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The Scope of Osteopathic Practice in Europe

Steering Group on Scope of Practice

European Federation of Osteopaths (EFO)
Forum for Osteopathic Regulation in Europe (FORE)

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Ton Kouwenberg, DO
Chair of the SOPE-Steering Group

Foreword

Osteopathy in Europe is at a critical stage in its development. It is only recognised and regulated in a few European Union countries and is subject to a restrictive scope of practice in others.

As a result of this the leading European representative bodies for osteopathy, the European Federation of Osteopaths (EFO) and the Forum for Osteopathic Regulation in Europe (FORE) established a group to prepare a scope of osteopathic practice document.

Following an extensive investigation of osteopathic literature and consultation with members of EFO and FORE the group has completed this Scope of Osteopathic Practice in Europe (SOPE) document.

This is offered for the guidance of the development of the profession in Europe and as a reference document. It is expected that the members of EFO and FORE will consider which future work streams would flow from the production of this document

It must be stressed that this should be seen as a work in progress and it is expected that it will be reviewed on a regular basis in the years to come.

Michael Watson
Chief Executive EFO



1 Introduction

1.1 The reason for this document

Osteopathy is a medical practice, which is being practised in various ways all over the world. There are more than 100.000 osteopaths world wide.

The quality of osteopathy is extremely important to both the osteopaths and the patients. In Europe, EFO and FORE are the umbrella organizations, which consider this quality of paramount importance. Both organizations play a coordinating role, each in their own territory within the profession. They are advocates for the various European agencies to embrace regulations of the practice of osteopathy as a full-fledged profession, with a high degree of responsibility and with specific qualifications. The objective of this is to clearly define osteopathy and to place it within the medical landscape. They ensure the unity of the profession by defending the common socio-professional interests of the effective osteopaths.

It is in light of the concern for the quality of osteopathic care and the continuous striving towards professionalization of osteopathy that the EFO/FORE's task to write this Scope of Osteopathic Practice in Europe must be understood.

1.2 Practical value of the SOPE-document

The SOPE document contributes to the further professionalization of the profession. Its main function is the international harmonization of the professional practice of osteopaths. It also serves to increase the recognisability of and insight into osteopathy, to guarantee and monitor the quality aspects of osteopathy and to strengthen the identity of osteopathy.

More specifically, the SOPE document can be used in the following ways:

The profession of osteopathy is not yet regulated in various European countries (for an overview, see Appendix I). This means that the profession of osteopathy and individual professional osteopaths in various European countries are not yet receiving legal protection or recognition. The lack of this recognition has not prevented the various professional organizations of osteopaths that are active in these countries and that are members of the EFO and/or FORE from continuously working on meeting all the conditions of a medical profession through self-regulation. Both FORE and EFO have been active in formulating the various Frameworks¹ and Codes². This SOPE will also play a significant role in this process.

In Europe there are various professional groups that, for the sake of convenience, have been

¹ European Framework for Codes of Osteopathic Practice, European Framework for Standards of Osteopathic Practice, European Framework for Standards of Osteopathic Education and Training
http://www.forewards.eu/index.php?option=com_content&task=view&id=16&Itemid=88888905

² The Deontological Code of European Osteopaths and The European Charter of Osteopathic Ethics



categorized under the denomination manual medicine/therapy. Aside from osteopathy, this also includes other manual practices, such as manual medicine strictu sensu, manual therapy, chiropractic and physiotherapy.

Osteopathy is sometimes confused with one of these other manual forms of treatment. There is clearly a need for a clear differentiation between osteopathy and the other professional groups. SOPE can contribute to more clarity here.

SOPE can also be informative for the development of other documents, guidelines and protocols regarding the professional practice of osteopaths. We are thinking here, first of all, of the development of a European standard for healthcare provision by osteopaths (CEN Project³).

Finally, SOPE can be used to give information about the profession. It is informative for future practitioners of the profession, related practitioners and patients.

1.3 Positioning of the SOPE-document and future goals

This document is a description of the professional practice of an osteopath in the year 2012.

This SOPE has been formulated and extensively discussed by the professional group, under the auspices of EFO and FORE, and ultimately all its member organizations have agreed with this description.

In view of the rapidly changing society and the speed with which new developments can happen within the professional group and the practice of the profession, however, we have to realize that this SOPE is a snapshot. It will therefore have to be continuously tested for its validity and practical value based on new insights and changes in the professional practice. It makes sense for the EFO/FORE, to take on this responsibility as the representatives of the professional associations, registers and competent authorities of osteopathy in Europe.

This SOPE is for guidance only. The document came into being through the search for consensus and should be seen as a guideline for the scope of osteopathic practice. It is therefore voluntary.

SOPE is also regarded as an important part of a larger whole through which the following goals for the future can be put forward:

- The development of a European standard for healthcare provision by osteopaths (CEN Project);
- Updating and unification of the already existing EFO/FORE frameworks and codes;
- Development of an educational profile for osteopathy.

³ CEN: European Committee for Standardization (<http://www.cen.eu/cen/pages/default.aspx>)



1.4 Contents of the SOPE-document

The SOPE document was developed as follows. After some introductory information regarding how and why of the SOPE was developed, the essence of the profession is discussed from Chapter 2. In chapter 2 a brief definition is given about osteopathy. A historical setting (Chapter 3) followed by the concepts, principles and characteristics of the profession (Chapter 4). In Chapter 5, osteopathy is placed in the context of overall healthcare. In Chapter 6, an osteopathic consultation is outlined and Chapter 7 deals with the indications, while Chapter 8 discusses the contra-indications within the practice of osteopathy. The SOPE ends with a list of works that were consulted and which directly relate to the development of the document and some appendices for information and clarification.



2 What is Osteopathy?

“Osteopathy is a system of medicine that emphasizes the theory that the body can make its own remedies, given normal structural relationships, environmental conditions, and nutrition. It differs from allopathy primarily in its greater attention to body mechanics and manipulative methods in diagnosis and therapy.”⁴

World Health Organization (WHO)

3 History of Osteopathy

3.1 History of Osteopathy (USA)

Osteopathy was founded in 1874 by Andrew Taylor Still (°1828 Virginia, †1917 Kirksville) and has since established itself as a recognized form of medicine within the US healthcare system, and indeed is still one of the fastest growing professions in that industry generally.

A.T. Still, became a physician, following in the footsteps of his father and practised medicine for twenty years. As a Unionist, he participated in the American Civil War (1861-1864) as a field surgeon. The loss of several of his children during an epidemic of cerebral-spinal meningitis convinced Still of the necessity to reform healthcare. Following the rules of his idea master, John Wesley, he observed nature, dissected the bodies of Shawnee Indians and dissected animals he had hunted. He also studied the medical practices of the Shawnees, which included joint manipulations. His medical doctrine became a mixture of metaphysics and mechanical speculations resulting from his observations. To him, all disease originated from an impediment of proper blood circulation. Muscle contractions and joint displacement were responsible for bad circulation of the life fluids. Still belonged to a long line of “Hippocratic” thinkers.

Still started the first college for osteopathy in Kirksville in 1892 (“American School of Osteopathy”). Despite the fact that the state of Kansas permitted him to issue the Medical Doctor (MD) diploma, he insisted that the title Diplomate in Osteopathy (DO) be used. This title would later be replaced by Doctor of Osteopathic Medicine (DO).

