

# Flexibility, Stretching and Common Injuries

**Flexibility** is the body's freedom of movement. It allows our body to function efficiently, well within normal range of motion, without putting extra stress on joints, connective tissue and muscles. Like with anything else – if you don't use it, you lose it!

**General stretching** can be done any time – in the morning to loosen up, at work to relieve stress and relax, after sitting or standing for a long time, when you feel stiff. However, in order to improve flexibility, certain guidelines must be followed.

## Principles of safe stretching for increased flexibility:

- Flexibility is joint/muscle specific
- Breathing should be rhythmic, slow and controlled
- Hold the stretch without bouncing
- Be aware of the mechanism called The Stretch Reflex - an involuntary muscle contraction brought on, when muscles are stretched beyond their limits
- Warm up your body before stretching

## Benefits of stretching:

Increased physical efficiency and performance  
Decreased risk of injury  
Increased coordination  
Improved muscle balance and postural awareness  
Enhanced circulation  
Decreased risk of lower back pain  
Reduced stress and muscle tension

## FITT Principle for flexibility

**F** – at least daily

**I** – hold relaxed level of mild tension

**T** – hold stretch for 30-60 sec. repeat 2-3x

**T** – slow, controlled hold of mild stretch

Work your balance...

...and improve your proprioception. Proprioception is an automatic sensitivity mechanism in the body that sends messages through the central nervous system. That system then relays information to the rest of the body about how to react and with what amount of tension. In a sense, it is your "muscle memory" to control your movements and allow your body to work efficiently.

Overtime, as we get older, this system can lose its sharpness resulting in loss of balance and ability to control precise movements. It is very important to train it.

Try these exercises:

- Stand upright and shift your body weight from side to side. Be aware of the body positioning.
- Stand on one leg without losing balance, building up to 30 seconds per leg.
- Next challenge – close your eye (or later both eyes), while standing on one leg. Make sure you have something to support yourself on case you lose balance (chair, table, counter).

## Common injuries

'Injury' is any physical damage done to the body. Whether it's a traumatic or chronic injury, the body's ability to function normally is compromised due to inflammation, swelling and/or damage done to muscular-skeletal structures. This leads to decreased range of motion, strength, balance and coordination.

Three most common injuries are **lower back, knee and hip injuries**.

**Lower back** health relies on the efficiency of core stabilizers - muscles attached to pelvis, spine and femur, forming a “corset”. They provide a strong support unit for pelvis and spine in neutral alignment. In this alignment the spine is in the best possible position with the least stresses imposed on it, promoting good posture. The main stabilizers (lower abdominals and deeper back muscles) are “turned on” to do their job.

Because they are endurance muscles, the key is to have them “on” at all times. Latest studies show that in people with lower back injuries these muscles fail to do their job to support the core and keep a perfect neutral alignment. Therefore the goal is to train/retrain the muscles in question.

Daily routine for back health:

1. Sitting “tall out of your hips”
2. Seated knee lift
3. Seated arm reach over head

Daily routine for knee health:

1. Seated knee extension
2. Step-ups

Daily routine for hip health:

1. Side lying “clam shell” or straight leg lift
2. Standing leg side, front, back lift

There are two general kinds of **knee problems** - mechanical (sudden injury, blow) and inflammatory knee problems. ACL (Anterior Cruciate Ligament), PCL (Posterior Cruciate Ligament), MCL (Medial Collateral Ligament), LCL (Lateral Collateral Ligament), meniscus (medial and lateral) injuries are examples of common mechanical injury. Arthritis and osteoarthritis are examples of common inflammatory injuries to the knee.

**Hip and pelvis injuries** can result from a fall, direct blow, twist, or excessive muscle contraction. Overuse injuries of the hip include bursitis, tendonitis, and fractures. These injuries develop over time from muscle contractions and pounding of the legs.

**BOTTOM LINE:** As a primary prevention, keep active and mobile. Keep functional flexibility and strength up with regular stretching and strengthening routine.

If Injury occurs:

**RICE** Principle - **R**est, **I**ce, **C**ompression, **E**levation

Seek medical help for proper diagnosis and treatment.