the level of conditioning. The
contracted muscle group is then relaxed and a controlled stretch is immediately applied for about 30 seconds. The athlete is then allowed 30 seconds to recover and the process is repeated 2 to 4 times.

Information differs slightly about timing recommendations for PNF stretching. Although there are conflicting responses to the questions: *for how long should I contract the muscle group* and *for how long should I rest between each stretch*, it is my professional opinion, that through a study of research literature and personal experience, the previous timing recommendations provide the maximum benefits from PNF stretching.

**Isometric Stretching**

Isometric stretching is a form of passive stretching similar to PNF stretching, but the contractions are held for a longer period of time. Isometric stretching places high demands on the stretched muscles and is not recommended for children or adolescents who are still growing. Other recommendations include allowing at least 48 hours rest between isometric stretching sessions and performing only one isometric stretching exercise per muscle group in a session.

A classic example of how isometric stretching is used is the *Leaning Heel-back Calf Stretch* to the right. In this stretch the participant stands upright, leans forward towards a wall and then places one foot as far from the wall as is comfortable while making sure that the heel remains on the ground. In this position, the participant contracts the calf muscles as if trying to raise the heel off the ground.

To perform an isometric stretch; assume the position of the passive stretch and then contract the stretched muscle for 10 to 15 seconds. Be sure that all movement of the limb is prevented. Then relax the muscle for at least 20 seconds. This procedure should be repeated 2 to 5 times.
The Types of Stretching

Dynamic Stretches

The term dynamic stretches refers to stretching exercises that are performed with movement. In other words, the individual uses a swinging or bouncing movement to extend their range of motion and flexibility. Listed below are four different types of dynamic stretching exercises.

Ballistic Stretching

Ballistic stretching is an outdated form of stretching that uses momentum generated by rapid swinging, bouncing and rebounding movements to force a body part past its normal range of motion.

The risks associated with ballistic stretching far outweigh the gains, especially when greater gains can be achieved by using other forms of stretching like dynamic stretching and PNF stretching. Other than potential injury, the main disadvantage of ballistic stretching is that it fails to allow the stretched muscle time to adapt to the stretched position and instead may cause the muscle to tighten up by repeatedly triggering the stretch reflex, (discussed in chapter 5).

Dynamic Stretching

Unlike ballistic stretching, dynamic stretching uses a controlled, soft bounce or swinging movement to move a particular body part to the limit of its range of motion. The force of the bounce or swing is gradually increased but should never become radical or uncontrolled.

Do not confuse dynamic stretching with ballistic stretching. Dynamic stretching is slow, gentle and very purposeful. At no time during dynamic stretching should a body part be forced past the joints normal range of motion. Ballistic stretching, on the other hand, is much more aggressive and its very purpose is to force the body part beyond the limit of its normal range of motion.

Active Isolated Stretching

Active isolated (AI) stretching is a form of stretching developed by Aaron L. Mattes, and is sometimes referred to as The Mattes Method. It works by contracting the antagonist, or opposing muscle group, which forces the
stretched muscle group to relax. The procedure for performing an AI stretch is as follows.

1. Choose the muscle group to be stretched and then get into a position to begin the stretch.
2. Actively contract the antagonist, or opposing muscle group.
3. Move into the stretch quickly and smoothly.
4. Hold for 1 to 2 seconds and then release the stretch.
5. Repeat 5 to 10 times.

While AI stretching certainly has some benefits (mainly for the professional or well conditioned athlete), it also has a number of unsubstantiated claims. One such claim is that AI stretching does not engage the stretch reflex (or myotatic reflex) because the stretch is only held for 2 seconds or less.\textsuperscript{1,2} This however, defies basic muscle physiology. The stretch reflex in the calf muscle for example is triggered within 3 hundredths of a second, so any claim that AI stretching can somehow bypass or outsmart the stretch reflex is nothing more than wishful thinking.

**Resistance Stretching and Loaded Stretching**

Resistance stretching and loaded stretching are a form of dynamic stretching that both contract and lengthen a muscle at the same time. They work by stretching a muscle group through its entire range of motion while under contraction. For this reason, both resistance stretching and loaded stretching are as much about strengthening a muscle group as they are about stretching it.

