

**PROFESSIONAL AND HOME USE**

# **STRETCHING FOR PAIN RELIEF**

**ELBOW, FOREARM & WRIST**

**NIEL ASHER EDUCATION / LAWFORD COLLEGE**

## **Fitness and Flexibility**

An individual's physical fitness depends on a vast number of components, and flexibility is only one of these. Although flexibility is a vital part of physical fitness, it is important to see it as only one "spoke" in the "fitness wheel." Other components include strength, power, speed, endurance, balance, co-ordination, agility, and skill.

Whilst particular sports require different levels of each fitness component, it is essential to plan a regular exercise or training program that covers all the components of physical fitness. Rugby and American football (gridiron), for example, rely heavily on strength and power; however, the exclusion of skill drills and flexibility training could lead to serious injury and poor performance. Strength and flexibility are of prime concern to a gymnast, but a sound training program would also improve power, speed, and endurance.

The same is true for each individual: while some people seem to be naturally strong or flexible, it would be foolish for such persons to completely ignore the other components of physical fitness. And just because an individual exhibits good flexibility at one joint or muscle group, it does not mean that the entire individual will be flexible. Therefore, flexibility must be viewed as specific to a particular joint or muscle group.

## **The Dangers and Limitations of Poor Flexibility**

Muscles that are tight and stiff limit our normal range of motion. In some cases, lack of flexibility can be a major contributing factor to muscle and joint pain. In the extreme, lack of flexibility can mean it is difficult, for example, to even bend down or look over the shoulder.

Tight, stiff muscles also interfere with proper muscle action. If the muscles cannot contract and relax efficiently, the result will be a decrease

in performance and a lack of muscle movement control. Moreover, short, tight muscles cause a dramatic loss of strength, power, and efficiency during physical activity.

In a very small percentage of cases, muscles that are tight and stiff can even restrict blood circulation. Good blood circulation is vitally important in helping the muscles receive adequate amounts of oxygen and nutrients. Poor circulation can result in increased muscle fatigue and, ultimately, will impede the muscles' repair process and the ability to recover from strenuous exercise.

Any one of these factors can greatly increase the chances of becoming injured. Together they present a package that includes muscular discomfort, loss of performance, an increased risk of injury, and a greater likelihood of repeated injury.

### **Causes of Restricted Flexibility**

The muscular system needs to be flexible in order to achieve peak performance, and stretching is the most effective way of developing and retaining flexible muscles and tendons. However, a number of other factors also contribute to a decrease in flexibility.

Flexibility, or range of motion, can be restricted by both internal and external factors. Internal factors such as bones, ligaments, muscle bulk, muscle length, tendons, and skin all restrict the amount of movement at any particular joint. As an example, the human leg cannot bend forward beyond a straight position, because of the structure of the bones and ligaments that make up the knee joint.

External factors such as age, gender, temperature, restrictive clothing, and of course any injury or disability will also have an impact on one's flexibility.

## **Flexibility and the Ageing Process**

It is no secret that with each passing year, the muscles and joints seem to become stiffer and tighter. This is part of the ageing process and is caused by a combination of physical degeneration and inactivity. Although we cannot help getting older, this should not mean that we give up trying to improve our flexibility.

Age should not be a barrier to a fit and active lifestyle, but certain precautions should be taken as we get older. Participants just need to work at it for longer, be a little more patient, and take a lot more care.

## **Stretching**

Stretching has a host of benefits, including:

- Improved range of motion
- Increased power
- Diminished post-treatment soreness
- Reduced fatigue

Stretching the muscles with trigger points, or the muscles that you are trying to strengthen, is important for breaking old holding patterns, restoring range of motion, and preventing injury. Gently stretching after a trigger point treatment session or after strengthening exercises can help reduce muscle soreness and keep your muscles long and flexible.

## **Types of Stretching**

There are many different ways to stretch, each with its advantages and disadvantages. The two most recommended techniques are: (1) passive/static stretching, best used at home or after treatment; and (2) proprioceptive neuromuscular facilitation (PNF), best used when working with a partner.

