Stretching Principles
STRETCHING PRINCIPLES

A Course for the Safe and Effective Application of Stretching Techniques

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Introduction to Stretching

Stretching is a very important part of a training program and is often overlooked. Many problems stem from lack of flexibility. When a muscle is hypertonic, it is limited in its ability to contract and lengthen properly. Limited ability in the muscles causes unproductive movements and joint stress. Muscles that are hypertonic are also more likely to contribute to bad biomechanics. Appropriate stretching and moderate exercise may prevent many common musculoskeletal injuries prevalent in today’s society. Stretching and strengthening, when implemented appropriately, produce a solid foundation for healthy biomechanics. Biomechanics and movement patterns become inefficient without this foundation. Inefficiency can lead to less than optimal performance and increase the risk of injury.

In order to develop appropriate training programs that are in line with desired results, it is important to understand specific motion patterns. If a muscle is too tight, the limited range of motion (ROM) may contribute to injury. A joint cannot move through its optimal range of motion relative to its demands, because the body will begin to compensate. This will then produce inefficient movements which can lead to injury. On the other hand, when a muscle is too loose there will be less stored energy to tap into for explosive movements, and the integrity of the joint diminishes. Randomly increasing the joints’ range of motion, without considering the individual and the tasks they need to perform, may be detrimental. Studies have shown a decrease in muscle power output, and increased muscle reaction time, following a stretch. Stretching certain muscle groups may be contraindicated when strength and/or power are required of them during the activity. In some instances, decreasing the body’s range of motion will enhance performance. One example is a sprinter’s torso. Energy derived from the ground is transferred to the trunk by the lower extremities. Some of this energy can be lost to excessive lengthening of the trunk