Like AI stretching above, resistance stretching and loaded stretching do have their benefits. Five time Olympic swimmer, Dara Torres credits a portion of her swimming success to the use of resistance stretching. However, these forms of stretching place high demands on the musculo-skeletal system and are therefore only recommended for professional or well conditioned athletes.

\textsuperscript{1} Mattes, A. 2000 *Active Isolated Stretching: The Mattes Method* Pages 1, 3, 6.
\textsuperscript{2} Wharton, J & P. 1996 *The Whartons' Stretch Book* Page xxiii.
Chapter 5
The Rules for Safe Stretching

As with most activities there are rules and guidelines to ensure that they are safe. Stretching is no exception. Stretching can be extremely dangerous and harmful if done incorrectly. It is vitally important that the following rules be adhered to, both for safety and for maximizing the potential benefits of stretching.

There is often confusion and concerns about which stretches are good and which stretches are bad. In most cases someone has told the inquirer that they should not do this stretch or that stretch, or that this is a “good” stretch and this is a “bad” stretch.

Are there only good stretches and bad stretches? Is there no middle ground? And if there are only good and bad stretches, how do we decide which ones...
Chapter 6
How to Stretch Properly

When to stretch?
Stretching needs to be as important as the rest of our training. If we are involved in any competitive type of sport or exercise then it is crucial that we make time for specific stretching workouts. Set time aside to work on muscle groups that are tight or especially important for your particular sport. The more involved and committed we are to exercise and fitness, the more time and effort we will need to commit to stretching.

As discussed in chapter 5 it is important to stretch both before and after exercise, but when else should we stretch? Stretch periodically throughout the entire day. It is a great way to stay loose and to help ease the stress of everyday life. One of the most productive ways to utilize time is to stretch...
Chapter 7
Flexibility Testing

To really take advantage of the many benefits of stretching, a record of flexibility should be kept. For sports trainers and coaches in particular, it is vitally important to test and chart an athletes’ flexibility on a regular basis. This is important for two reasons.

Firstly, it provides a starting point from which to measure improvements and gives an indication of any areas that may be weak, limited or inflexible.

Secondly, in the event of an injury, this baseline flexibility provides a...
Chapter 8
135 Unique Stretching Exercises

In this second half of the book there are 135 photographs of unique stretching exercises, each with an accompanying description explaining how the stretch is performed. These stretching exercises are not specific to any particular sport or any particular type of person. Of course all of them will not be relevant to everyone, but a great number of them will be suitable for most athletes, coaches, trainers and health care professionals.

If you find a particular stretch difficult to perform, start with the stretches that are more comfortable for you, and return to the more difficult stretches when your flexibility has improved.

An index is included on page 44 to assist in finding individual stretches, and each stretch has been arranged to correspond with a particular body part or major muscle group. For example, when looking for stretches for the shoulders, look to that particular heading. The stretches have been arranged so as to start with the neck and work down to the ankles and feet.

On the following two pages there are anatomical diagrams of the major muscles of the body, and at the beginning of each section there is a list of the individual muscles that the stretches target. By matching the list of individual muscles at the beginning of each section, with the anatomical diagrams on the next two pages, you can see exactly which muscles are being stretched during each stretching exercise.

For a more comprehensive explanation of the muscle anatomy involved during each of the stretching exercises, please refer to The Anatomy of Stretching at www.AnatomyOfStretching.com.

Important!
Remember to always follow The Rules for Safe Stretching in chapter 5, and if you have any pre-existing injuries or ailments please consult a sports doctor or physical therapist before attempting any of the following stretches. Discontinue any exercise that causes pain or severe discomfort and consult a medical expert.
Index of Stretches

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Stretches for the Neck and Shoulders

The neck and shoulders are comprised of a multitude of small muscles that control the head and upper arm. The muscles around the neck and shoulder, along with the structure of the joints, allow for a large range of motion of the head and upper arm: including flexion, extension, adduction, abduction and rotation.

The anatomical structures of the neck and shoulder joints are commonly over-stretched by applying too much force to the targeted muscle groups. Please take extra care when performing the following stretches and always follow *The Rules for Safe Stretching* in chapter 5.

Sports that benefit from these neck and shoulder stretches include: Archery; batting sports like Cricket, Baseball and Softball; Boxing; contact sports like Football, Gridiron and Rugby; Golf; racquet sports like Tennis, Badminton and Squash; Swimming; throwing sports like Cricket, Baseball and Field events; and Wrestling.