The effects of different techniques vary from person to person. It is advised to warm up for 10 minutes before stretching, whether with some cardiovascular exercises or a warm/hot shower.

### **Passive/Static Stretching Technique**

This technique is safe and effective for the novice:

1. Place the body in a position where the muscle you want to stretch can be put under tension.
2. Slowly and cautiously approach the stretch.

***Do not stretch to the point of pain—discomfort is expected, but be cautious not to force the stretch.***

3. Hold for a minimum of 20 seconds (45–60 is best) and allow the muscle to lengthen.
4. Breathe and relax
5. Gently come away and rest for 45–60 seconds.
6. Repeat the stretch 2–3 times
7. Repeat 2–3 times daily.

Increase efficiency by stretching the antagonist (the opposite muscle) straight afterwards.

## **Proprioceptive Neuromuscular Facilitation (PNF)**

This is a more advanced technique and may be used for obtaining more permanent results; it also improves muscular strength. There are several forms of PNF stretches, including “hold relax stretch” or “contract relax stretch.”

1. Position the muscle group so that it is under tension, and hold.
2. Contract the stretched muscle for 5–6 seconds while a partner resists you moving the joints.
3. Stretch the muscle again for approximately 30 seconds.
4. Rest/recover for 30 seconds.
5. Repeat the procedure 2–4 times (up to 10 minutes).
6. Repeat 2–3 times daily.

## **Protocol for Stretching**

As a rule any stretching program should be continued for four to six weeks, unless otherwise specified by your practitioner, doctor, or physical therapist. After your recovery, these exercises can be continued as a maintenance program for lifelong protection and health.

Performing the exercises two to three days a week will maintain strength and range of motion. A goal should be to make a regular time at home every day for stretching the affected muscles toward obtaining full range of motion. It is also advised to keep a diary of any stretches that aggravate your trigger point symptoms.

Remember to warm up before doing stretches: perform 5 to 10 minutes of low-impact activity, such as walking or riding a stationary bicycle.

NB: Do not ignore pain. It is important to be aware that overzealous stretching can reactivate latent trigger points. The advice is to progress

gradually from one stretch to another and listen to your body; different stretches work different types of fiber and afford the brain a better sense of self. You should not feel severe pain during or after a stretch: in general, if a stretch activates your trigger point pain, it should be stopped.

Pain on rest can indicate that the trigger points are very active. The advice here is either to rhythmically move the effected area in warm water or to apply moist heat and the gentlest of massage.

Talk to your practitioner, doctor, or physical therapist if you have any pain while stretching.

### **Foam Roller Stretching**

Foam rollers have been used since the 1950s to stretch ease and ‘rebalance’ muscular tension. Dr. Moshe Feldenkrais is credited with having been the first person to use them for therapeutic purposes. Foam rollers come in various shapes, sizes and densities; they are cheap to buy and easy to use. Selecting the best roller is down to personal choice. Often this depends on your height, weight and the area you are looking to stretch.

Rollers can be very effective at deactivating trigger points both on their own, after hands-on techniques, and after dry needling. Using a foam roller is simple; used properly they can be very effective for improving:

- Balance
- Flexibility
- Coordination
- Relaxation
- Range of motion

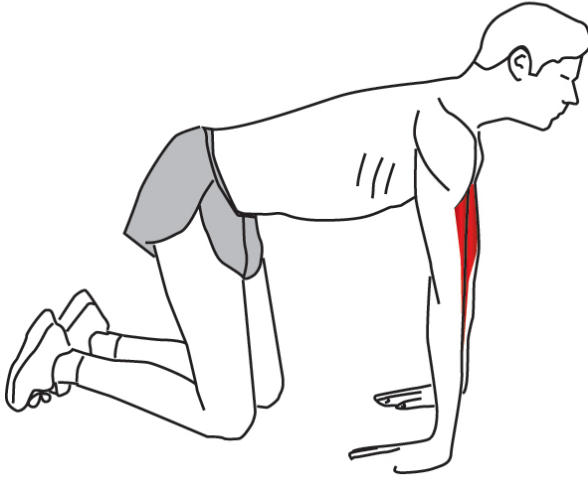
## **Medical Disclaimer**

The techniques offered in this book are not a substitute for proper therapy from a registered practitioner; although aches and pains from trigger points and muscle injuries are common, there can sometimes be an underlying pathology. It is advisable to always seek a proper diagnosis from a qualified medical practitioner.

