

## **An Introduction to Veterinary Osteopathy: Treating the Whole Body Through Manual Therapy**

Patricia Maria Kortekaas, P.T.  
www.fullspectrumcaninetherapy.com

### **Objectives:**

- Attendees will learn about the basics and principles of osteopathy
- They will learn that you can apply the principles to all living creatures!

### **What is Osteopathy?**

Osteopathy is a non-pharmaceutical, “hands-on” approach that encourages the body to heal itself by using the body’s *intrinsic* forces and *corrective* mechanisms to achieve homeostasis. Osteopathy views the body as a FUNCTIONAL and HOLISTIC unit. Practitioners of osteopathy believe that the body knows what is best for itself and that treatments should be aimed at strengthening the body’s own defense mechanisms rather than suppressing symptoms of disease. Osteopathy – derived from the Greek words OSTEON (tissue) and PATHOS (feeling) – is essentially “feeling the motion of tissues.”

### **History**

In the early 19th century, American physician Andrew Taylor Stills discovered an important direct relationship between the *musculoskeletal system* and the *function* of the rest of the body. He realized that the human body was potentially PERFECT in its form and function, so he wanted to understand the secrets held by **nature’s design**. Likening the body to a highly complex machine, he believed that perfect alignment and lubrication of the parts of the body are needed for optimal functioning. He concluded that the **unity of function** was dependent on the circulatory system, the nervous system and the third unifying system, the fascia. Fascia is everywhere in the body, and surrounds blood vessels, nerves, organs, and muscles. The fascia is important for support, lubrication (via blood and lymph flow) and acts as a mechanical “brain” for the musculoskeletal system. These three functional systems organize the body into a *unified* continuous whole; any inappropriate alteration in the structure and fluid flow can trigger dysfunction in other parts of the body. The body attempts to adapt to dysfunction and continues to compensate until it can no longer do so, finally breaking down, resulting in disease in part of or the whole body.

### **Osteopathy defined:**

Osteopathic techniques include many noninvasive, manual therapy techniques. They may be divided in two basic categories, direct and indirect techniques, depending upon how the practitioner addressed restrictions in the body’s tissues.

- **Direct Techniques** – the practitioner thrusts through the restrictive barrier.
  - Includes high velocity/low amplitude (chiropractic) and muscle energy techniques
- **Indirect Techniques** – the practitioner works away from the restrictive barrier, setting up the tissues to “unwind” and move through the restrictive barrier on its own.

### **Categories of indirect techniques include:**

- Craniosacral techniques
- Energy engaging techniques
- Myofascial release techniques
- Functional indirect and Strain/counter-strain techniques
- Nerve release techniques
- Vascular techniques
- Visceral manipulation

These indirect techniques are well known to physical and manual therapists, but are not widely utilized in veterinary medicine. The emerging field of osteopathy in animal rehabilitation has tremendous potential to help treat all animals with a variety of back, neck, and shoulder problems. It may be particularly useful for performance animals, such as agility dogs; geriatric animals; and service dogs. A regimen of osteopathic treatments commonly helps to restore an animal's **normal** function more quickly and permanently than by using stretching and strengthening exercise alone.

### **OSTEOPATHIC TREATMENT STEPS**

#### **Overview of osteopathic treatment:**

First, a complete examination of the body is done, identifying the areas of the body with the most dysfunction. Then, the practitioner must decide where to start treatment first. Beginning treatment by focusing first on the most painful areas often does not lead to complete and sustained relief. Rather, a fundamental principle of osteopathy is to resolve the CORE problem, layer by layer. First, a practitioner locates and treats the AREA of GREATEST RESTRICTION (AGR) (i.e., the part of the body with the greatest dysfunction that also has the most influence on other systems). Following that concept, the therapist works sequentially from the AGR through progressively less important restrictions to help the body to return to more normal function (this is called SEQUENCING). Because the underlying issues may be multifaceted and complex, this approach will ensure both complete and lasting results. For example, an agility dog that presents with a right forelimb lameness that appears to arise from the shoulder may actually have an underlying issue with the core of the body. Treatment of just the shoulder will not resolve the lameness. Thus the practitioner must make an **osteopathic diagnosis** in order to proceed with treatment in a logical, effective manner.

