

## **Focus on Fascia**

### **The history of the sparse understanding of fascia until now, and its rapidly growing importance today in science, medicine and hands-on therapies**

Fascia has traditionally been overlooked in the study of anatomy. Anatomy is a science of identifying the structures of the body for example, their form and structure and how they relate to other parts of the body. The knowledge of anatomy has been initially derived from dissection, and then later from surgery, x-rays, MRI scanning and other modern forms of imaging.

In the process of dissection, a great amount of time is spent in “cleaning” the connective tissue away from what one wants to see, to draw or to photograph. The connective tissue scraped away is discarded and is no longer a subject study in the fields of anatomy or physiology.

Anatomy is of primary importance to surgeons in helping them to find the different structures. In a surgical procedure, it is of the utmost importance that the surgeon knows where and what to cut and what not to cut. The surgeon also has to determine what tissue is healthy and should remain and what is not.

Connective tissue makes up more than 50% of the weight of the body, but it is generally not portrayed in the anatomy books. This may be because it is almost impossible to draw most of the fascia in the body in a way that makes any sense. It is fattish and yellowish and the fascia in one part of the body looks pretty much like the fascia somewhere else, in contrast to the muscles, bones and organs underneath which are easy to distinguish from each other.

Also, understanding the possible role of fascia has not interested the western medical community, which has focused primarily on biochemistry

and surgery. Almost all movement and body posture is understood in terms of the nerves causing muscles to contract and the contracting muscles moving the bones to which they attach. As I look at movement and posture from a little knowledge of the role of connective tissue, I believe that these old explanations are missing a key piece of the puzzle.

This limited widespread misunderstanding of the body creates a problem for modalities of body therapy derived from a “scientific model of the body” with a basis in anatomy and physiology. The model of what they are working on with their hands is less than 50% of the body as a whole.

For example, when someone massages a hard, tight muscle, they concentrate on the mass under their fingers. They think of the composition of a muscle in terms of muscle fibers and nerves to the muscle fibers. They learn how the nerve signal causes the individual muscle fibers to contract. But this is only part of the story.

The therapists are usually unaware that in order to get the contact with the bulk of the muscle, they have pushed through not only the skin, but also the layer of highly enervated, superficial fascia that forms the deepest layer of skin.

Also, this superficial fascia dives deeper in the body between adjacent muscles all the way down to the periosteum. The periosteum is the living connective tissue covering the mineral deposits of the bone. It is rich in nerve endings as well as blood vessels.

Have these therapists missed something on the way down? Have they missed out on an opportunity to release the superficial fascia and affect not only the muscular skeletal system, but also the autonomic nervous system. Have they missed something by working on the surface of the muscle rather than exploring the connective tissue between two adjacent muscles?

In most anatomy books, you can find a very detailed anatomical model showing how the individual muscle fibers contract. However, I have never seen any explanation of the mechanism that allows a muscle to relax.

The most recent scientific studies of connective tissue show that the hard muscle that we feel under our fingers is not hard and tense because of the continuing action of nerves and muscle fibers. Actually, in a tight muscle, the actual muscle fibers are not contracted! The tightness is rather a condition of the connective tissue.

Many different kinds of connective tissue have been described in Chinese medicine. It is interesting that some of the most exciting new western scientific studies in anatomy focus on connective tissue and examine the relationship of traditional acupuncture points and meridians with the superficial fascia under the skin and down into the spaces between the muscles.<sup>1</sup>

Suddenly, fascia has become a focus of interest of body therapists as well as the scientific community. There was for example a major scientific conference at Harvard University devoted to scientific research on connective tissue: “Fascia 2007”. There were 25 presenters at the cutting edge of scientific research in the 2 day program attended by over 1200 scientists and body therapists.

After the conference, video tapes from the conference were shown in thirty countries.

The idea to hold such a conference did not come from the traditional scientific community as such, but from two body therapists, Robert Schleip and Thomas Myers. Both are Rolfers©. Robert is a Rolfing© teacher and Tom has been the head of the anatomy department of the Rolf Institute.

### **Rolfing© and other schools of structural integration**

Rolfing© is a form of hands on therapy developed by Ida P. Rolf. She was a scientific researcher in the study of connective tissue at the Rockefeller

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<sup>1</sup> Helen Langevin ....

Institute in New York. At the same time, she practiced yoga to help her with some of her own health issues.

A friend of hers had been a concert pianist, but was unable to play because she had injured her wrist in a fall on the street. Ida combined her understanding of yoga with her knowledge of connective tissue and started to treat her friend. Her friend had a surprisingly rapid recovery and was soon back to playing the piano concerts. Spurred on by her success, Ida started to treat other people to explore the possibility to help a client by working from an understanding of the nature of connective tissue.

