HOW MANUAL OSTEOPATHS CAN BENEFIT BY ADDING PHYSIOTHERAPY MODALITIES TO THEIR SERVICES

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History of Osteopathy and Physiotherapy

Osteopathic medicine was developed in the United States in 1874 by Andrew Taylor Still. Dr. Still started out as a medical doctor but the death of his wife and children from infectious diseases left him disillusioned with orthodox medicine. Using an alternative philosophical approach, Dr. Still opposed the use of drugs and surgery as remedial agents. He saw the human body as having self – healing mechanisms and the duty of the osteopathic physician to remove any impediments to healthy functioning. He promoted healthy living, good nutrition and the application of manipulative techniques to improve physiological function.

His philosophy was based on the understanding of the integration between body, mind and spirit and the relationship between structure and function. When there is interruption to structure; such as disruption to blood flow or nervous impulses, there is a subsequent interference with the functioning of the tissues supplied by those structures which ultimately leads to disease. By manipulating bones and restoring structure, he would cure disease.

Physical therapy has its origins in ancient history. Hippocrates advocated the use of massage and hydrotherapy for health back in 460 BC and before that, the need for physical (manual) handling of patients was well understood within Ayurvedic medicine. The modern practice of physical therapy was developed in London in 1896. It was discovered that hospital patients needed to be mobilized on a regular basis in order to maintain adequate muscle mass, function and mobility. The popularity of this discovery grew rapidly and in 1920 the Chartered Society of Physiotherapy (CSP) was formed in the Country of United Kingdom.

What do Manual Osteopaths and Physiotherapists do?

Manual osteopaths treat the whole person and not just the areas causing symptoms. This is because manual osteopaths believe the cause often originates in another area part of the body. Therefore, several people may come in with the ‘same’ symptoms, but the reasons for their symptoms may be very different, it would follow that no two osteopathic treatments are the same.

Physiotherapists apply therapeutic techniques and intervention in order to assist recovery of functional limitation and disability following injury and disease. The intervention (particularly with NHS physiotherapists) is often aimed at preventing impairment.

What do Manual Osteopaths and Physiotherapists treat?

Manual osteopathy is well known for its ability to help with musculoskeletal aches and pains but it is also able to help with a vast majority of different symptoms and conditions in people of all ages; from babies to the elderly! Manual osteopaths can provide one-off relief from pain and dysfunction or help you to manage any long-term (chronic) complaints.

Common conditions seen by manual osteopaths include; joint pain, back pain, neck pain, period pain, muscle aches, strains and stiffness, tennis elbow, asthmas, repetitive strain injuries, headaches, migraine, child development problems, arthritis, sports injuries, pain and altered function pre and post joint operations, etc.

Physiotherapists also treat all of these problems. Since many patients are referred to a physiotherapist from a doctor, physiotherapists might also see a more varied range of conditions. Some physiotherapists specialize in certain areas of dysfunction, for example; neurological physiotherapy and cardiopulmonary physical therapy.

Both manual osteopaths and physiotherapists have access to more modern diagnostic equipment such as X-ray and MRI.

How do Manual Osteopaths and Physiotherapists treat patients?

Manual osteopaths take a thorough medical history to make sure that you're safe to treat and that manual osteopathy would be of benefit to you. Very often an osteopath will ask you to undress down to your underwear in order to observe your whole body posture.

The manual osteopath will use a variety of carefully applied manual therapeutic techniques such as joint mobilization, muscle energy techniques, and soft tissue therapy.

Osteopathic treatment is not painful and can often be very relaxing. Following an osteopathic treatment, it is not uncommon to have some transient discomfort (lasting 24-48hours), this is just your body adapting to the changes the manual osteopath has made and re-balancing the system. Patients often report an improvement in all areas

of health following osteopathic treatment, not just relief from the original problem that brought them to the manual osteopath in the first place.
Physiotherapy consultations are very similar, starting with a subjective examination (interview) including medical history, they will then go on to examine the patient to rule out serious pathology and determine functional limitations. This may or may not involve you undressing – dependant of course on the area involved. The results of the examination and interview will guide diagnosis, therapeutic intervention and management of the patient. Physiotherapists use: therapeutic exercise, electrotherapeutic and mechanical intervention, functional training exercises, patient education and counseling as well as working with occupational therapists in the provision of aids and appliances. Emphasis is on health promotion, quality of life, and fitness in all ages. Some physiotherapists will also use manipulation, but this is undertaken as a short post-graduate course.