**The major muscles being stretched.**

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A01 - Lateral Neck Stretch: Look forward while keeping your head up. Slowly move your ear towards your shoulder while keeping your hands behind your back.

A02 - Rotating Neck Stretch: Stand upright while keeping your shoulders still and your head up, then slowly rotate your chin towards your shoulder.
A03 - Forward Flexion Neck Stretch: Stand upright and let your chin fall forward towards your chest. Relax your shoulders and keep your hands by your side.

A04 - Diagonal Flexion Neck Stretch: Stand upright and let your chin fall forward towards your chest. Then gently lean your head to one side.
A05 - Neck Extension Stretch: Stand upright and lift your head, looking upwards as if trying to point up with your chin. Relax your shoulders and keep your hands by your side.
Top 5 Stretches for each Sport

The stretches below are a short list of some of the most beneficial stretches for each sport. Obviously there are a lot more, but these are a great place to start.

<table>
<thead>
<tr>
<th>Sports</th>
<th>Stretches</th>
</tr>
</thead>
<tbody>
<tr>
<td>Archery</td>
<td>A16, B12, C02, D06, D14</td>
</tr>
<tr>
<td>Basketball</td>
<td>A05, B13, F03, H05, K07</td>
</tr>
<tr>
<td>Backpacking</td>
<td>C02, D11, E07, G03, K07</td>
</tr>
<tr>
<td>Batting sports: (Cricket, Baseball, Softball, etc.)</td>
<td>A09, B16, C03, D02, D18</td>
</tr>
<tr>
<td>Boxing</td>
<td>A01, A07, B08, B17, D17</td>
</tr>
<tr>
<td>Canoeing</td>
<td>A13, A16, B06, D20, E04</td>
</tr>
<tr>
<td>Contact sports: (Football, Gridiron, Rugby, etc.)</td>
<td>A02, A07, E08, F01, H05</td>
</tr>
<tr>
<td>Cross Country</td>
<td>C05, F03, I04, K07, L01</td>
</tr>
<tr>
<td>Cycling</td>
<td>B06, D08, E05, F05, J03</td>
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<tr>
<td>Field Hockey</td>
<td>D22, E07, F02, H04, J02</td>
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<tr>
<td>Golf</td>
<td>A17, B12, D06, D18, I04</td>
</tr>
<tr>
<td>Gridiron</td>
<td>D13, E10, F06, G13, H02</td>
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<tr>
<td>Hiking</td>
<td>C03, D11, E03, G01, J03</td>
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<tr>
<td>Ice Hockey</td>
<td>D23, E08, F01, H02, K07</td>
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<tr>
<td>Ice Skating</td>
<td>D07, E03, E12, F01, H01</td>
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<tr>
<td>Inline Skating</td>
<td>D09, E04, E10, F03, H04</td>
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<tr>
<td>Kayaking</td>
<td>A13, A17, B07, D18, E03</td>
</tr>
<tr>
<td>Martial Arts</td>
<td>B17, C05, D13, G05, H06</td>
</tr>
<tr>
<td>Mountaineering</td>
<td>C02, D09, E01, G03, L02</td>
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<tr>
<td>Netball</td>
<td>A02, B14, F03, H05, K04</td>
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<tr>
<td>Orienteering</td>
<td>C03, D13, E04, G06, K02</td>
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<tr>
<td>Race walking</td>
<td>D17, E05, F03, J02, K04</td>
</tr>
<tr>
<td>Racquet sports: (Tennis, Badminton, Squash, etc.)</td>
<td>A14, B07, B17, C03, D16</td>
</tr>
<tr>
<td>Roller Skating</td>
<td>D08, E04, E13, F06, H03</td>
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<tr>
<td>Rowing</td>
<td>A15, A16, B06, C05, E01</td>
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<tr>
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<td>C03, F01, G04, I02, K04</td>
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<tr>
<td>Rugby</td>
<td>D17, E04, F01, G04, H05</td>
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<tr>
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<td>D13, E01, E13, F01, I04</td>
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<tr>
<td>Snow Skiing</td>
<td>D06, D22, F06, I03, K07</td>
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<tr>
<td>Soccer</td>
<td>F01, G05, H05, J06, L02</td>
</tr>
<tr>
<td>Surfing</td>
<td>C05, D16, E07, F05, I02</td>
</tr>
</tbody>
</table>
Swimming
Throwing sports: *(Cricket, Baseball, Field Events, etc.)*
Volleyball
Walking
Water skiing
Wrestling