Ida Rolf developed her technique into a form of treatment that she called “structural integration”. As she started to teach others, the therapy came to be called Rolfing© and the people trained by her were called Rolfers©. Over the last few years, several schools of structural integration have come. Most of them have their roots directly or indirectly in Rolfing©.

One of the first schools was started by Joseph Heller. He had been a Rolfing© teacher and had been president of the Rolf Institute. He left the Rolf Institute to teach on his own and he called his work Heller Work. He still kept the protocol of ten sessions, but placed more weight on the psychological aspects that emerged in the series of treatments.

## **Thomas Myers**

Thomas Myers developed a new understanding of the myofascial system from the ideas current in the Rolf Institute twenty five years ago. For a period, he was head of the anatomy department for the Rolf Institute. He wrote a very popular book called “Anatomy Trains”. In addition to teaching courses in “Anatomy Trains” and other short courses, he also teaches his own interpretation of structural integration called Kinesis.

[www.anatomytrains.com](http://www.anatomytrains.com)

Tom was one of my anatomy teachers when I took my training at the Rolf Institute. I can clearly see that his “Anatomy Trains” is a sophisticated development of the ideas he presented to our class then.

Thomas Myers taught “Anatomy Trains” for our Stanley Rosenberg Institute in Copenhagen in April 2007.

Another of my anatomy teachers during my Rolfing© education was Louis Shultz. Together with Rosemary Feitis, he wrote one of the best books for body workers on fascia: “The Endless Web.” In addition to being a Rolfer© herself, Rosemary was Ida Rolf’s personal secretary for several years.

### **Ida P. Rolf Method at the Stanley Rosenberg Institute**

Several years after I completed my Rolfing© training, I started to teach my own interpretation of the ten sessions of structural integration. I call that form of body therapy “Ida P. Rolf Method” in honor of the woman who was the original source of the work.

What is unique in our approach is the gentleness of our techniques. We release the connective tissue with a light touch using a minimum of physical force.

### **Robert Schleip and Stephen Porges**

Robert Schleip was the other person behind Fascia 2007. In addition to teaching Rolfing© at the Rolf Institute, he returned to the Institute of Applied Physiology at Ulm University in Germany. There, he did a research project on the contractibility of connective tissue. You can download his research paper in this section of our or visit his own website [www.somatics.de](http://www.somatics.de).

He was awarded not only a PhD for the project, but also graduated Summa Cum Laude (with highest honors). He now splits his time between his Rolfing© practice and his scientific research at the University.

Robert Schleip made a presentation of some of his ideas about connective tissue at a conference sponsored by our Institute featuring Dr. Stephen Porges and his Polyvagal Theory in August 2007.

Dr. Porges new interpretation of the function of the autonomic nervous system is revolutionizing our understanding of the relationship between the body and our mental-emotional state. It also gives us a new understanding of the difference between normal and abnormal behavior. Se [www.stephenporges.info](http://www.stephenporges.info).

Robert Schleip will return to Copenhagen to teach a seminar in April 2008 for our Institute. He will be joined by a medical doctor, Stephen Levin. Dr. Levin has developed a concept which he calls bio-tensegrity, which is an understanding of one aspect of connective tissue. See: [www.biotensegrity.com](http://www.biotensegrity.com)

## **Jim Oshman**

Jim was often a guest at the Rolfing© trainings when Ida was still alive. He in fact presented a lecture on the subject of connective tissue at her last Advanced Rolfing© class.

Jim has written two books, “Energy Medicine” and “Energy Medicine and High Performance”. Jim lectures widely around the world on these subjects.

In “Energy medicine”, he presents the scientific basis for a biophysical understanding of the body. He proposes the potential for Energy Medicine applications in not only allopathic medicine but complementary therapies as well.

Modern western medicine is based largely on biochemistry, but there is a growing body of scientific study that we are also affected by various forms of physical energies such as electricity, magnetism and electromagnetism.

Also there is a growing body of scientific evidence that human beings like all other forms of life produce various forms of physical energies which are measurable scientifically. It is only a small step to raise the possibility that a human being's biophysical system can not only be influenced by various forms of energies such as lasers, but can also be influenced in positive ways from the bio-energies from another human being.

In his book, "Energy Medicine and High Performance," Jim focuses on some of the fascinating qualities of connective tissue. He brings together many scientific studies about connective tissue in a coherent way that is especially interesting for anyone involved in the healing arts.