Advances in the medicinal profession soon caused some friction within his own team of teachers. A rising number of teachers called for the addition of courses chemistry, physiology and materia medica to the curriculum.

As of today, 23 COMs (College of Osteopathic Medicine) have educated roundabout 60.000 DOs in total. They are fully integrated in primary care and have the potential to specialise in one of many different branches of medicine.

⁴ WHO definition of osteopathy (http://whqlibdoc.who.int/wkc/2004/WHO_WKC_Tech.Ser.04.2.pdf)



3.2 History of osteopathy in Europe

Osteopathy in Europe and the rest of the world went through a completely different evolution. John Martin Littlejohn (1865-1947) is the man credited with bringing osteopathy to Europe. He initially studied rights, Easter philology, theology, but also anatomy and physiology at the University of Glasgow. Because of his poor health, he migrated to the USA in 1892 to be treated by A.T. Still. He recovered very quickly, which left a profound impression on him. Still offered him a position as professor in general medicine, while being trained into an osteopath by Still. Littlejohn joined the College of Kirksville, and soon became dean. He then soon clashed with Still over which standard subjects should be taught.

In 1900, Littlejohn founded the College for Osteopathy in Chicago, to move back to England in 1913, and found the first British School of Osteopathy in 1917.

Littlejohn approached Parliament in 1935 for recognition of the osteopathic profession. Finally, in 1993, osteopathy was being regulated as an official separate profession by the signing of the "Osteopaths Act". The General Osteopathic Council (GOsC) was elected to lawfully regulate osteopathy in the UK, register all practitioners, and further spread osteopathy amongst the people.

Nowadays, English colleges for osteopathy are liaised to the formal structures of higher education.

Although Littlejohn's view differed in certain aspects from Still's, osteopathy in the UK developed much more according to Still's principles than osteopathy in the US did, which rather distanced itself from Still through the assimilation to allopathy.

The difference between American and European osteopathy can mainly be explained historically by two facts:

- we find the "medical market" in the USA not yet controlled by allopathic medicine at the end of the 18th century, quite in contrast to the UK market, where it was already fully regulated by the time osteopathy was introduced;
- in stark contrast with the allopathic medical presence within osteopathy in the USA⁵, UK osteopathy has mostly been developed outside the confines of regular medicine.

From the UK, France and later from Belgium, osteopathy spread out to several countries in Europe.

⁵ Still and some of his early disciples were medical men and the early faculty of the ASO included several individuals with MD degrees.



4 Concepts, Principles and Characteristics of Osteopathy

4.1 The Concepts and Principles of Osteopathy

The practice of osteopathy uses current medical and scientific knowledge to apply the principles of osteopathy to patient care. Scientific plausibility and evidence-based outcomes have a high priority in patient treatment and case management.

Osteopathy provides a broad range of approaches to the maintenance of health and the management of disease. It embraces the concept of the unity of the individual's structure (anatomy) and function (physiology); as such osteopathy is a patient-centered system of health care, rather than disease-centered.

An essential component of osteopathy is its great attention to body mechanics and its manual methods in diagnosis and therapy. Osteopathy was developed as a means to facilitate normal self-regulating/self-healing mechanisms in the body by addressing areas of tissue strain, stress or dysfunction which may impede normal neural, vascular and biochemical mechanisms.

The practical application of the concepts and principles are described by several models of structure-function relationships that osteopathic clinicians use to influence the gathering of diagnostic information and the interpretation of the significance of neuromusculoskeletal findings in the overall health of the patient.

As such it is not limited to the diagnosis and treatment of musculoskeletal problems, nor does osteopathy emphasize joint alignment and radiographic evidence of structural relationships. Rather, osteopathy is more concerned with the manner in which the biomechanics of the musculoskeletal system are integrated with and support the entire body physiology. Osteopathy acknowledges that each human body is constructed of the same components and their corresponding functions, but is also aware that each individual develops their own biomechanical adjustments as a response to any physical, chemical, emotional and psychological events that might be of influence.

Typically a combination of models will be appropriate for an individual patient. The combination chosen is modified by the patient's differential diagnosis, co-morbidities, and other therapeutic regimens.

The following five models of structure-function guide the osteopathic clinician's diagnosis and treatment of the patient. The models describe the effects of postural and biomechanical factors on the patient's ability to compensate for stressors or illness; the influence of the nervous system on physical, cognitive, and emotional health; the importance of the respiratory-circulatory system in maintaining proper cell and tissue function; the role of psychosocial factors in preventing and treating disease; and factors which influence bioenergetic needs such as oxygen and nutrient consumption.



These models⁶ are:

- *Biomechanical Model:* This model views the body as an integration of somatic components that relate as a posture and balance mechanism. Stresses or imbalances within this mechanism will affect dynamic function and result in increased energy expenditure, altered proprioception⁷, changes in joint structure, impediments of neurovascular function and altered metabolism. Osteopathic treatment within this model allows for restoration of posture and balance, and efficient use of the musculoskeletal components.
- *Neurological Model:* The neurological model considers the effects of spinal facilitation, proprioceptive function, balance between the components of the autonomic nervous system, and activity of nociceptors (pain fibres) on the function of the neuroendocrine immune network. Of particular importance is the interrelation of the musculoskeletal and visceral systems through the autonomic nervous system. Osteopathic treatment within this model focuses on the reduction of mechanical stresses, balance of neural inputs and the reduction or elimination of nociceptive drive.
- *Respiratory/Circulatory Model:* This model concerns itself with the maintenance of extra- and intracellular environments through the unimpeded delivery of oxygen and nutrients and the removal of cellular waste products. Any tissue stress interfering with the flow or circulation of any bodily fluid can affect tissue health. Osteopathic treatment within this model would address dysfunction in respiratory mechanics, circulation and the flow of bodily fluids.
- *Bio-psychosocial Model:* This model looks at the various reactions and psychological stresses with which patients contend. Health may be affected by environmental, socio-economic, cultural, physiological and psychological factors. Somatic dysfunction⁸ in the musculoskeletal system may be a reaction to environmental, socio-economic, cultural or psychological conditions, but can in turn, reinforce physiological stress.
- *Bio-energetic Model:* The body seeks to maintain a balance between energy production, distribution, and expenditure. Maintaining this balance aids the body in its ability to adapt to various stressors: immunological, nutritional, psychological, etc. Osteopathic treatment within this model would address somatic dysfunction, which has the potential to deregulate the production, distribution or expenditure of energy.

⁶ References to underpin these models are listed in appendix II

⁷ Proprioception is the sense of the relative position of neighbouring parts of the body.

⁸ Somatic dysfunction: impaired or altered function of related components of the somatic (body framework) system; skeletal, arthrodial and myofascial structures and their related vascular, lymphatic and neural elements. Somatic dysfunction is treatable using osteopathic manipulative treatment.



It is of course imperative for thorough knowledge of the physiological mechanisms of these models to be taught extensively in an osteopathic curriculum.

4.2 The characteristic features of osteopathy

Even though the aforementioned principles can no longer be seen as exclusive to osteopathy, they are still part of its conceptual framework and a distinction might be found in the level of interweaving and depth with which they are applied in everyday practice.

