

# Stretching ...its Essential!

Dr. Brian Abelson DC, ART, Kamali T. Abelson BSc.  
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The importance of stretching within a workout routine cannot be over-emphasized. Stretching brings our body back into balance, prevents injuries, enhances performance, changes our posture, and even changes how we age, and the way people perceive us. Yet stretching is often neglected because the average person (and many athletes) does not understand why it is so important to not only be strong, but also flexible.

Consider the basic biomechanics of how our body performs. Our bodies are designed to work in balance - every time a group of muscles contracts to perform an action, an opposing group of muscles (antagonist) must relax and lengthen.

These muscles can only contract as forcefully as their antagonist can relax. For example, the quadriceps muscle can contract more quickly if the hamstring muscle group is able to easily lengthen and relax. Without the lengthening of the antagonist, we lose our power, balance, and endurance, we become susceptible to injury, and waste our energy.

Flexibility training has been shown to reduce tension and resistance in muscle tissue, allowing these structures to lengthen comfortably, and properly support the contracting muscle groups.

## Why Stretch?

Tense, tight muscles result in:

- Decreased sensory awareness.
- Increased blood pressure.
- Decreased blood circulation.
- Decreased coordination.
- Increased injuries.

Constantly tense muscles decrease their own blood circulation. Blood is the conduit of oxygen and food nutrients to the muscles, and is the remover of toxic wastes from your tissues. When blood supply is reduced, muscles suffer from a lack of nutrients and oxygen, and have a build-up of toxic waste. This combination results in fatigue, aches, decreased strength, and sometimes pain.

Effective stretches and increased flexibility provides many benefits including:

- Increased range of motions of your joints.
- Increased blood supply to the soft tissues.
- Enhanced performance and coordination.
- Reduced injuries.
- Reduced tension and resistance in muscle tissue.
- Increased comfort and performance of your body.
- Increased awareness of the body.

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## Stretching to support your work!

Modern life seems to place our tissues in a state of constant contractions (which keeps our muscles in a continually shortened state) without corresponding activities to lengthen and relax these same muscles. This places our body in a state of physical imbalance.

For example, look at our typical office workers, sitting in front of their computers for eight hours a day. Their shoulders are rolled forward, their back is hunched, their neck jutting forward, and their posture is poor. This results in shortened and contracted chest muscles, tension in their upper back, weak posture, headaches, and often wrist and elbow pain.

With the best of intentions, these same office workers go to the gym to make themselves stronger by lifting weights and by performing aerobic workouts – in the hope that they can improve their ability to better perform at work, and reduce their chance of injury. (Done correctly, exercise is very effective, since the stronger you are, the less susceptible to injury you become.) Unfortunately, many of these people rely heavily on a weight program to increase their strength – resulting in yet more contractions. To their frustration, they experience slow or limited progress in their routines, and often suffer from overuse injuries.

These motivated individuals often do not realize that the strength they hope to gain from these weight lifting exercises is only effective when the opposing soft-tissue structures are able to properly lengthen. *They need to stretch.*

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## Types of Stretching

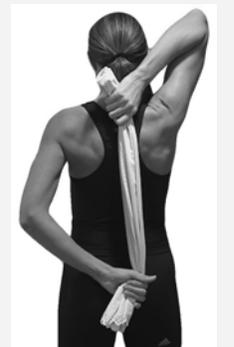
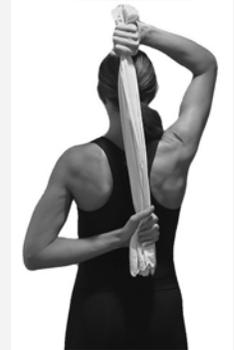
The art of stretching has undergone a revolution over the last 50 years. Today, the athlete can choose from many types of stretching routines, each specifically oriented towards addressing specific needs. You can choose to perform one or more of the following categories of stretches, each with their own unique benefits:

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- **Dynamic stretching** – Uses motion to gradually increase the reach and range of motion. These stretches are typically used for warming up and waking up the muscles before starting an exercise program. For example, swinging your arms in a circle, kicking an imaginary football, or twisting from side to side.
- **Static Active stretching** – Uses little or no motion to stretch the muscles of the opposing group. It is the opposite of dynamic stretching. Static active stretching requires the strength of the opposing muscle groups to hold the limb in position for the stretch, and requires no voluntary muscle involvement. An example would be holding one leg up high while balancing on the other. This type of stretching is normally done at the end of your workout to bring your body back toward a state of rest and recovery.
- **Static Passive stretching** – Is a stretch where you are relaxed and make no contribution to the range of motion. Instead, an external force is created by an outside agent (body weight, device to help you maintain your the stretch. The muscles groups are stretched without actually moving the limb. These are ideal for the cool-down period of your workout. Static passive stretches should be held for about 10 seconds and 2-3 stretches per muscle group is sufficient.
- **Isometric stretching** – Is another type of passive stretching where isometric muscle contractions are used to stretch and strengthen the muscles without changing its length. This type of stretching develops strength while in the stretched position.
- **PNF stretching** - PNF stretching is a combination of static passive stretching and isometric stretching. It usually requires the participation of a stretching partner. In this, your partner stretches the muscle group passively, causing an isometric contraction in the stretched position, then relaxing the stretch, and then increasing the stretch passively for their partner.

### Triceps Towel Stretch

This is an excellent stretching exercise that works a number of muscles including: triceps, subscapularis, serratus anterior, infraspinatus, teres minor, and teres major. You will need a long towel to do this exercise.



