## It's all about blood flow!

When people ask what the most important thing about healing an injury, recovering from a recent surgery, or just staying healthy is; my answer is very often related to blood flow. Maintaining adequate blood flow to the tissues is so important for healing and health maintenance, yet many assume it is outside of their control. I beg to differ. Physical activity increases blood flow to the working tissues. Adequate nutrition and hydration keeps the body's blood supply generous and healthy. To prevent drying the tissues out, avoid nicotine, limit caffeine, salt and alcohol intake. In addition, consider all that Physical Therapy has to offer.

Aerobic activity enhances blood flow. Resistance training to a muscle not only helps to build up the muscle, but actually enhances vascular connections. As a muscle undergoes training, the first result of the training is the formation of new capillaries bringing in more blood to the working tissues. It's like the exercising of the muscle is the community building a new mall or business. The body is smart enough to lay down a network of roads... or capillaries to carry those shoppers/blood cells with oxygen to the new mall/working muscle. Improved blood flow not only supplies the muscle with FRESH blood and oxygen, it also effectively carries away the muscle's waste back to the kidneys. Better waste management leads to faster recovery times, less soreness after a workout, and overall improved tissue health. Furthermore, healthier tissues resist injury, heal faster when injured, and recover from surgery much more quickly.



Adequate nutrition and hydration contribute greatly to quality and quantity of blood flow. Low blood volume can dry tissues out, slow recovery, and delay healing. Low blood volume can make muscles function inefficiently, which predisposes one to injury. Quality of blood flow also plays a role. The blood's role is to carry oxygen and nutrients to the cells. If those nutrients are missing, or there is excess cholesterol, fats or sugars, the blood can't do its job effectively. Smoking and poor diet further degrades blood flow by constricting blood vessels and weakening the heart's ability to pump the vital blood. Many surgeons deny patients elective surgery until they have quit smoking. A surgeon desires a good outcome as much as the patient, and since smoking hinders blood flow, it can also limit one's candidacy for elective surgery. One more reason to quit!

Caffeine, salt and alcohol also upset the fluid balance in the body and can lead to low blood volumes. It's important to try to avoid or limit these substances when recovering from surgery and limit them in moderation for overall health.

In addition to exercise, nutrition/hydration, and avoiding or moderating certain substances; there is another effective tool in improving one's blood flow. Physical Therapy (PT) can offer a great deal for healing injured tissue, tissue recovering from surgery, or simply maintaining tissue health. The primary method PT uses to enhance blood flow is carefully prescribed exercises meant to target specific tissues. In addition, various forms of massage can improve venous return and help with muscle waste management, or can stimulate improved blood flow to an injured or overworked tissue. Deep moist heat, Hydrotherapy, or Ultrasound can supply comfort and blood flow to enhance and aid healing. Finally, instrument aided massage, manual joint techniques, and therapeutic taping can further aid the body's management of blood flow.

It is often a challenge to "go with the flow". Through exercise, nutrition as well as Physical Therapy; we strive to improve the blood flow that fuels your muscles to help you stay active and healthy.