Although manual techniques are used by many types of clinicians, such as chiropractors, physiotherapists, etc., the unique manner in which osteopathic manipulative techniques are integrated into patient management, as well as the duration, frequency and the choice of technique are all distinctive aspects of osteopathy. Osteopathy is not limited to the spinal thrust techniques often associated with manual medicine. Many forms of osteopathic manual techniques are taught and used by osteopaths. These include thrust or impulse techniques as well as very gentle techniques (see chapter 6).

Despite the fact that the different forms of manual medicine each have their own technical arsenal and method of application, continuous progress in interprofessional exchanges has naturally meant that in the search for an efficient manual diagnostic and therapeutic approach, those techniques are selected that are considered most appropriate. Over time, this technical Darwinism has resulted in a considerable transfer of techniques from one profession to another. Against the backdrop of this transmission of techniques, it is crucially important to remember that the arsenal of applied osteopathic techniques does not define osteopathy itself. They are only part of the practice of osteopathy. The underlying concept, the underlying osteopathic thought process and how these are implemented in practice are what distinguish osteopathy from other manual forms of medicine, much more so than its techniques and how they are performed.

Although the range of techniques, as indicated above, is not one of the characteristic features of osteopathy in comparison to the arsenals of the other forms of manual medicine, within the profession we do refer to the “osteopathic touch”⁹. This is a concept that is quite separate from the practical manual techniques and that is believed to be very specific to our occupational group.

Other characteristics, such as the holistic¹⁰ nature of osteopathy and the adherence to the

⁹ We would define the ‘osteopathic touch’ so often referred to in osteopathic literature as a highly developed haptic ability coupled with competent technical skill.

¹⁰ The word “holistic” is used here to convey the concept first mooted at the start of the last century within the field of biology as an alternative to the notion that life can be explained by means of purely mechanistic principles, on the one hand, and the idea that to explain life we must assume a life force, on the other hand. The holistic perspective understands all things in terms of an organic whole and not as separate physical and chemical elements, as prescribed by mechanistic thinking. The theory of a characteristic life force, such as is present in vitalism, is thus rendered superfluous and indeed must be considered unscientific. Essentially, holism views the organism as more than just a mechanical aggregate: rather it is a true and unified **whole**, hierarchically organised and displaying various levels of complexity. At each level the whole is more than merely the sum of the parts. The behaviour of each level is determined by principles that cannot simply be reduced to the laws which govern its components. Study of the lower levels is necessary, but not sufficient in order to understand the upper levels. “New”, “**emerging**” characteristics are to be found, or rather “reveal themselves” at each new level of complexity.



salutogenetic¹¹ and/or hygienetic¹² model, are not exclusive to osteopathy and can also be brought back to the principle of unity and the potential for self-regulation respectively.

Another important concept within osteopathy is that of “function”¹³. Functions are at all levels contextual and relational, from local function of a body part to the function of a person in their physical and social environment. Clinical decisions depend on how this context is formed and understood.

Osteopathy adopts a very specific approach to the contextual and relational character of function. On the one hand osteopathic evaluation and diagnosis stress on the importance of the whole in reaching a better understanding of the parts. On the other hand dysfunctional local systems are identified in a quite specific way.

A study of the literature¹⁴ shows us that the traits mentioned above are no longer the preserve of osteopathy, but that the combination and particularly the practical implementation thereof could certainly define its identity.

To summarise: Current osteopathic practice has evolved and developed from its original founding doctrine. What remains is a unique clinical practice restricted essentially to the use of manual techniques to achieve a diagnostic and/or therapeutic goal. The majority of osteopathic consultations are to be found in the sphere of functional pain of the locomotor apparatus¹⁵. The aim of osteopathic treatment – and perhaps this is the one thing that does remain of Still's teachings – is to return the organism to normal function and therefore restrict the need for medication or surgery. It is possible that other motives for consulting an osteopath, linked to other functions such as the digestive system or circulation, will eventually reach the same level of scientific grounding thanks to further clinical and basic

Living organisms strive towards the realisation and preservation of the normality of this whole. Anomalies are counterbalanced wherever possible, as is evident during embryogenesis and physiological homeostasis (Willemsen H. (ed.), *Dictionary of Philosophy, entry on The Vitalism vs Mechanism Debate*, Assen, Van Gorcum, 1992, p. 457-461)

¹¹ ‘Salutogenesis’, as defined by Israeli sociologist Aaron Antonovsky, can be seen as a counterpart of ‘pathogenesis’. The term describes an approach focusing on factors that support human health and well-being, rather than on factors that cause disease. More specifically, the “salutogenic model” is concerned with the relationship between health, stress and coping.

¹² Hartmut Heine suggested the alternative term ‘hygienesis’ as a counterpart to pathogenesis, defining it as the activation of self-healing forces (Heine H., *Lehrbuch der biologische Medizin*, 1997, p.3, Hippokrates Verlag, Stuttgart).

¹³ Tyreman S.J., *The Concept of Function in Osteopathy and Conventional Medicine: A Comparative Study*, 2001, PhD Project, BSO, London

¹⁴ Wagner C., *Exploring a European osteopathic identity: analysis of professional profiles of European osteopathic organizations*, 2009, WSO-DUK, master thesis, Vienna.

¹⁵ About 65% of all complaints that were reported in the SDC-Project in the UK were of the spine (http://www.osteopathy.org.uk/uploads/standardised_data_collection_finalreport_24062010.pdf) and an almost similar percentage was found in the KCE-Report in Belgium (<http://kce.fgov.be/publication/report/osteopathy-and-chiropractic-state-of-affairs-in-belgium>).



research and will therefore be elevated to the status of fully fledged indications for osteopathic treatment¹⁶. Such research will have to be conducted in a university environment and cooperation with other medical specialisations will be vital.

5 The position of osteopathy within healthcare

Today, the field of operation of the professional osteopath is situated within first-line medical care. Indeed, as a profession, osteopaths have laid claim to this role.

Patients do not require to be referred from a general practitioner or specialist in order to make an appointment with an osteopath. Whenever possible, osteopaths will work alongside general practitioners, specialists and/or other healthcare disciplines, to the extent that this meets with the consent of the patient.

The osteopathic profession remains autonomous in terms of the actions (expertise, diagnostics, safety, care), attitude (respect, handling of information, relation of trust and awareness of responsibility) and work organisation (efficiency, protection, right to complain) of the osteopath.

To which field of operations within first-line medical care does osteopathy belong?

Osteopathy can be both complementary to, as well as an alternative to more standard medical treatment. Alongside its curative function, osteopathy also has, by virtue of its conceptual background, a place within preventive medicine.

Osteopathic medicine is concerned less with conditions and diseases than that which has compromised the health, so it is not very informative to present a list of conditions which osteopathic treatment may help. Consequently, the following is offered only as a general guide to the varied range of presenting complaints that patients might bring to their osteopath. It is not exhaustive:

- Problems relating to the mechanical and nervous systems, such as pain, discomfort and impaired function of muscles and joints and their associated structures.
- Falls, injuries and strains, the effects of poor posture, tension, emotional stress and headache.
- Impaired function of body systems presenting as digestive problems, circulatory disturbances, respiratory conditions, ear, nose or throat problems especially in the young, stress-related conditions and infective diseases. Osteopathic care has also been shown to assist effectively in in-patient care and post-operative convalescence.
- Sports-related problems at all levels, including elite athletes.
- Problems associated with pregnancy, expectant mothers, the newborn and childhood.
- Sometimes patients do not know what is wrong, but they do not feel well. They perhaps do not feel themselves or are not as comfortable as they should be.

