What is a Muscle "Knot" or Adhesion?
by Tina Watkins

Skeletal muscle, as its name implies, is the muscle attached to the skeleton. It is also called striated muscle. Skeletal muscle is made up of thousands of cylindrical muscle fibers bound together by connective tissue, through which blood vessels and nerves run. Increased strength and muscle mass comes about through an increase in the thickness of these individual fibers and an increase in the amount of connective tissue.

A knot, or trigger point, is an irritated patch of muscle. The nerve that controls it may be firing too quickly, or there may have been some trauma to the muscle fibre and the tissue is full of junk molecules.

Once the initial injury has occurred, a cycle of repair and re-tear develops that leads ultimately to a large tender knot developing in the muscle. This is comprised of muscle fibres surrounded by scar tissue. Gerard Hartmann of Ireland is a world-renowned physical therapist, who has treated 61 Olympic medal winners, and worked closely with Nike to develop the Free Run shoe. He has said that scar tissue is "like chewing gum stuck and hardened to a wool carpet."

Within the muscle the scar tissue is inflexible, so when the muscle either contracts forcibly (shortens and broadens) or stretches (lengthens and narrows) the scar tissue re-tears and the cycle of repair and re-tear continues with increased irritation and more scar tissue is therefore created. Excessive scar tissue formation at the site of tear inhibits normal contractibility and extensibility of muscle.