A12, A14, B08, D04, J03
A13, A17, B14, B17, D18
A12, D22, E10, H02, K07
D21, E08, F05, J03, K01
B01, C03, D10, E09, F06
D15, D22, E06, G01, H06
# Top 5 Stretches for each Sports Injury

The stretches below are a short list of suggested stretches to help with a number of common sports injuries. The following stretches are beneficial for the prevention and long term rehabilitation of the injuries listed below; however, they are not to be used in the initial stages of injury rehabilitation. Stretching during this early stage of the rehabilitation process can cause more damage to the injured tissues. **Avoid all stretching during the first 72 hours after any soft tissue injury**, and remember to follow *The Rules for Safe Stretching* in chapter 5.

<table>
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<th>Sports Injury</th>
<th>Stretches</th>
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<tr>
<td>Thumb Sprain</td>
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<tr>
<td>Finger Sprain &amp; Tendonitis</td>
<td>B11, B12, B13, B14, B17</td>
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<td><strong>Wrists and Forearm</strong></td>
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<tr>
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<td>Carpel Tunnel &amp; Ulnar Tunnel Syndrome</td>
<td>B02, B11, B13, B16, B17</td>
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<tr>
<td>Elbow Sprain</td>
<td>A08, A16, B10, B11, B17</td>
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<tr>
<td>Triceps Tendon Rupture</td>
<td>A09, B01, B06, B09, B10</td>
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<tr>
<td>Tennis, Golfers &amp; Throwers Elbow</td>
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<td><strong>Shoulder and Upper Arm</strong></td>
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<td>Biceps Bruise, Strain &amp; Tendonitis</td>
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<td>Chest Strain</td>
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<td>Impingement Syndrome</td>
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<tr>
<td>Pectoral Muscle Insertion Inflammation</td>
<td>A14, B01, B04, B05, B07</td>
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<tr>
<td>Rotator Cuff Tendonitis</td>
<td>A09, A12, A13, A14, A15</td>
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<tr>
<td>Frozen Shoulder (<em>Adhesive Capsulitis</em>)</td>
<td>A08, A14, A16, B06, B07</td>
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<td><strong>Back and Spine</strong></td>
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<tr>
<td>Muscle Bruise &amp; Strain</td>
<td>D05, D08, D13, D18, D22</td>
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<tr>
<td>Ligament Sprain</td>
<td>D01, D05, D09, D14, D21</td>
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<tr>
<td>Body Part</td>
<td>Muscles/Conditions</td>
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<tr>
<td><strong>Abdomen</strong></td>
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<td><strong>Hips, Pelvis and Groin</strong></td>
<td>Hip Flexor Strain &amp; Iliopsoas Tendonitis</td>
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<td></td>
<td>Groin Strain &amp; Tendonitis</td>
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<td>Osteitis Pubis</td>
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<td>Piriformis Syndrome</td>
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<td><strong>Hamstrings and Quadriceps</strong></td>
<td>Quadriceps Bruise, Strain &amp; Tendonitis</td>
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<td>Hamstring Strain</td>
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<td>Iliotibial B&amp; Syndrome</td>
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<td><strong>Knee</strong></td>
<td>Medial Collateral Ligament Sprain (MCL)</td>
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<td>Anterior Cruciate ligament Sprain (ACL)</td>
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<td>Osgood-Schlatter Syndrome</td>
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<td>Patellofemoral Pain Syndrome</td>
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<td>Patellar Tendonitis (Jumpers Knee)</td>
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<td><strong>Lower Leg</strong></td>
<td>Calf Strain</td>
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<td>Achilles Tendon Strain &amp; Tendonitis</td>
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<td></td>
<td>Shin Splints (MTSS)</td>
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<td></td>
<td>Anterior Compartment Syndrome</td>
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<td><strong>Ankle and Feet</strong></td>
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<td>Posterior Tibial Tendonitis</td>
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<td></td>
<td>Peroneal Tendonitis</td>
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<td></td>
<td>Plantar Fasciitis</td>
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</tbody>
</table>
Resources


About the Author

Brad Walker
Brad is an internationally recognized stretching and sports injury consultant with over 20 years of practical experience in the health and fitness industry. Brad is a Health Science graduate of the University of New England with postgraduate accreditations in athletics, swimming and triathlon coaching. Brad has worked with elite level and world champion athletes and lectures for Sports Medicine Australia on injury prevention.