¹⁶ We refer you at this juncture to the published NICE Guidelines (National Institute for Health and Clinical Excellence): Early management of persistent non-specific low back pain, 2009; <http://www.nice.org.uk/nicemedia/live/11887/44334/44334.pdf>



Recent studies have shown osteopathy to be effective in a series of conditions and diseases. Some studies suggest that osteopathic care is cost-efficient, may decrease patient need for drug treatment, may expose the patient to less diagnostic testing and that the risk of complications is in most cases lower¹⁷.

Beside its curative role, osteopathy also claims to have a preventive function within healthcare. The aims of preventive medicine are to promote and maintain good health, prevent disease, counter the progression of disease and prevent chronic illness.

The preventive function of osteopathy is determined by the osteopathic vision of disease and health as gradual phenomena where the patient's dysfunction is believed to be prodromal¹⁸ to a pathology. The essence of this osteopathic vision of disease and health is that the organism carries within itself the potential for health. This vision leads to a form of prevention that differs from what society today understands prevention to mean.

Generally speaking, osteopaths are self-employed and run their own practice, sometimes together with other practitioners. Osteopaths can also be employed by hospitals and any other kind of care facility.

Osteopaths do not claim full authorisation to all areas of health and disease, however, they do work across the entire spectrum of health and disease, together with other healthcare professionals, i.e. osteopaths do not limit themselves to a certain area of healthcare.

Osteopaths practise their profession with complete independence. They work diagnostically as well as therapeutically. They are first-line practitioners with a high degree of responsibility: their specialist training in neurology and locomotor pathology, as well as in general semiology, enables them to identify those pathologies that can(not) be treated directly using their skills. They are aware of the possibilities but also the limitations of their profession and act consequentially.

To summarise: Osteopathy considers itself as a true generalist healthcare praxis. Osteopaths are active in first-line medical care, both for diagnosis and therapy; they act as mediators in the maintenance and/or restoration of health, working closely together with the patient and mainly through touch; to this they add a manual technique that is aimed at restoring lost function, at all levels of the body.

6 Osteopathic Practice

An osteopathic consultation consists of the osteopath taking and recording a present and past case history and conducting appropriate osteopathic and clinical examinations to assist in the assessment of the patient.

¹⁷ A non exhaustive list of studies can be found in appendix III

¹⁸ Prodromal is an early symptom (or set of symptoms) that might indicate the start of a disease before specific symptoms occur.



The osteopath formulates a diagnosis and prognosis, communicates these effectively to patients and therefore plans an osteopathic treatment dealing appropriately with clinical findings, performs the treatment and reassesses the results of this.

6.1 Case history

The osteopath takes a comprehensive past and current medical history from the patient, including family history and details of the presenting problem. This allows the patient to express their version of events and thoughts, with occasional prompting to focus on and elicit further detail for important areas. A range of relevant questions is asked, including reference to third party reports and findings from the patients, to assist in formulating an exclusion diagnosis, a differential diagnosis and a working diagnosis. Significant attention is given to predisposing and maintaining factors that may have led to the problem, such as occupational, recreational or stress.

The osteopath will maintain a comprehensive written record of the consultation and subsequent contact with the patient. This information will be treated as strictly confidential.

At this stage the osteopath will satisfy his/herself that it is safe to continue with observation and examination

6.2 Observation and clinical examination¹⁹

Based on the case history, a range of possible diagnoses is generated. A relevant and detailed osteopathic clinical examination, tailored to the individual patient and his or her problem, is performed in order to explore these.

When necessary, the osteopath will use the clinical examination procedures that are familiar to most people and widely used by healthcare practitioners, in order to examine all body systems. In addition, however the osteopath will use specific osteopathic examination techniques such as observation and palpation²⁰ to evaluate the quality, state, mobility and health of the mechanics of the joints, muscles and the other tissues of the body. This will lead to an initial working diagnosis of what the osteopath considers might explain the patient's problem. The osteopath will then determine the most relevant options for dealing with this and communicate these to the patient.

¹⁹ Most common used diagnostics tools used by osteopaths and an Assessment of a somatic dysfunction are listed in appendix IV

²⁰ Palpation is the highly trained and practised sense of touch, a hallmark of the osteopath. It is known that we obtain information about the world through our five senses: sight, sound, touch, taste and smell. It is also known also that we can train these senses, as we do with the sense of sight when we learn to read; that a tea or wine taster trains the sense of taste; a perfumer trains the sense of smell; a musician trains the ear. In the same way, from the outset of their training, osteopaths develop their sense of touch, to be able to feel information that is not readily experienced by the untrained hand. These all are primary senses, which cannot be described, only compared with itself or another sense.



Diagnosis could be viewed as the collection of a set of findings from the history and examination and using these just to identify the name of a disease, condition or syndrome. This is useful in communicating predetermined pathology, signs and symptoms. The osteopath, however, strives to achieve a much more comprehensive understanding and explanation of the various factors involved, rather than simply providing a convenient label. Further, the osteopathic interpretation of a patient's problem may evolve as the treatment progresses and a greater understanding of the condition unfolds.

At this point the osteopath has sufficient findings to proceed to treatment or not.

6.3 Evaluation, treatment and management

The osteopath synthesises their findings from the observation and examination to confirm or review their working diagnosis. The osteopath then correlates and prioritises the somatic dysfunction(s) of all the patient's bodily systems and designs a treatment plan accordingly.

At this stage the osteopath discusses the diagnosis and treatment plan in detail with the patient. Finally he formulates a prognosis for the patient.

6.3.1 Treatment

Osteopathic treatment addresses the mobility of the patient's bodily tissues, which affects their overall state of health. Osteopathy offers a range of manual techniques which can be categorized as direct, indirect, combined, fluid and reflex based.²¹

- Direct techniques may be applied specifically to a joint or non-specifically to a body area. Direct techniques engage the restrictive barrier and use an activating force to correct the somatic dysfunction. Direct techniques may use thrust, impulse, muscle contraction, fascial loading, or passive range of motion to achieve the tissue response.
- Indirect, fluid, balancing, or reflex based techniques may be applied specifically to a joint or non-specifically to a body area. These techniques do not engage the restrictive barrier. These techniques may use fascial massage, fascial and soft-tissue loading or unloading, hydraulic pressures, phases of respiration, cranial or postural adjustments as part of the application of the technique.

Manipulative techniques are used to influence patient's health in accordance with the aforementioned models (chapter 3.1).

These techniques can apply to varying levels of the body, for example, specific soft tissue techniques for muscles and ligaments; specific joint mobilisation or positioning to improve the range and quality of their motion; rapid controlled thrusts to joints; manual techniques to restore function to visceral structures; etc.

The choice of treatment techniques or modalities, are influenced by many factors such as:

- Patient's presenting complaint

²¹ Further details of manual treatment acts are listed in appendix IV



- The illness
- Age
- General well-being
- General health
- Previous medical history
- Osteopathic examination findings
- Drug use
- ...

At this stage the treatment plan and subsequent choice of techniques are specific to the patient.