#### **DIAGNOSIS in osteopathy:**

If we analyze the word “diagnosis”, we see that “*dia*” means “through” and “*gnosis*” means “essential knowing”. In osteopathy, the art of differential diagnosis is both essential and difficult. For example, the movements in the lumbar and pelvic areas during the gait may seem complex and overwhelming, especially when we are observing an altered gait. So, practitioners use guidelines or rules to help organize the physical examination findings into a useable framework for treatment, or an osteopathic or manual therapy diagnosis.

There are three questions to ask after the physical examination is complete, and whose answers help the practitioner in arriving at a diagnosis and treatment plan:

- **WHERE** is the problem?
- **WHAT** is the problem?
- **HOW** do I treat the problem?

The answers to these questions will help you locate the injured/dysfunctional areas and to determine what problems you have found, and what technique(s) to use to resolve the abnormalities found in the tissues.

### **1. WHERE is the problem?**

Where do we start to resolve the mystery of the altered gait? Observation of the gait, followed by functional tests (e.g., sitting, getting up from sitting or laying down, circling around a person to test side bending and rotation in the spine, and jumping) can provide some insight into the dysfunctional mechanics. However, the most important skill is manual testing of normal and restricted joints in the dog. The definition of **normal joint feel or play** is a “springy” end feel when testing the end range of the joint. Understanding the mechanics of each joint helps determine what is normal “quality and quantity” of that particular joint’s movement.

In asking where the problem is, we will also use our “area of greatest restriction” (AGR) model to determine the area to treat first. One way to help determine the AGR is to somewhat arbitrarily divide the dog’s body into three areas:

- *Cranium* (includes all parts of the head)
- *Above the diaphragm* (includes the neck, thorax, and front legs)
- *Below the diaphragm* (includes the abdomen, lumbo-pelvis, and hind legs)

Once you have determined which of the three areas contains the AGR, then you progressively work from that larger area to smaller areas of restrictions.

If we have determined the AGR is in the below the diaphragm area, we will have to examine the spine, the pelvis, and the extremity for normal joint play. This allows you to pinpoint the AGR in order to begin treatment.

### **2. WHAT is the problem?**

Another important component in determining a treatment plan is determining what tissue or tissues are primarily affected in the restricted area, as the treatment protocol may vary with the tissue(s) that are affected.

#### **HIERARCHY OF PROTECTION ORDER FOR THE INJURED BODY:**

The body responds to an injury in a certain order to protect crucial parts of the body from damage and increase the chances for survival. Andrew Stills, D.O., called this the “**Rule of the Artery**” because the blood supply is vital for every living creature. He felt that this hierarch was essential for survival; for example, if the blood supply were compromised secondary to an injury, there would be limited life force available to help the body heal.

#### **The body protects itself in the following order:**

1. Vascular system (arterial/venous), lymphatic system, and fascia
2. Central, peripheral and autonomic nervous system
3. Organs
4. Endocrine system
5. Musculoskeletal system

With this concept in mind, it’s essential to adjust osteopathic techniques for the

appropriate dysfunctional area in the body. In this hierarchy, it is useful to think simplistically of muscles as having only two functions: Muscles are **movers**, or muscles are **protectors**. Muscles' primary function is to move two or multiple bones when a muscle contracts; this is the healthy, normal function of muscles. But if a muscle is "stuck" in contraction (spasm) while not moving anything, the muscle is protecting around something. One goal of the osteopathic exam is to find out what the muscles are protecting around. Using the hierarchy model while examining an AGR, the practitioner asks what structure (starting with the vascular system and working down) the muscles are protecting around. When you have figured out what the muscle(s) are protecting around, you can adjust the appropriate technique for the right problem. For example, sublumbar muscle spasm (e.g. iliopsoas) may arise from a problem with nearby vascular structures (e.g. the aorta); nervous system structures (e.g. spinal cord and nerves); organs (e.g. kidneys and ureters); endocrine system (e.g.. ovaries); or a problem with the muscle itself.

### 3. HOW to treat the problem?

The treatment modality selected depends upon the practitioner's training and the patient's problems. Here are descriptions of some of the techniques that we use every day in treating animal (and human!) patients. Please refer to the references for descriptions of additional techniques.