About the Models

Dustin Smith
Dustin is a Level I Artistic Gymnastics coach with over 6 years of professional coaching experience. He holds a Certificate II and III in sport and recreation and is Head Coach & Coordinator of men’s gymnastics at the Gold Coast Gymnastics Club in Queensland, Australia. His sporting achievements include state representation for soccer and baseball, and a 3rd place finish for trampoline at the Queensland championships.

Shannon Austin
Shannon has 14 years of gymnastics competition experience with numerous national and international rankings; including a Level 10 National and State ranking; and a 1st place Level 9 ranking at the 2006 International Hawaii Aloha Gymfest. She currently works as a gymnastics coach at the Gold Coast Gymnastics Club in Queensland, Australia and is studying Secondary Education and PE at university.
Need help designing a stretching routine?

Designing the right stretching routine isn’t easy. Even with a publication like the Ultimate Guide to Stretching & Flexibility, you still need to have a detailed understanding of anatomy and physiology; have experience in basic strength and conditioning techniques; and know precisely which stretches are relevant for each particular muscle group and each particular sport.

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A short time ago I caught up with a good friend of mine; Christopher Guerriero. He's the author of *Maximize Your Metabolism* and the founder of the National Metabolic & Longevity Research Center in the US, and helps actors, actresses, models and "C" level executives reach their full potential both physically and mentally.

Anyway, we got to talking and he said a lot of his clients had been asking about stretching, and could I do an exclusive audio recording for his clients?

Well, of course I agreed but with one condition: I had to be able to offer the recording to my valued customers. He agreed; and now you can get our exclusive, one-on-one audio recording for free; the same recording that his clients have to pay $97 a month to access.

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Simply visit the web site below and you can listen to the recording online, download the MP3 to your iPod or read the entire word-for-word transcript. I hope you enjoy it.

---

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The *Ultimate Guide to Stretching & Flexibility* is the book you keep with you wherever you go. It’s an easy-to-use, quick reference guide for anyone involved in health, fitness and sporting activities. Written to minimize the likelihood of sports injury and increase athletic performance, it gives coaches, trainers, athletes and fitness enthusiasts a complete reference handbook to assist with the planning and implementation of their training and rehabilitation sessions.

The author, Brad Walker, is a Health Science graduate of the University of New England with postgraduate accreditations in athletics, swimming and triathlon coaching. He has coached elite level and world champion athletes from sports as diverse as triathlon, motor cycle racing, roller skating, squash and baseball, and has lectured extensively on sports injury prevention and rehabilitation.

Brad has written more books and articles on stretching and flexibility than any other author; including the *Anatomy of Stretching* and the *Anatomy of Sports Injuries*. His stretching and sports injury articles have been published in numerous health and fitness magazines and extensively online at sites such as About.com and Athletes.com. Amazon has listed his books on five Best-Seller lists and Google cites over 100,000 references to him on the internet.

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**Dr Dennis Waitley (PhD): (Author & Past Chairman US Olympic Committee)**

"The first publication to thoroughly cover the importance of stretching to improve performance, avoid injury and assist in recovery. A vital part of any athlete's complete conditioning program."

**Craig Starcevich (B.Ed.) (Fitness Coordinator - Brisbane Lions Football Club)**

"The Ultimate Guide to Stretching & Flexibility has given me a greater understanding and appreciation of the importance of stretching. After reading the Ultimate Guide, my coach and I decided to write specific stretching time into my program, thus taking stretching far more seriously. Thanks for allowing me to read the Ultimate Guide. It is definitely a book that anybody wanting to exercise, even more so elite athletes should have by their side."

**Greg Bennett: (World Champion Triathlete)**

"We're always looking for the best, most updated information to help our athletes. I liked everything. It might be the best book on this subject I've read. The exercise descriptions and photos are excellent."

**Robert: (Pullman, USA)**

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