The scope of treatment extends to empowering the patient to maintain their health through education and general lifestyle advice.

It is important that the patient is continually updated and informed in a clear manner of the diagnosis treatment protocol, treatment strategies or alternative treatment modalities which may be recommended. The patient is informed of potential risks, side effects and the timeframe for treatment. The patient must give consent before commencing any treatment.

6.3.2 Ongoing case management

At the start of each consultation the patient is asked to report any progress or change relating to their complaint. The osteopath then carries out a new examination and commences further treatment accordingly. The initial diagnosis is reviewed at the end of each treatment. The duration and frequency of the treatment plan depends on the patient's progress. The patient is kept informed throughout this process and will be advised of any need for referral.

7 Appropriateness of Treatment

The indication for osteopathic treatment is the presence of somatic dysfunction that is clinically significant. Clinical significance is determined using the models of osteopathic practice described in chapter 4.1.

When employed by skilled and knowledgeable individuals, the principles of osteopathy and the osteopathic model of health care may be applied in many clinical conditions.

As primary contact health care providers, osteopaths have responsibility to diagnose and refer patients as appropriate when the patient's condition requires medical, surgical or other therapeutic intervention which falls outside the realm of the osteopath's training. Osteopaths need to recognize when specific approaches and techniques may be contraindicated in specific conditions.



8 Contraindications

It is important to understand that a contraindication to osteopathic treatment in one area of the body may not preclude osteopathic treatment in a different area.

Likewise, a contraindication for any specific technique does not negate the appropriateness of a different type of technique in that same patient. Absolute and relative contraindications for osteopathic treatment are usually based upon the technique employed. It is the responsibility of the osteopath to discern which types of techniques are safe and appropriate in a clinical situation.

Direct techniques, such as muscle energy, thrust and articulatory manoeuvres, pose different risks than indirect, fluid and reflex based techniques. There is scant data published that details which techniques should be avoided in specific conditions. An understanding of the pathophysiology of the patient's condition and the mechanism of action of the technique have been used to establish biological plausibility for the absolute and relative contraindications listed.

Patient refusal or absence of informed consent (verbal and/or written) is an absolute contraindication to the application of any technique or treatment.

8.1 Direct techniques

8.1.1 Systemic conditions that constitute absolute contraindications to direct techniques

- uncontrolled or suspected bleeding disorders
- prolonged bleeding times
- treatment with anticoagulant pharmacotherapy without recent evaluation of therapeutic level
- clotting abnormalities
- congenital or acquired connective tissue diseases that result in compromised tissue integrity
- compromised bone, tendon, ligament or joint stability as might occur in metabolic disorders, metastatic disease and/or rheumatoid diseases

8.1.2 Systemic conditions that constitute relative contraindications to direct techniques

- osteoporosis
- osteopenia

8.1.3 Absolute contraindications to direct techniques specifically applied at the local site

- aortic aneurysm
- open wounds, skin derangement, recent surgery
- acute hydrocephalus

- hydrocephalus without diagnostic workup
- acute intracerebral bleed
- acute cerebral ischemia, including transient
- suspected cerebral arterial-venous malformation
- cerebral aneurysm
- acute abdominal pain
- acute cholecystitis with suspected leakage or rupture
- acute appendicitis with suspected leakage or rupture
- acute or subacute closed head injury
- acute disc herniation with progressive neurological signs
- suspicion or evidence of vascular compromise
- suspected vertebral artery compromise
- known congenital malformation
- acute cauda equina syndrome
- ocular lens implant (early post-operative period)
- uncontrolled glaucoma
- neoplasm
- suspected or risk of bone compromise such as osteomyelitis, bony tuberculosis, etc., or risk of same

8.1.4 Absolute contraindications to direct techniques specifically involving thrust or impulse applied at the local site

- specific technique at the site of surgical internal fixation of the joint
- compromised bone or joint stability as might occur focally in neoplasm, metastatic disease, suppurative arthritis, septic arthritis, rheumatoid diseases, osteomyelitis, bony tuberculosis, etc.
- acute fracture, pseudarthrosis
- bony or intramuscular hematoma or abscess

8.1.5 Relative contraindications to direct techniques using thrust or impulse at the local site

- vertebral disc herniation
- strained ligaments at the site
- acute acceleration-deceleration injury of the neck

8.2 Indirect, fluid, balancing, and reflex based techniques:

Relative contraindications to indirect techniques usually concern the clinical-temporal profile of the problem.

8.2.1 Absolute contraindications to indirect, fluid, balancing, or reflex based techniques applied at the local site

- acute hydrocephalus without diagnostic workup



- acute cerebral bleed
- acute intracerebral vascular accident
- suspected cerebral arterial-venous malformation
- cerebral aneurysm
- suspected acute peritonitis
- acute appendicitis or other visceral disease with suspected leakage or rupture
- recent closed head injury

8.2.2 Relative contraindications to any indirect, fluid, balancing, or reflex based technique applied at the local site

- metastastatic disease
- neoplasm
- closed head injury



References

General Osteopathic Council

Osteopathic Practice Framework – consultation document, 2009

Jansen T.; van Wolde H., (ed.) 2009, Beroepscompetentieprofiel Osteopathie Nederlandse Vereniging voor Osteopathie (NVO) en Nederlandse Register voor Osteopathie (NRO)

van Dun P.L.S., (red.) 2009, Beroepscompetentieprofiel Osteopathie, Brussel: Groepering Nationaal en Representatief van de Professionele Osteopaten vzw. (GNRPO) [*Professional Competence Profile for Osteopathy, Brussels: National and Representative Group of Professional Osteopaths, non-profit group*]

WHO: Benchmarks for Training in Osteopathy, 2010,
http://whqlibdoc.who.int/publications/2010/9789241599665_eng.pdf



Appendix I

EFO/FORE Memberstate	Is osteopathy protected by a legal statute? Is this a medical or paramedical legal statute? In case there is no legal statute yet, is there any other form of official recognition of osteopathy (e.g. protection of the title of osteopath, or being able to register oneself as osteopath in a register set up by the professionals within private law)?
Austria	No
Belgium	29-04-1999: Law Colla on non-conventional healthcare in Belgium. Although not implemented yet. Medical statute. Social security reimbursement: 10 Euro (max. 50 per year) on a private basis. Trademark DO® as quality sign for professional osteopaths according to the requirements of GNRPO.
Finland	Official Healthcare Professionals. Medical statute. Name “osteopath” is protected. The government has VALVIRA where every healthcare practitioner is registered.
France	Recognized. Neither medical nor paramedical, osteopathy is in France a first line profession.
Germany	No recognition. Title protection in the state of Hessen. Trademark DO® as quality sign for fully-trained osteopaths according to the requirements of VOD/EFO.
Greece	No recognition. GOA is an Association that acts as a register.
Ireland	No recognition.
Italy	No recognition.
Luxemburg	No recognition. The Professional Association ALDO also registers osteopaths DO trademark.
Netherlands	No recognition. Association NVO and register NRO. Both are looked at by a governing structure CvO. NRO registers and watches the trademark DO MRO® as a title for osteopaths.
Norway	No recognition. NOF is an association that also acts as a register.
Poland	No recognition. TOP as an association also registers.
Portugal	No recognition. The Association AROP hosts a register.