Combining Manual Osteopathy with Physiotherapy

Many patients arrive at their first physiotherapy appointment expecting to receive hot packs, ultrasound and instructions on how to complete a series of exercises. These modalities are warranted in many instances and most therapists would agree that exercise is needed to help restore muscle imbalances. However, many therapists now approach the restoration of function from a different perspective. These therapists are interested in why a muscle isn't functioning properly and view exercise not as the driving mode of recovery but as a complement to manual therapy. They may, for instance, look to restore proper sacroiliac or lumbar joint function to treat piriformis syndrome rather than directly manipulate the piriformis muscle through exercise.

Manual osteopathy is a specialized form of manual therapy delivered with the hands as opposed to a device or machine. In manual Osteopathy, practitioners use their hands to put pressure on muscle tissue and mobilize joints in an attempt to decrease pain caused by muscle spasm, muscle tension and joint dysfunction.

Joint Mobilization

The movement of the joints or bones in a controlled manner. This technique is to help loosen joints and re-establish functional movement patterns.

Soft Tissue Therapy

The restoration of muscle play, breaking fascial restrictions between muscles, and decreasing excessive tone that is associated with muscle tightness.

Muscle Energy Technique (MET)

Muscle Energy Technique focuses on joint range-of-motion limitation, and uses light to moderate force muscular contractions precisely controlled to affect a specific joint and restore normal joint motion. The therapist will position the patient in a manner such that the specific joint will be affected. The patient is asked to initiate a muscle contraction to assist in the procedure.

Physiological Therapeutics

Various physiotherapy modalities may be utilized as an adjunct to hands-on treatment in order to reduce pain and swelling and to promote healing. Modalities that are commonly used include:

Interferential Current Stimulation

Interferential current (IFC) stimulation involves crossing the pathways of two unmodulated sine waves of different frequencies. The frequency of one wave is usually fixed at 4,000 Hz and the other wave is variable from 2,000 Hz to 5,000 Hz. The interferential resultant current is theoretically produced in a cloverleaf shape on a diagonal between the pathways of the two circuits. The point at which the electrical currents cross will be where the interference is the greatest. Thus, you receive the benefit of the cumulative effects of interfering waveforms.

Physiological Effects of Interferential Stimulation

- Increases circulation to the areas being treated.

- Enhances the release of the endogenous opiates such as enkephalins and endorphins.

INDICATIONS FOR USE

- Reduction of muscle spasms.
- Pain management.
- Reduction of edema.

CONTRAINDICATIONS:

- Pregnancy.
- Cancers.
- Cardiac Pathology.
- Infections.
- Thrombophlebitis.
- Pacemakers.

Ultrasound

Ultrasound is the use of common household current converted to an ultrasound wave by the combination of a transformer, transducer head and oscillating circuit. The crystal in the transducer head creates the piezoelectric effect of the ultrasound wave which allows these waves to penetrate deep into the tissues. This can have many favorable thermal and non-thermal effects.

PHYSIOLOGICAL EFFECTS OF ULTRASOUND

- Increased metabolic rate of tissue
- Increased extensibility of collagen
- Increased blood flow and tissue healing
- Increased joint range of motion
- Decreased sensitivity of neural elements
- Decreased pain and muscle spasms

INDICATIONS FOR ULTRASOUND:

- Treatment of non-acute soft tissue injuries
- Sub-acute and chronic inflammation
- Tissue regeneration
- Non-acute bursitis
- Adhesive capsulitis

- Scar tissue softening
- Myositis
- Nerve root irritation

CONTRAINDICATIONS FOR ULTRASOUND:

- Neoplasms – active cancers
- Circulatory disorders
- Pregnant uterus or over reproductive organs
- Areas of acute inflammation
- Open wounds
- Epiphysis of growing bones
- Over or around pacemakers
- Over areas of decreased sensation
- Healing fractures
- Feverish conditions
- Also, avoid brain, heart, eyes and ears

COMMENTS:

- Can be used in combination with electrical stimulation or with 10% Hydrocortisone cream for Phonophoresis. Commonly used in conjunction with other modalities.
- Can be used directly on skin surface with ultrasound gel or in water (immersed ultrasound)
- PTC, Inc. clinical policy is to discontinue ultrasound after 10-12 treatments to a single area due to possible detrimental physiological effects.