1. Stretch the towel behind your back, holding both ends firmly.
  - The bottom hand should be at the small of the back.
  - The top hand should be behind the head.
2. Keep the bottom hand relaxed.
3. With the upper hand, slowly pull the towel upwards as far as you can comfortably stretch.
  - Take at least 30 seconds to reach this maximum stretch.
4. Now relax the *upper hand*.
5. With the lower hand, slowly pull the towel downwards as far as you can comfortably stretch.
  - Take at least 30 seconds to reach this maximum stretch.
6. Repeat this exercise five times, taking at least 30 seconds for each stretch.
7. Repeat the entire sequence for the other side.

*This exercise is derived from the book – **Release Your Pain – Resolving Repetitive Strain Injuries with Active Release Techniques.***

**Note:** There are many excellent resources in both the web and in the many books available today that can help you to perform each of these types of stretches. Take the time to research these resources, and find the tool that best helps you in your stretching goals.

## Introducing Stretching into Your Exercise Routines

So how should you introduce stretching into your daily life and into your workout routines? How can you achieve the maximum benefit?

In a perfect world, you would find time to do some dynamic stretching before your workout (after a 10 minute warm-up), then static stretches after your workout. And with any luck, integrate some gentle isometric and PNF stretches at your desk to keep you limber.

With all stretches, the keys are:

- Relaxed muscles. Contracted muscles are not relaxed, and cause you to perform resistance exercises rather than stretches.
- Controlled slow motions to keep the muscle relaxed, and to prevent overstretching and tearing of the muscle fibers.
- Stretching only to the point of mild discomfort. The concept of 'no pain, no gain' does not apply to effective stretching!

## Single Leg Hamstring Stretch

This exercise stretches and increases the flexibility of the gluteal fold, hamstrings, and calf muscles of the affected leg.



2. Lie on your back.
3. With both hands, reach down and clasp your leg just above the knee.
4. Lift the leg up towards the ceiling and pull the leg towards your chest, keeping the leg straight throughout the motion.
  - Only stretch to the point where you feel a light tension on the back of your leg. Do not overstretch.
  - You may feel the tension in the upper or lower portion of the leg.
  - Normal range of motion is about 80 to 90 degrees as measured from the floor.
5. Hold the stretch for 30 seconds and repeat it for the other side.

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## When Stretching Doesn't Work

Sometimes, even the best stretching program is not able to achieve its goal of relaxed, lengthened muscles that smoothly and effectively support their contracting partner. This can happen when soft-tissues have been injured through over-use,

trauma, or due to cumulative trauma caused by repetitive actions (running, swinging a bat, typing at a keyboard, and so on.)

These types of overuse injuries all result in inflammation, edema, and pain, followed by the laying down of sticky adhesive tissues between the affected tissue layers. These adhesions prevent free movement of these tissues, and are your body's response to overuse and abuse. They are placed there to prevent you from executing these movements, and to cause you to give your body a chance to rest and recover. Stretching when this initially happens can help you to resolve and recover from this problem.

Unfortunately, our tendency is to ignore these messages, and continue to overuse these tissues, resulting in yet more inflammation and yet more adhesive tissues being laid down. This destructive cycle can result in excessive amounts of adhesive tissue that restrict the free motion of soft tissues. These adhesive tissues are often stronger than the surrounding muscles. In the advanced stages, no amount of stretching will release these adhesions between your tissue layers. Your stretches will be effective in the areas above and below the adhesions, but not at the point of the adhesion itself. These adhesions reduce muscle strength, and keep you from reaching your full fitness potential

If you find that stretching is not effective, or that you are not able to perform the stretches to the full amount, you may want to consider soft-tissue therapies that can **locate** and **release** these adhesions. Some very effective techniques include **Active Release Techniques (ART)** and **Graston Techniques**. Both these techniques can help to release adhesions between the soft tissue layers, restore mobility, and help you to experience the full benefit of your stretching program.

### **So what are you waiting for...Get Stretching!**

Start integrating stretches into your workout, and into your daily life. You will be surprised and happy at the difference you feel, both in your body, and in your performance.

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**Dr. Brian Abelson DC.** is the Clinical Director of *Kinetic Health – Soft Tissue Systems* in Calgary, Alberta, Canada. **Kamali Abelson BSc** is a Senior Information Architect who has published numerous technical manuals, websites, online help systems, and health articles.

Dr. Abelson is a native Calgarian who attended the University of Calgary, majoring in Biosciences, before graduating from Palmer College of Chiropractic West, California with an award for *Clinical Excellence*. He holds advanced certification in all levels of Active Release Techniques, is trained in Biomechanics and ART, is an accomplished ART Instructor, and is licensed to the ART Elite Providers Network.

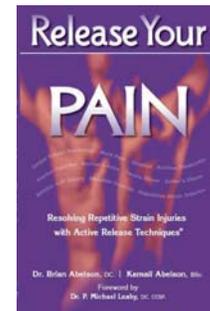
Dr. Abelson and Kamali Abelson are co-authors of **“Release Your Pain”** - the first book written for the public about Active Release Techniques. They are also the co-authors of the award-winning information websites: [www.drabelson.com](http://www.drabelson.com) and [www.activerelease.ca](http://www.activerelease.ca).

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**Would you like to know more?** Understand the real causes of your soft-tissue injuries and restrictions, and learn about how Active Release Techniques can help to resolve these.

Try out the exercises at the end of each chapter; each exercise has been specially designed to address a particular type of soft-tissue problem.

You can purchase our new book *“Release Your Pain – Resolving Repetitive Strain Injuries with Active Release Techniques”* at [www.releaseyourbody.com](http://www.releaseyourbody.com)



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