Spain	<p>No recognition.</p> <p>Register ROE and association APREO. Together they created a General Council (CGOE).</p> <p>There are other organizations, but they do not comply with the minimum level of training stated by EFO or FORE.</p>
Sweden	<p>No recognition.</p> <p>There is one association: SOF. SOF also registers. Organized within private Law.</p>
Switzerland	<p>Recognized.</p> <p>Medical statute.</p>
United Kingdom	<p>Recognized. The title "Osteopath" is protected. Only GOSc Registrants.</p> <p>Para-medical statute.</p>

Table 1: Questionnaire carried out by the EFO/FORE in September 2011



Appendix II

The biomechanical model:

Hruby R.J.,
Pathophysiologic models: aids to the selection of manipulative techniques, *The AAO Journal*, 1991; 1 (3): 8-10

Rimmer KP, Ford GT, Whitelaw WA. Interaction between postural and respiratory control of human intercostal muscles, *Journal of Applied Physiology*, 1995; 79(5): 1556-1561

Norré ME. Head extension effect in static posturography, *Annals of Otolaryngology, Rhinology, and Laryngology*, 1995; 104(7): 570-573

The neurological model:

Celander E., Koenig A.J., Celander D.R.,
Effect of osteopathic manipulative therapy on autonomic tone as evidenced by blood pressure changes and activity of the fibrolytic system, *JAOA*, 1968; 67: 1037-8

Degenhardt B.F., Darmani N.A., Johnson J.C., Tows L.C., Rhodes D.C., Trinh C., McClanahan B., DiMarzo V.,
Role of osteopathic manipulative treatment in altering pain biomarkers: a pilot study, *JAOA*, 2007; 107 (9): 387-400

Donnerer J.
Nociception and the neuroendocrine-immune system. In: Willard F.H., Patterson M., editors. *Nociception and the Neuroendocrine-Immune Connection*. Indianapolis: American Academy of Osteopathy, 1992; p. 260-73

Emrich H.M., Millan M.J.,
Stress reactions and endorphinergic systems., *J Psychosom Res*, 1982; 26: 101-4

Ganong W.,
The stress response - a dynamic overview, *Hosp Prac*, 1988; 23 (6): 155-71

Kiecolt-Glaser J.K, Glaser R.,
Stress and immune function in humans. In: Ader R., Felton D.L., Cohen N., editors. *Psychoneuroimmunology*. 2nd ed. San Deigo, CA: Academic Press; 1991; p. 849-95

McEwan B.,
Glucocorticoid-biogenic amine interactions in relation to mood and behavior, *Biochem Pharm*, 1987; 36: 1755-63

Van Buskirk R.L.,
Nociceptive reflexes and the somatic dysfunction: a model, *J Am Osteopath Assoc*, 1990; September 90 (9): 792-809



Willard F.H., Mokler D.J., Morgane P.J.,
Neuroendocrine-Immune System and Homeostasis. In: Ward RC, editor. *Foundations for Osteopathic Medicine*. 1st ed. Baltimore: Williams and Wilkins, 1997; p. 107-35

The respiratory/circulatory model:

Degenhardt B.F., Kuchera M.L.,
Update on osteopathic medical concepts and the lymphatic system, *J Am Osteopath Assoc*, 1996; 96: 97-100

Downey H.F., Durgam P., Williams A.G. Jr, Rajmane A., King H.H., Stoll S.T.,
Lymph flow in the thoracic duct of conscious dogs during lymphatic pump treatment, exercise, and expansion of extracellular fluid volume, *Lymphat Res Biol.*, 2008; 6 (1): 3-13

Hodge L.M., King H.H., Williams A.G., Reder S.J., Belavadi T., Simecka J.W., Stoll S.T., Downey H.F.,
Abdominal Lymphatic Pump Treatment Increases Leukocyte Count and Flux in Thoracic Duct Lymph, *Lymphatic Research and Biology*, June 2007, Vol. 5, No. 2: 127-134

Schander A., Bearden M., Huff J., Williams Jr. A., Stoll S., Simecka J., King H., Downey H., Hodge L.,
Lymphatic pump treatment mobilizes leukocytes from the gut associated lymphoid tissue into thoracic duct lymph, *International Journal of Osteopathic Medicine*, 2008; 11(4): 149-149

van Dun P.L.S., Dillies P., Dobbelaere E., Inghelbrecht F., Van Eeghem P., Steyaert L., Danse L., Rosseel Y.,
Influence of a mobilization of the mesentery upon the capacity of the portal vein, reported by echo-Doppler, *International Journal of Osteopathic Medicine*, 2008; 11(4): 160-161

The bio-psychosocial model:

Asmundson G.J.G., Wright K.D.,
Biopsychosocial Approaches to Pain; In: Hadjistavropoulos T., Craig K.D., editors, *Pain: Psychological Perspectives*. Mahwah: Lawrence Erlbaum Associates Inc; 2004

Drossman D.A.,
Biopsychosocial Issues in Gastroenterology. [Book chapter]. In press 2010

Engel G.L.,
The clinical application of the biopsychosocial model, *Am. J. Psychiatry*, 1980, 137: 535-44

Flor H., Hermann C.,
Biopsychosocial Models of Pain In: Dworkin R.H., Breitbart W.S., editors, *Psychosocial Aspects of Pain: A Handbook for Health Care Providers*, Progress in Pain Research and Management. Seattle: IASP Press, 2004; p. 47-76



Gatchel R.J.,
Co morbidity of chronic pain and mental health disorders: the biopsychosocial perspective, *Am. Psychol.*, 2004; 59(8): 795-805

Melzack R.,
Pain and the neuromatrix in the brain, *J Dent Educ*, 2001; 65(12): 1378-82

Penney J.N.,
The biopsychosocial model of pain and contemporary osteopathic practice, *Int. Journal of Osteop. Med.*, 2010, 13: 42-47

Quintner J.L., Cohen M.L., Buchanan D., Katz J.D., Williamson O.D.,
Pain medicine and its models: Helping or hindering? *Pain Medicine*, 2008; 9(7): 824-34

The bio-energetic model:

Norré M.E.,
Head extension effect in static posturography, *Ann Otol Rhino Laryngol*, 1995; 104: 570-3

Rimmer K.P., Ford G.T., Whitelaw W.A.,
Interaction between postural and respiratory control of human intercostal muscles, *J Appl Physiol*, 1995; 79 (5): 1556-61

Winter D.A., Patia A.E., Frank J.S., Wait S.E.,
Biomechanical walking pattern changes in the fit and healthy elderly, *Phys Ther*, 1990; 70 (6): 340-7



Appendix III

Allen T.W., D'Alonzo G.E.,
Investigating the role of osteopathic manipulation in the treatment of asthma. *J Am Osteopath Assoc* 1993 June; 93(6): 654-6, 659

Andrews E.C.,
The application of osteopathic principles in the management of arthritis, *JAOA* 1956; 55(6): 355-7

Anderson R.E., Seniscal C.,
A comparison of selected osteopathic treatment and relaxation for tension-type headaches, *Headache*, 2006 September; 46(8): 1273-80

Andersson G.B.J., Lucente T., Davis A.M., Kappler R.E., Lipton J.A., Leurgans S.,
A comparison of osteopathic spinal manipulation with standard care for patients with low back pain, *N Engl J Med*, 1999, 341: 1426-1431

Arbuckle B.,
The CP Patient: I. Rehabilitation through occupational and manipulative therapy, *Journal of Osteopathy* 1962; 69(11): 24-39

Baird R.E., Cullom S., Deedman R., Feeney J., Kellogg J., Simning P.,
Osteopathic manipulation and tension-type headaches, *Am Fam Physician*, 1993, November 1; 48(6): 1023-4

Biondi D.M.,
Physical treatments for headache: a structured review, *Headache*, 2005, June; 45(6): 738-46

Biondi D.M.,
Cervicogenic headache: a review of diagnostic and treatment strategies, *J Am Osteopath Assoc*, 2005 April; 105(4 Suppl 2): 16S-22S

Bischoff A., Nürnberger A., Voight P., Schwerla F.,
Osteopathy alleviates pain in chronic non-specific neck pain: A randomized controlled trial, Abstracts ICAOR, *IJOM*, 2006, 9: 27-46.