#### A. FUNCTIONAL INDIRECT TECHNIQUES

As previously mentioned, techniques may be divided into direct and indirect methods. With direct techniques, the segment being treated is positioned **against** the restrictive barrier. With indirect techniques, the segment being treated is taken **away from** the restrictive barrier, towards the opposite physiological barrier. Between the restrictive barrier and the opposite physiological barrier is a **dynamic balance point (DBP)**, the point in flexion/extension, side bending right/left, and rotation right/left of the joint where the surrounding tissues are the **MOST** relaxed (the **position of ease**). At the DBT, the practitioner adds a slight compression or distraction to start the unwinding process of the restricted joint, until full range of motion and normal arthro-kinematics are restored. The technique, which integrates several neurophysiological systems simultaneously, is pain free, easy to use, and has a long-lasting impact on resolution of the dysfunctions.

#### BASIC PRINCIPLES FOR FUNCTIONAL INDIRECT TECHNIQUES:

- Palpation and Muscle Energy techniques used for diagnosis
- Find the DBP by finding the restrictive barrier in all three planes around the joint.
- At the DBP, stabilize the joint and add fascial loading or traction to start the segmental unwinding. The pressure of your hands is the right amount – you do NOT need a lot of pressure. (This is called the "Therapeutic Pressure.")
- ALLOW the segment to move and go through several movements until it moves through the restrictive barrier and normal joint mechanics are restored.

#### PROPOSED EFFECTS of FUNCTIONAL INDIRECT TECHNIQUES:

- Mobilization of restricted joints, capsules, ligaments, etc.
- Restoration of normal muscle tone and resting length
- Integration of the myofascial elements of the body
- Integration of neurophysiological levels above and below the diaphragm
- Removal of the "VIRUS" from the computer (the motor cortex)
- Restoration of normal arthrokinematics, osteokinematics, and tensegrity!

## **B. NEURO CARDIO VASCULAR TECHNIQUES**

These techniques, also called vascular normalization techniques (VaNT)®, use various “reflexes” to reset vascular flow in restricted, constricted blood vessels in damaged tissues, joints and/or organs. They are based upon “restoring the vascular blue print” in the body after disturbance of the blood vessel walls (compression, traction and/or vasculitis) during an injury and/or other stresses (mental or physical). Some of these reflexes are located in the **tarsal** bones (influencing blood stagnation below the diaphragm) and **carpal** bones (influencing blood stagnation above the diaphragm), and **hyoid/inion** (influencing the intra-cranial blood flow). All of them also help with vascular stagnation in the entire body.

## **C. NEUROLOGICAL GAIT TECHNIQUES**

These techniques help restore the neurological regulation of the musculoskeletal system in its function of moving the body in the gait cycle, the normal gaits of walking, trotting, etc. Four main “**routers**” are used to resolve problems in the neurological “timing gear” of joint capsules, fascia, ligaments, muscles, membranes and tendons in dysfunctional areas of the body, allowing the body to gait normally again. The routers include:

1. *Mandible* router for release of the cervical spine and cranium
2. *Thoracic* router for the thoracic spine, ribcage and front leg
3. *Visceral* router for organs both above and below diaphragm
4. *Pubis* router for the lumbar spine, the pelvis and the rear leg.

## **REFERENCES:**

### **Training in Osteopathy for Animals:**

*The Vluggen Institute for Equine Osteopathy and Education* – Janek Vluggen, D.O., MRO, EDO and Kimberly Parker, DVM, EDO  
*Animal Normalization Therapy* - [www.fullspectrumcaninetherapy.com](http://www.fullspectrumcaninetherapy.com) - Patricia M. Kortekaas, PT

### **Books**

*Visceral Vascular Manipulations* - Jean-Pierre Barral, D.O. and Alain Croibier, D.O.  
*Anatomy Trains* - Thomas W. Myers, 2<sup>nd</sup> edition  
*Foundations for Osteopathic Medicine* - Robert C. Ward, D.O., F.A.A.O., 2<sup>nd</sup> edition  
*Foundations of Osteopathic Medicine* – Anthony G. Chila, Ed., 3<sup>rd</sup> edition  
*Principles of Manual Medicine* – Philip E. Greenman, 3<sup>rd</sup> edition

### **Other References**

[www.lowensystems.com](http://www.lowensystems.com) - Frank Lowen, LMT  
Integrated Manual Therapy (IMT) - Sharon Weisselish, P.T., PhD.