

## How the Body Works... The Knee

The knee joins the thigh bone (femur) to the shin bone (tibia). The smaller bone that runs alongside the tibia (fibula) and the kneecap (patella) are the other bones that make the knee joint. Tendons connect the knee bones to the leg muscles that move the knee joint. Ligaments join the knee bones and provide stability to the knee. Two C-shaped pieces of cartilage called the medial and lateral menisci act as shock absorbers between the femur and tibia.

A person doesn't think much about their knee until something goes wrong and every step hurts, especially when someone does a lot of standing and/or walking for work. What can go wrong with a knee? Here is a short list of some of the more common things that can go wrong with the knee:

Pain under the kneecap (also known as patellofemoral syndrome or chondromalacia patella): Irritation of the cartilage on the underside of the kneecap (patella), causing knee pain. This is a common cause of knee pain in young people.



*Continued on Page 2*

### *Truths/Myths about Exercise*

Why do I need cardiovascular exercise?

Our bodies are designed to move not sit all day!

If you have a sedentary job, think about how your body feels at the end of the day. Maybe your shoulders burn from tension and your hips feel sore and tight from sitting in a chair all day. You feel tired and lethargic.

Now, think about how your body

feels after a workout. You have a lot more energy and your muscles feel much looser.

Our bodies are made to move-not sit around all day and yet, that's exactly what we're doing.

Here are some of the benefits of cardiovascular exercise:

- Stronger heart and lungs
- Increased bone density

- Reduced stress
- Reduced risk of heart disease
- Better sleep
- More energy
- Weight loss

Every little bit helps. Even a 10 minute walk around the neighborhood helps.

## True Stories...

### "Hip Pain, But Why?"

A man recently came into the clinic with complaints of hip pain. He said he felt tight in the front of his hip and he had been trying to stretch it out for several weeks but it was slowly getting worse. He works as an iron pourer and always pours off the same hip.

Thru an evaluation it was determined that he had a tight back part of the hip (the posterior capsule) similar to what is seen in golfers and baseball players even though he felt tight and sore in the front.

He was given a home stretching program for the muscles in the gluts and had several physical therapy sessions focusing on stretching the hip capsule as well as improving his mechanics while pouring iron. He now is back to working pain free.

So many times the pain shows up in a different location from where the problem is so it is always a good idea to get checked out by a quality physical therapist from HCE.

## How The Body Works...

### The Knee (From Pg. 1)

**Knee osteoarthritis:** Caused by aging and wear and tear of cartilage, osteoarthritis symptoms may include knee pain, stiffness, and swelling. HCE believes that this condition is caused by poor movements of the bones that make up the knee, thus creating irritation and tissue breakdown. Correcting this movement can "heal" the joint.

**Meniscal tears:** Damage to a meniscus, the cartilage that cushions the knee, often occurs with twisting the knee. Large tears may cause the knee to lock.

### Here are some simple things that can help you take care of your knees:

**Maintain a healthy weight:** every pound you gain adds three to four pounds with each step you take. Just being overweight by 10lbs can add 30 to 40lbs with each step on your knee, thereby increasing the wear & tear on the joint.

**Get stronger:** The stronger your muscles are that cross the knee joint the less stress on the knee itself. The muscles share the work load.

**Get flexible:** Be sure to keep the muscles in the front (the quadriceps) and the muscles in the back of the upper leg (the hamstring) flexible. This helps reduce stress on the knee, by allowing for normal & smooth motion.

**Check your shoes:** Wear proper fitting shoes and make sure to replace them when they wear out. If you work on concrete floors or stand all day at work consider wearing a cushioned insole. Let the shoes take the pounding!

## Healthy/Unhealthy Habits

One of the big trends the past couple of years has been minimalist running shoes. You probably have seen people wearing one brand of them. The shoes with the individual toes.

### Are they good for you?

The big claim of the minimalist shoes is that it reduces foot injuries and mimics running barefoot, how running was done years ago and is still done a lot in Africa. Several problems arise: there was

no concrete when people were running barefoot and people didn't weigh nearly as much as we do now in the United States. Today people can be an overweight couch-potato and decide to run in a brand new pair of minimalist shoes. This is a recipe for disaster!

Some new studies have shown that recreational runners running in a pair of minimalist shoes for 10 weeks showed increased

bone marrow edema- something that will lead to injury. So the truth is you need to be very careful if you choose to run in a minimalist shoe and transition very slowly. If you are a beginner runner you are better off getting a gait assessment from a physical therapist to screen out if you have any lower extremity issues and what style of shoe best fits your body type. So in truth don't believe all the hype!