Blood S.D., Hurwitz B.A.,
Brain wave pattern changes in children with ADD/ADHD following osteopathic manipulation: A pilot study, *American Academy of Osteopathy Journal*, 2000; 10(1): 19-20

Boesler D., Warner M., Alpers A., Finnerty E.P., Kilmore M.A.,
Efficacy of high-velocity low-amplitude manipulative technique in subjects with low-back pain during menstrual cramping [see comments], *J Am Osteopath Assoc*, 1993, February; 93(2): 203-4



Bonfort G., Assendelft W., Evans R., Haas M., Bouter L.,
Efficacy of spinal manipulation for chronic headache: a systematic review, *Journal of Osteopathic Medicine (Australia)* 2001; 4(2): 66

Cameron M.,
A financial analysis of osteopathic manual therapy as adjunct to typical medical care in an Indonesian hospital, *Majalah Kerdokteran Indonesia* 2000; 50(12): 549-54.

Carey T.S., Motyka T.M., Garrett J.M., Keller R.B.,
Do osteopathic physicians differ in patient interaction from allopathic physicians? An empirically derived approach, *J Am Osteopath Assoc*, 2003, July; 103(7): 313-8

Carreiro J.E.,
Osteopathic evaluation of 1600 neonates. 1993, Unpublished Work

Cipolla V.T., Dubrow C.M., Schuller E.A.,
Preliminary study: An evaluation of the effects of osteopathic manipulative therapy on intraocular pressure, *JAOA*, 1975; 74: 433-7.

Clymer D.H., Levin F.L., Sculthorpe R.H.,
Effects of osteopathic manipulation on several different physiologic functions: Part III. Measurement of changes in several different physiological parameters as a result of osteopathic manipulation, *JAOA*, 1972; 72: 204-7

Crow W.T., Willis D.R.,
Estimating cost of care for patients with acute low back pain: a retrospective review of patient records, *Am. Osteopath. Assoc.*, 2009; 109 (4): 229-33

Degenhardt BF, Kudo S., Efficacy of osteopathic evaluation and manipulative treatment in reducing the morbidity of otitis media in children, *JAOA*, 1994; August: 673.

Fitzgerald M., Stiles E.,
Osteopathic hospital's solution to DRG's may be OMT, *DO*, 1984; 97-101

Gamber R.G., Shores J.H., Russo D.P., Jimenez C., Rubin B.R.,
Osteopathic manipulative treatment in conjunction with medication relieves pain associated with fibromyalgia syndrome: results of a randomized clinical pilot project, *JAOA*, 2002; 102(6): 321-5.

Gerhardt K., Montag G., Ruetz M., Schwerla F.,
Osteopathic treatment of women suffering from urinary incontinence following an injury to the perineum during delivery: A randomized controlled trial, Abstracts ICAOR , *IJOM*, 2008, 11: 158

Grimshaw D.N.,
Cervicogenic headache: manual and manipulative therapies, *Curr Pain Headache Rep*, 2001, August; 5(4): 369-75.



Greenman P.E., McPartland J.M.,
Cranial findings and iatrogenesis from cranosacral manipulation in patients with traumatic brain syndrome, *J Am Osteopathic Assoc*, 1995; 95: 182-91

Gurry B., Hopkins M., Peers C., Anderson S., Watts M.A.,
Musculoskeletal Medicine in Practice 5 Years of the Acute Low Back Pain Service for Plymouth: Results of a Survey, *J. Orthop. Med.*, 2004; 26 (1): 3-8

Hart L.G., Deyo R.A., Cherkin D.C.,
Physician office visits for low back pain: frequency clinical evaluation and treatment patterns, *Spine*, 1995; 20(1): 11-9

Hayden C., Mullinger B.,
Reprint of: a preliminary assessment of the impact of cranial osteopathy for the relief of infantile colic, *Complement. Ther. Clin. Pract.*, 2009; 15 (4): 198-203

Hoving J.L., de Vet H.C., Koes B.W., Mameren H., Deville W.L., van der Windt D.A., et al.
Manual therapy, physical therapy, or continued care by the general practitioner for patients with neck pain: long-term results from a pragmatic randomized clinical trial, *Clin J Pain*, 2006; 22: 370-377

Howell R.K., Allen T.W.,
The influence of osteopathic manipulative therapy in the management of patients with chronic lung disease, *JAOA*, 1974; 75: 757-60

Huff J., Schander A., Stoll S., Simecka J., Downey H., King H., Hodge L.,
Lymphatic pump treatment enhances immunity and reduces pulmonary disease during experimental pneumonia infection, *International Journal of Osteopathic Medicine*, 2008; 11(4): 150-150

Hundscheid H.W.C., Pepels M.J.A.E., Engels L.G.J.B., Loffeld R.J.L.F.,
Treatment of irritable bowel syndrome with osteopathy: Results of a randomized controlled pilot study, *Journal of Gastroenterology and Hepatology*, 2007; 22 (9): 1394-8

Jarski R.W., Loniewski E.G., Williams J., Bahu A., Shafinia S., Gibbs K., Muller M.,
The effectiveness of osteopathic manipulative treatment as complementary therapy following surgery: a prospective, match-controlled outcome study, *Altern. Ther. Health Med.*, 2000; 6 (5): 77-81

Kaschowicz G., Besse J.P., Schweing G.,
Osteopathic treatment for uterine leiomyomas: a randomized controlled clinical trial, Dissertation, 2005

Korthals-de Bos IBC, Hoving JL, van Tulder MW, Rutten van Mólken MPMH, Adèr H, de Vet HCW, Koes BW, Vondeling H et Bouter LM,
Cost effectiveness of physiotherapy, manual therapy and general practitioner care for neck pain: an economic evaluation alongside a randomised controlled trial, *BMJ*, 2003; 326: 911-6



Lewis M.A.,
Colorado Workers compensation Annual report presented to the Colorado General Assembly. workers Compensation. Colorado: State forms-Central Stores, 1993, Report No.: 395-10-09-0440

Licciardone J.C., Herron K.M.,
Characteristics, satisfaction, and perceptions of patients receiving ambulatory healthcare from osteopathic physicians: a comparative national survey, *JAOA*, 2001; 101 (7): 374-85

Licciardone J.C., Brimhall A.K., King L.N.,
Osteopathic manipulative treatment for low back pain: a systematic review and meta-analysis of randomized controlled trials, *BMC Musculoskeletal Disorders*, 2005, 6:43

Licciardone J.C., Buchanan S., Hensel K.L., King H.H., Fulda K.G., Stoll S.T.,
Osteopathic manipulative treatment of back pain and related symptoms during pregnancy: a randomized controlled trial, *Am. J. Obstet. Gynecol.*, 2010; 202 (1): 43e.1-8

Lombardini R., Marchesi S., Collebrusco L., Vaudo G., Pasqualini L., Ciuffetti G., Brozzetti M., Lupattelli G., Mannarino E.,
The use of osteopathic manipulative treatment as adjuvant therapy in patients with peripheral arterial disease, *Manual Therapy*, 2009; 14 (4): 439-443

Malone D.G., Baldwin N.G., Tomecek F.J., et al.,
Complications of cervical spine manipulation therapy: 5-year retrospective study in a single-group practice, *Neurosurg Focus*, 2002, December 15; 13(6): ecp1.