TENS

TENS is the use of stimulation to assist in the management of pain. This unit assists in the closure of the "gate" of pain signal transmission. TENS is given for home use so the patients are able to use when they feel they need it. This can be used for acute as well as chronic conditions.

PHYSIOLOGICAL EFFECTS OF TENS:

- Impulses flood the pathways to the brain and close the "gate" to the transmission of pain signals.

- Stimulation of sensory nerves using a low-frequency releases the bodies natural pain killers (opiates) that are produced by the pituitary gland and in the spinal cord.
- Causes local vasodilation in patients with myofascial symptoms.
- Vasodilation alters the ischemic areas affecting the pain caused by trigger points.

Indication For TENS

Pain syndromes such as:

- Acute pain
- Chronic pain
- Phantom limb pain
- Postoperative pain
- Obstetric pain
- Cardiopulmonary pain
- Neurological pain

CONTRAINDICATIONS FOR TENS

- Patients with demand-type cardiac pacemakers
- Placement over the anterior neck area and carotid sinus
- Cardiac disease. Stimulation across the chest
- Epilepsy
- Over the eyes
- Mucosal surfaces
- Cardiovascular accident patients with central nervous system disorders.
- Incompetent patients
- Breaks in the skin

PRECAUTIONS WITH TENS

- Do not use on a pregnant patient during the first trimester
- Skin irritation from electrodes with long term applications
- Equipment such as ECG monitors and ECG alarms may not function properly while TENS units are in use.

SOFT TISSUE THERAPY

Soft tissue therapy can help the recovery of stiff, painful or over-tired muscles by: speeding up the elimination of waste products and temporarily increasing the local blood supply. STT primarily works the muscular system but can be utilized for scar mobilization and deep friction massage of tendons, fascial tissue or ligaments. STT techniques are a combination of manual techniques designed to relax, release and stretch soft tissue.

PHYSIOLOGICAL EFFECTS OF STT

- Normalizing and improving muscle tone.
- Promoting relaxation.
- Stimulate circulation.
- Produce therapeutic effects on respiratory and nervous systems.

CONTRAINDICATIONS:

STT techniques should not be used on patients with the following conditions unless his or her doctor gives permission:

- An infection, a contagious disease, high temperature or compromised immune system.
- An inflammatory condition such as thrombosis.
- A skin infection, bruising or acute inflammation.
- Unstable joints.
- Cardiac condition.

COMMENTS:

In physical therapy, soft tissue therapy is utilized with other modalities or exercise. Combining soft tissue therapy techniques with other modalities may relieve a patient's symptoms while concurrently promoting relaxation. This can improve the quality of rest and/or sleep which is essential for effective healing.

PHYSIOLOGICAL EFFECTS OF SUPERFICIAL HEAT

- Increase in tissue temperature, local metabolism and blood flow.
- Analgesia and sedation (relaxation).
- Increased nerve conduction velocity
- Increase in 02 and nutrient supply at cellular level

- Decrease muscle spasms and pain

INDICATIONS OF SUPERFICIAL HEAT

- Before active exercises
- Before stretching or passive range of motion
- In conjunction with massage, ultrasound or traction to achieve maximum relaxation and warm local superficial tissues.

- Muscle spasms
- Prior to joint mobilizations

CONTRAINDICATIONS

- Local infection present
- Some dermatologic conditions
- Feverish conditions

PRECAUTIONS

- Be aware of any deficits in sensation

- Very old/young or mentally incapacitated patients

PHYSIOLOGICAL EFFECTS OF COLD

- Reduce tissue temperature and local vasoconstriction
- Decrease inflammatory process and metabolism
- Diminish the effects of central and peripheral nerve disorders
- Decrease extensibility of nonelastic tissues

INDICATIONS OF COLD

- Reduction of acute pain and swelling
- Reduction of spasms and spasticity
- Facilitation of motor responses

CONTRAINDICATIONS OF COLD

- Frostbite to the area
- Raynaud's disease or other circulatory compromises

PRECAUTIONS

- If stretching is required after cold therapy
- Same precautions that apply to heat