



## Summary

Active movement of skeletal muscle is brought about by the contraction of voluntary muscle. This muscle tissue has contractile properties which are activated by nerve impulse, to supply the effort required to move or stabilize the body lever. If resistance is applied to a muscle as it contracts, the muscle will adapt, and become stronger over time. Adaptive changes can occur in muscle through the use of therapeutic exercise if the metabolic capabilities of the muscle are progressively overloaded. Muscles which are contractile tissue become stronger as a result of hypertrophy of muscle. The cardiovascular response of the muscle improves thereby increasing muscle endurance and power.

The therapeutic use of resistance is an exercise program, whether applied manually or mechanically, it is an integral part of a patient's plan of care when the ultimate goal is to improve strength, endurance and overall physical function.

All of us at some point in our life have experienced reduced power and tiredness bordering or fatigue. What causes this? This is a common complaint called muscle weakness. As the name suggests, it is the reduced strength in one or more muscles. Muscle weakness can be mild or severe, temporary or permanent, reversible or irreversible.

Many factors, such as disease, disuse and immobilization may result in muscle weakness. The therapeutic use of resistance in an exercise program, whether applied mechanically or manually, is an integral part of patient's plan of care when the ultimate goal is to improve strength, endurance and overall physical function.