Marx S.,
Does osteopathic treatment have an influence on the symptoms of patients with chronic prostatitis/chronic pelvic pain syndrome (CPPS)? A randomized controlled trial, Abstracts ICAOR, *IJOM*, 2006, 9: 27-46

Mills M.V., Henley C.E., Barnes L.L.B., Carreiro J.E., Degenhardt B.F.,
The use of Osteopathic Manipulative Treatment as Adjuvant Therapy in Children With Recurrent Acute Otitis Media, *Arch. Pediatr. Adolesc. Med.* 2003, 157: 861-866

Misko I.S.,
The evaluation of intraocular tension following osteopathic manipulation, *JAOA*, 1981; 80: 750

Monaco A., Cozzolino V, Cattaneo R, Cutilli T, Spadaro A.,
Osteopathic manipulative treatment (OMT) effects on mandibular kinetics: kinesiographic study, *Eur. J. Paediatr. Dent.*, 2008; 9(1):37-42

Noll D.R., Shores J., Bryman P.N., Masterson E.V.,
Adjunctive osteopathic manipulative treatment in the elderly hospitalized with pneumonia: A pilot study, *JAOA*, 1999; 99(3): 143-52



Noll D.R., Johnson J.C., Baer R.W., Snider E.J.,
The immediate effect of individual manipulation techniques on pulmonary function measures in persons with chronic obstructive pulmonary disease, *Osteopath. Med. Prim. Care*, 2009; 8(3): 9

O'Neal M.L.,
The pediatric spine: anatomical and dynamic considerations preceding manipulation, *Compr Ther*, 2003; 29(2-3): 124-9
Pasquarello G., Johnson K.,
Cervical Spine Manipulation, *American Osteopathic Association*, 2004

Philippi H., Faldum A., Schleupen A., Pabst B., Jung T., Bieber I., Kaemmerer C., Dijs P., Reitter B.,
Infantile postural asymmetry and osteopathic treatment: a randomized therapeutic trial, *Developmental Medicine and Child Neurology*, 2006, 48: 5-9

Richardson B.S., Way B.V., Speece A.J.,
Osteopathic manipulative treatment in the management of notalgia paresthetica, *JAOA*, 2009; 109 (11): 605-608

Shekelle P.G., Coulter I.,
Cervical spine manipulation: summary report of a systematic review of the literature and a multidisciplinary expert panel, *J Spinal Disord*, 1997, June; 10(3): 223-8

Stoll S.T., Mitra M.,
Post-traumatic headache of cervical origin, *The AAO Journal*, 2002; 12(3): 38-41

Sucher B.M.,
Palpatory diagnosis and manipulative management of carpal tunnel syndrome [see comments], *J Am Osteopath Assoc*, 1994 August; 94(8): 647-63.

Sucher B.M.,
Palpatory diagnosis and manipulative management of carpal tunnel syndrome: Part 2. 'Double crush' and thoracic outlet syndrome, *J Am Osteopath Assoc*, 1995 August; 95(8): 471-9

Sucher B.M., Hinrichs R.N.,
Manipulative treatment of carpal tunnel syndrome: biomechanical and osteopathic intervention to increase the length of the transverse carpal ligament [see comments]. *J Am Osteopath Assoc*, 1998, December; 98(12): 679-86

Stevinson C., Honan W., Cooke B., Ernst E.,
Neurological complications of cervical spine manipulation, *J R Soc Med*, 2001, March; 94(3): 107-10

Tarsuslu T., Bol H., Simsek I.E., Toyman I.E., Cam S.,
The effects of osteopathic treatment on constipation in children with cerebral palsy: a pilot study, *J. Manip. Physiol. Ther.*, 2009; 32 (8): 648-653



UK BEAM Trial Team. United Kingdom back pain exercise and manipulation (UK BEAM) randomised trial: cost effectiveness of physical treatments for back pain in primary care. *BMJ*. 2004, 329: 1381

Wells M.R., Giantinoto S., D'Agate D. et al.,
Standard osteopathic manipulative treatment acutely improves gait performance in patient's with parkinson's disease, *JAOA*, 1999; 99(2): 92-8

Williams N.H., Wilkinson C., Russell I., Edwards R.T., Hibbs R., Linck P., Muntz R.,
Randomized osteopathic manipulation study (ROMANS): pragmatic trial for spinal pain in primary care, *Family Practice*, 2003; 20(6): 662-9

Williams N.H., Edwards R.T., Linck P. et al.,
Cost-utility analysis of osteopathy in primary care: results from a pragmatic randomized controlled trial, *Family Practice*, 2004, December; 21(6): 643-50



Appendix IV

Most common used diagnostics tools used by osteopaths:

- Inspection.
- Range Of Motion (ROM).
- Classical orthopedic tests.
- Classical neurological tests.
- Percussion and auscultation.
- Palpation (of position and of movement/static and dynamic).
- Tender Points (Jones techniques) and Triggerpoints.
- Muscle function testing.
- Fascial testing.
- Examination of visceral mobility.
- Examination of the cranium (neuro- and viscerocranium).
- Examination of neurolymphatic reflexes (Chapman reflexes).

Assessment of a somatic dysfunction:

- A static and dynamic morphologic inspection (with a qualitative and a quantitative evaluation of movement).
- Evaluation of function.
- Evaluation of pain.
- Evaluation of asymmetry.
- Evaluation of tissue texture.

Treatment consists primarily of manual acts, such as:

- Structural “High Velocity Low Amplitude” (HVLA-techniques, mobilization with impulse).
- Toggle techniques.
- Percussion vibrator technique.
- “Muscle Energy Techniques” (MET) (techniques in which neuromuscular reflexes are being used).
- General osteopathic mobilizations (General Osteopathic Treatment. (GOT), Total Body Adjustment (TBA))
- Functional techniques (Sutherland-, Hoover-, Jones or counterstrain-techniques, balanced ligamentous tension (BLT), ...
- Progressive inhibition of neuromuscular structures (PINS).
- Fascial techniques (myofascial release-, Chila-techniques, unwinding-techniques, ...).
- Soft tissue techniques.
- Neurovisceral and neurolymphatic reflex techniques.
- Fluida techniques (lymphatic pump techniques, ...).
- Visceral manipulation.
- Neurocranial and viscerocranial techniques.