### **You follow the techniques described in this book at your own risk.**

If you think you may be suffering from any medical condition you should seek immediate medical attention. You should never delay seeking medical advice, disregard medical advice, or discontinue medical treatment because of information provided herein.





### **TECHNIQUE:**

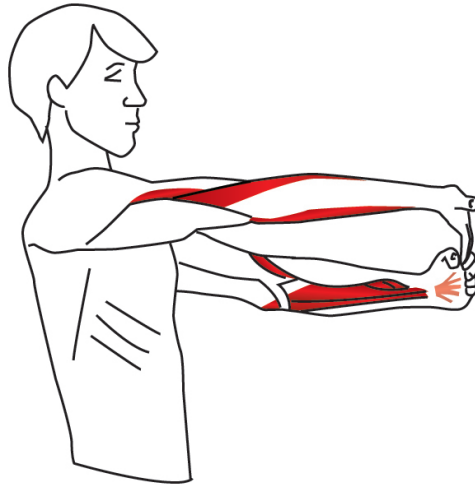
- Kneel on all fours
- Rotate your hands so that your fingers are pointing towards your knees and your forearms are facing forwards
- Slowly move backwards

**PRIMARY MUSCLES:** Biceps brachii. Brachialis. Brachioradialis. Coracobrachialis.

**SECONDARY MUSCLES:** Pronator teres. Flexor carpi radialis. Flexor carpi ulnaris. Palmaris longus.

**INJURY WHERE STRETCH MAY BE USEFUL:** Biceps tendon rupture. Bicipital tendonitis. Biceps strain. Elbow strain. Elbow dislocation. Elbow bursitis. Tennis elbow. Golfer's elbow. Thrower's elbow.

**NOTE:** Some people feel the stretch in their forearms and others in their upper arms; this depends on where you are most tight. Move your hands closer to your knees in order to stretch more easily.



### **TECHNIQUE:**

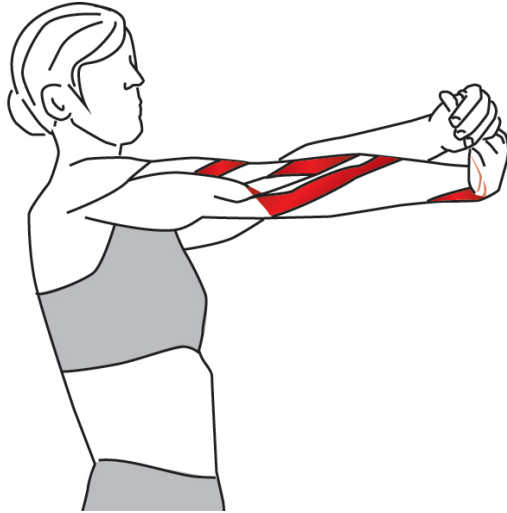
- Stand or sit upright
- Extend one arm straight out keeping it parallel to the ground
- Turn your palm outwards so that your fingers are pointing downwards
- Pull your fingers back using your other hand

**PRIMARY MUSCLES:** Brachialis. Brachioradialis. Pronator teres. Flexor carpi radialis. Flexor carpi ulnaris. Palmaris longus.

**SECONDARY MUSCLES:** Flexor digitorum superficialis. Flexor digitorum profundus. Flexor pollicis longus.

**INJURY WHERE STRETCH MAY BE USEFUL:** Tennis elbow. Golfer's elbow. Thrower's elbow. Wrist sprain. Wrist dislocation. Wrist tendonitis. Carpal tunnel syndrome. Ulnar tunnel syndrome.

**NOTE:** There are many small muscles, tendons and ligaments in the forearms, wrists, and fingers. Do not apply too much force too quickly.



