What Is Proprioception?

Proprioception refers to the body's ability to sense movement within joints and or joint position in the body. This enables us to know where our body parts are without having to look. This is important in our everyday movements but especially to those complicated fast paced sporting movements, where precision, quickness and coordination is vital. This coordinated movement is a direct result of the normal functioning of the proprioceptive system within our body. What is the Proprioceptive System?

The proprioceptive system is made up of several receptor nerves that are positioned within the muscles, joints and ligaments around joints and tendons. These receptors can sense tension and stretch (push or pull) action and pass this information to the brain receptors where it is processed. The brain then responds within the axon hillocks and dendrites to muscles to contract or relax in order to produce movement in the body.This system is subconscious; we typically don't have to think about the movements or the correlation of a movement. These reactions are not only subconscious but very fast and when the joints or ligaments are damaged the receptors may also be impaired resulting in the information not being transmitted to the brain efficiently. As a consequence, the joint aches or feels abnormal. When following an injury to joints and ligaments or tendons the receptors are also damaged, which indicates that the information that is usually sent to the brain is impaired. Thus a consequence to the joint feels somewhat abnormal.Some Benefits to proprioception?

When a joint has become damaged, or a ligament or tendon has been torn or partially torn, there will be a deficit in the proprioceptive ability of the individual to function ability. This can leave the person prone to re-injury, or decrease their coordination during sport performance. Proprioceptive ability can be trained through specific core, functional and stability exercises and, in the case of the injured athlete, the improvement can compensate for the damage caused by a specific injury. This has the effect of decreasing the chances of another injury. Proprioception also helps speed an athlete's return to competition following injury by stabilizing the ligaments, joints, tendons and core muscles. The exercises should be initiated as soon as possible following injury and be performed by a college trained person with a degree in this field.