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What therapeutic interventions are used by physical therapists?

Active Range of Motion (AROM) - the patient lifts or moves a body part through range of motion against gravity. AROM is usually one of the first modalities prescribed for arthritis.

Active Assisted Range of Motion (AAROM) - therapist-assisted active range of motion. This is usually prescribed for gentle stretching or strengthening for a very weak body part.

Cryotherapy or Cold Therapy - used to cause vasoconstriction (the blood vessels constrict or decrease their diameter) to reduce the amount of fluid that leaks out of the capillaries into the tissue spaces (swelling) in response to injury of tissue. Ice or cold is used most frequently in acute injuries, but also an effective pain reliever for even the most chronic pain.

Gait Training - the analysis of walking problems by visually examining the interaction of the low back and the joints of the thighs, legs, and feet during the various stages of walking, including initial contact, loading response, mid stance, terminal stance, pre swing, mid swing, and terminal swing. Many back, thigh, leg, ankle, and foot problems may be caused by or manifest themselves in subtle gait abnormalities.

Isometrics - muscle contraction without joint movement. This is usually prescribed for strengthening without stressing or damaging the joint (e.g., arthritis, or exercises to be performed in a cast, or right after surgery if recommended by the therapist/doctor).

Isotonics- muscle(s) contracting through the ROM with resistance. This is usually prescribed for strengthening.

Joint Mobilization - Joint mobilization refers to moving a joint passively. "Passive" mobilization refers to when the therapist moves the joint rather than the patient moving their joint. Moving joints, by either facilitating or assisting the joint accomplishes the goals of increasing range of motion, decreasing pain and/or reducing swelling and inflammation. Joint mobilization is almost always used in conjunction with other interventions that also increase motion and decrease pain.

Manual Therapy - Manual therapy describes a variety of techniques utilized by physical therapists. It includes all interventions where there is a one-on-one, hands-on treatment. Massage, joint mobilization and manipulation, PNF, positional release, dry needling, soft tissue mobilization and intramuscular dry needling are all considered manual therapy techniques.

Neuromuscular Electrical Stimulation (NMES) - the application of electrical stimulation to aid in improving strength (e.g., the quadriceps muscle after knee surgery or injury). NMES is also used to decrease pain and swelling and to relieve muscle spasm.

Proprioceptive Neuromuscular Facilitation (PNF) - a system of manually resisted exercises performed in diagonal patterns that mimic functional movements. PNF was initially used in developmentally and neurologically impaired patients but now is used in almost every aspect of neuromuscular retraining from athletes in sports facilities to the very weak in hospitals and nursing homes.

Posture Training - instruction in the correct biomechanical alignment of the body to reduce undue strain on muscles, joints, ligaments, discs, and other soft tissues. There is an ideal posture, but most people do not have ideal posture. Therapists educate patients about the importance of improving posture with daily activities. Stretching and strengthening exercises may be prescribed to facilitate postural improvement and to prevent further disability and future recurrences of problems.

Progressive Resistive Exercises (PRE) - exercises that gradually increase in resistance (weights) and in repetitions. PRE is usually prescribed for reeducation of muscles and strengthening. Weights, rubber bands, and body weight can be used as resistance.

Passive Range of Motion (PROM) - the patient or therapist moves the body part through a range of motion without the use of the muscles that "actively" move the joint(s).

Soft Tissue Mobilization - therapeutic massage of body tissue performed with the hands. Soft tissue mobilization may be used for muscle relaxation, to decrease swelling, to decrease scar tissue adhesions, and for pain relief.

Stationary Bicycle - with or without resistance. This is usually prescribed for improving the strength and/or range of motion of the back or lower extremities as well as cardiovascular endurance.

Stretching/Flexibility Exercise - exercise designed to lengthen muscle(s) or soft tissue. Stretching exercises are usually prescribed to improve the flexibility of muscles that have tightened due to disuse or in compensation to pain, spasm or immobilization.

Traction - a gentle longitudinal/axial pull on the neck, either manual or mechanical, intermittent or continuous for relief of neck pain, to decrease muscle spasm and facilitate unloading of the spine.

Transcutaneous Electrical Nerve Stimulation (TENS) - a relatively low voltage applied over painful areas through small self-adhesive electrodes. The electrical stimulation "disguises" or "overrides" the sensation of pain. It is a small, portable unit, used in intervals, to control pain and reduce dependence on drugs. It is usually prescribed for relief of pain.

Ultrasound - ultrasound uses a high frequency sound wave emitted from the sound head when electricity is passed through a quartz crystal. The sound waves cause the vibration of water molecules deep within tissue causing a heating effect. When the sound waves are pulsed, they cause a vibration of the tissue rather than heating. The stream of sound waves helps with nutrition exchange at the cellular level and healing. Studies have shown that ultrasound is helpful for ligament healing and clinically, for carpal tunnel syndrome, and muscle spasm.