### **TECHNIQUE:**

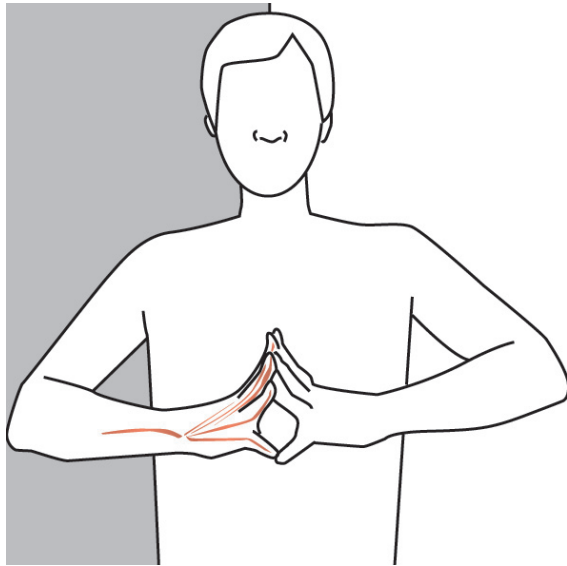
- Stand or sit upright
- Extend one arm straight out keeping it parallel to the ground
- Turn your palm upwards and bend your fingers so that they are pointing up
- With your other hand, push your fingers gently towards you

**PRIMARY MUSCLES:** Brachioradialis. Extensor carpi ulnaris. Supinator.

**SECONDARY MUSCLES:** Extensor digitorum. Extensor pollicis longus and brevis.

**INJURY WHERE STRETCH MAY BE USEFUL:** Tennis elbow. Golfer's elbow. Thrower's elbow. Wrist sprain. Wrist dislocation. Wrist tendonitis. Carpal tunnel syndrome. Ulnar tunnel syndrome

**NOTE:** There are many small muscles, tendons and ligaments in the forearms, wrists, and fingers. Do not apply too much force too quickly.



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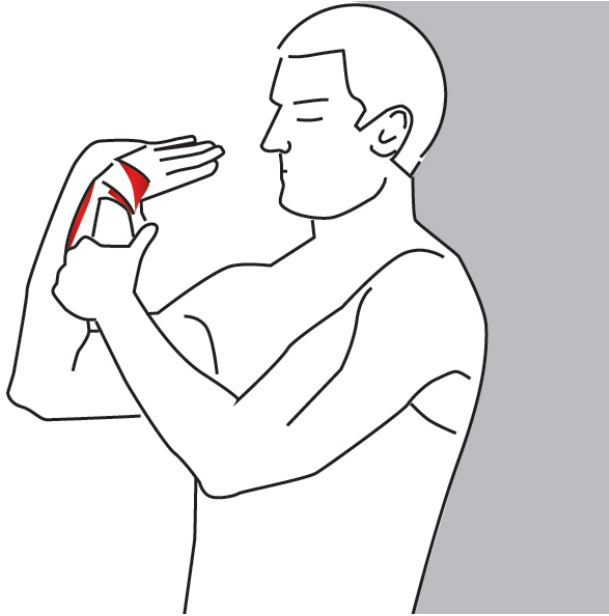
- Place the tips of your fingers together
- Push your palms towards each other

**PRIMARY MUSCLES:** Flexor digitorum superficialis. Flexor digitorum profundus. Flexor pollicis longus. Flexor pollicis brevis.

**SECONDARY MUSCLES:** Opponens pollicis. Opponens digiti minimi. Palmar interossei.

**INJURY WHERE STRETCH MAY BE USEFUL:** Tennis elbow. Golfer's elbow. Thrower's elbow. Wrist sprain. Wrist dislocation. Wrist tendonitis. Carpal tunnel syndrome. Ulnar tunnel syndrome.

**NOTE:** There are many small muscles, tendons and ligaments in the forearms, wrists, and fingers. Do not apply too much force too quickly.



