

Diseases of the Muscular System

GENERAL TERMINOLOGY

Atrophy—a decrease in muscle cell size from either disease or disuse.

Hypertrophy—an increase in muscle cell size.

Myalgia—muscle pain.

DISORDERS

Strain—occurs when a muscle or tendon is stretched beyond its elastic limits.

Cause: trauma.

Contraindications/indications: use ice and energy work during the initial 48 to 72 hours; massage proximal to the injury may improve circulation and healing.

Sprain—occurs when a ligament or joint capsule becomes stretched beyond its elastic limits.

Cause: trauma.

Contraindications/indications: use ice and energy work during the initial 48 to 72 hours; massage proximal to the injury may improve circulation and healing.

Muscle spasm (cramp)—spontaneous, involuntary contraction of skeletal muscle.

Causes: trauma; water or electrolyte imbalance causing the motor neurons to become hypersensitive and send out spontaneous action potentials.

Contraindications/indications: short effleurage from tendons to muscle belly can reset proprioceptors; compression, strain-counterstrain, proprioceptive neuromuscular facilitation, and reciprocal inhibition stretching techniques can be effective.

Fibromyalgia—a widespread musculoskeletal pain and fatigue disorder; 80 to 90% of cases occur in women; primarily affects the soft fibrous tissues of the body—muscles, ligaments, and tendons; patients describe their pain as deep muscular aching, throbbing, shooting, and stabbing; intense burning may also be present as well as abnormal patterns of sleep, diffuse pain and fatigue (particularly in muscles), headaches, irritable bowel, numbness and tingling in the extremities, and tender points—18 specific points primarily in the neck, spine, shoulders,

Remember that you cannot increase or decrease the number of muscle cells (or fat cells) in your body, but you can increase or decrease their size.

Strains and sprains are graded according to their severity. Table 27-1 compares the degrees of severity.

TABLE 27-1 Degrees of Sprains and Strains

Severity	Condition of Fibers	Degree of Swelling	Limitations
First degree	Stretched	Minimal	Minimal
Second degree	Partially torn	Moderate	Moderate
Third degree	Completely torn	Severe	Marked

and hips where tenderness occurs; diagnosis is often based on tenderness or pain in at least 11 of the 18 specified tender points.

Cause: unknown; theories include injuries or trauma that affects the central nervous system, changes in muscle metabolism that may decrease blood flow and cause fatigue, or an infectious agent such as a virus.

Contraindications/indications: use caution around tender points; kneading, pétrissage, and friction should be performed only as client's tolerance allows.

Chronic fatigue syndrome—disorder characterized by fatigue that is persistent, relapsing, or debilitating and does not improve with bed rest; to be officially diagnosed with this disease, the patient must also have fatigue that reduces or impairs average daily activity level by more than 50 percent for a period of at least 6 months and have no previous history of fatigue.

Cause: unknown; many theories exist, including virus infection, autoimmunity, multiple nutrient deficiencies, food intolerance, or extreme physical or mental stress.

Contraindications/indications: massage may reduce associated stress and anxiety and allow the body to relax; avoid any deep tissue work because it could overwork the immune system.

Torticollis (wryneck)—a deformity of the neck causing tilting or rotation to one side.

Cause: spasm of the sternocleidomastoid muscle because of strain or infection.

Contraindications/indications: massage to the neck (specifically, the sternocleidomastoid muscle) will help relieve tension and anxiety.

Muscular dystrophy—a group of muscular disorders in which there is considerable muscle degeneration and weakness.

Cause: inherited genetic trait.

Contraindications/indications: basic massage can relieve tension and related stress and anxiety, and could even slow atrophy; stretching can also be effective.

Duchenne muscular dystrophy—the most common form of muscular dystrophy; common signs, which usually appear before 3 years of age, include lordosis, muscle contractures, muscle wasting, and fat and connective tissue deposition in the muscles; patients are usually confined to a wheelchair by 12 years of age.

Cause: inherited sex-linked trait (predominantly affects males).

Contraindications/indications: basic massage can relieve tension and related stress and anxiety and could even slow atrophy; stretching can also be effective.

Myasthenia gravis—a disease characterized by destruction of acetylcholine receptor sites, producing overall muscle weakness; weakness is made worse by exercise and emotional stress and may lead to death if the respiratory muscles are affected; four times more common in women than in men; incidence rate in the United States is about 3 per 100,000.

Cause: autoimmune disease in which the body produces an immune response against the acetylcholine receptors in the neuromuscular junction; sometimes the cause is unknown.

Contraindications/indications: basic massage and range of motion exercises can relax and reduce stress; avoid any deep tissue work, which can release toxins in the body, stressing the kidneys and liver and potentially further complicating the condition.