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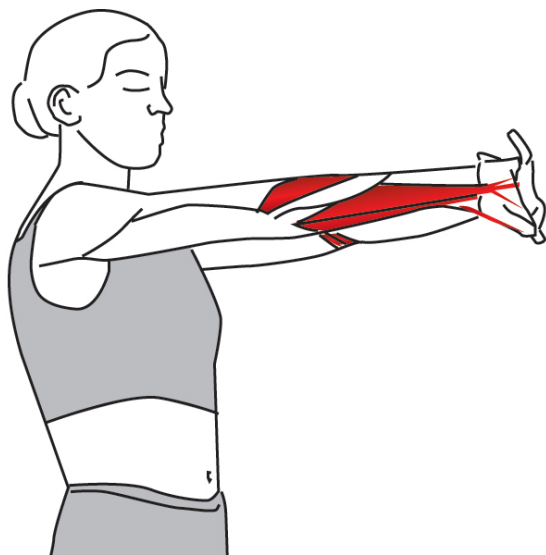
- Extend your arm straight outwards and bend it at a 90 degree angle
- Point your fingers upwards and your thumb to one side
- Pull your thumb down with your other hand

**PRIMARY MUSCLES:** Flexor pollicis longus. Flexor pollicis brevis.

**SECONDARY MUSCLES:** Adductor pollicis. Opponens pollicis.

**INJURY WHERE STRETCH MAY BE USEFUL:** Tennis elbow. Golfer's elbow. Thrower's elbow. Wrist sprain. Wrist dislocation. Wrist tendonitis. Carpal tunnel syndrome. Ulnar tunnel syndrome.

**NOTE:** There are many small muscles, tendons and ligaments in the palm and thumb. Do not apply too much force too quickly.



### **TECHNIQUE:**

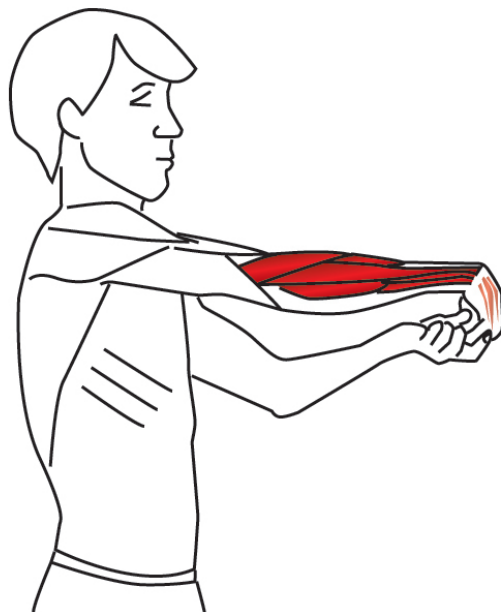
- Interlock your fingers in front of your chest
- Straighten your arms
- Turn the palms of your hands outwards

**PRIMARY MUSCLES:** Pronator teres. Flexor carpi radialis. Flexor carpi ulnaris. Palmaris longus.

**SECONDARY MUSCLES:** Flexor digitorum superficialis. Flexor digitorum profundus. Flexor pollicis longus.

**INJURY WHERE STRETCH MAY BE USEFUL:** Tennis elbow. Golfer's elbow. Thrower's elbow. Wrist sprain. Wrist dislocation. Wrist tendonitis. Carpal tunnel syndrome. Ulnar tunnel syndrome.

**NOTE:** There are many small muscles, tendons and ligaments in the forearms, wrists, and fingers. Do not apply too much force too quickly.



### **TECHNIQUE:**

- Extend one arm straight out
- Point your fingers downwards
- Use your other hand to pull your fingers towards your body

**PRIMARY MUSCLES:** Extensor carpi ulnaris. Extensor carpi radialis longus and brevis. Extensor digitorum.

**SECONDARY MUSCLES:** Extensor digiti minimi. Extensor indicis.

**INJURY WHERE STRETCH MAY BE USEFUL:** Tennis elbow. Golfer's elbow. Thrower's elbow. Wrist sprain. Wrist dislocation. Wrist tendonitis. Carpal tunnel syndrome. Ulnar tunnel syndrome.

**NOTE:** There are many small muscles, tendons and ligaments in the forearms, wrists, and fingers. Do not apply too much force too quickly.