Jim has taught several seminars for our Institute in the past. See his website: [www.energyresearch.bizland.com](http://www.energyresearch.bizland.com)

Thomas Myers will teach a conference together with Jim Oschman for our Institute in Copenhagen in October 2008.

## **Osteopathy**

Ida was often quoted that in her development of Rolfing©, she stood on the shoulders of the osteopaths.

The founder of osteopathy was an American medical doctor, A. T. Stills who lived in the 19<sup>th</sup> century. He had a unique philosophy of medicine. Rather than focusing on illness and pathology, he asked a simple question, "What brings about health?"

He established four medical schools. In the USA today, there are over twenty osteopathic medical schools. The doctors who graduate from osteopathic schools have the same rights as medical doctors – they can prescribe medicine, perform surgical operations, and work in psychiatric institutions.

Andrew T. Stills reasoned that if we wanted to have a healthy body, we should start with the individual cells. If we want to have a healthy cell, that

cell had to have an adequate supply of nourishment provided by the circulation of blood. The cell also had to have the possibility to get rid of its waste materials with the circulation of blood and lymph.

He reasoned that if you had healthy cells, you will have healthy tissue. If you have healthy tissues, you will have healthy organs. If you have healthy organs, you have a healthy body.

What factors could reduce the flow of blood and lymph to the cells? Tension surrounding the cells, or tension limiting the flow of blood and lymph in the vessels carrying the blood and lymph.

One focus of osteopathic treatments is to reduce tension in the body, restore circulation and allow the body to heal itself. The tensions in the body are held in the connective tissue. There is a rich tradition in osteopathy to release tension in all of the different parts of the connective tissue system.

### **Different hands-on therapies address different parts of the connective tissue system**

Ida Rolf concentrated on the myofascia – that part of the connective tissue intimately associated with what is commonly called “muscles”. “Myo” refers to the muscle fibers. “Fascia” refers to the tendons that connect the muscles to each other and to the bones. Fascia also refers to the epimysium, which is the connective tissue envelope surrounding every muscle, as well as the little connective tissue envelopes that surround every individual muscle cell and the somewhat larger envelopes that surround every bundle of muscle cells.

Carrying Ida’s work further, Thomas Myers made his own brilliant contribution to the understanding of myofascia in *Anatomy Trains* and formulated interesting strategies to work effectively in myofascia in *Kinesis*.

However, beyond the myofascia, there are 4 other organizations of the connective tissue that are of interest to the osteopaths. One is the ligament structure that connects the bones to each other in the joints. There is a large body of techniques to balance the tension in the ligaments to balance the bones in the joint and to increase ease of movement.

All of the sutural techniques used in cranio-sacral therapy can be seen as a way of releasing the ligamentous tension in the sutures between the bones of the cranium and face.

Another area treated by osteopaths is the cranial membranes (falx and tentorium) and the dura of the cranio-sacral system.

The practice of releasing the sutural ligaments and the dura has been called Osteopathy in the Cranial Field. Today it is more widely known as cranio-sacral therapy.

There is also a system of connective tissue surrounding the individual organs of digestion, the lungs and the heart. This connective tissue is addressed in visceral massage which we in our institute call Organ Massage.

The last system is the wrappings of the nerves and blood vessels. We treat the wrappings of the nerves in Neurodynamics, There is also osteopathic treatment for the connective tissue surrounding the arteries. However we have not yet brought this work into the curriculum of our Institute.

In addition to the traditional curriculum taught at other medical schools, the osteopathic medical schools also teach courses in various forms of manipulation and body therapy that stem from or are in harmony with A. T. Stills original insights and practices.

## **Osteopathy in Europe**

The ideas and practices of osteopathy spread from America to Europe. However in Europe, the focus was on the hands on techniques. European

osteopaths do not have the same background as medical doctors and they are not allowed to prescribe medicine, perform surgical operations or take psychiatric responsibility at psychiatric institutions.

However, with their primary focus on the hands on techniques, the European Osteopaths have preserved and further developed the hands on part of the original American osteopathic tradition.

Osteopathy blossomed in France, England and Belgium. Now, there is an upsurge of interest in osteopathy in not only these countries but also many other European countries.

Some teachers from the American schools come to Europe to teach and some of the European Osteopaths go to America to teach the osteopathic physicians.

### **The French Osteopath, Alain Gehin**

The roots of our understanding of Osteopathy are through Alain Gehin. We have been studying with him in an ongoing process since 1993. He is most widely known for his unique approach to cranio-sacral therapy. He has written two books: “The Manipulation of the Bones of the Cranium and Face” and “Cranial Osteopathic Biomechanics, Pathomechanics and Diagnostics for Practitioners.”

Alain has been one of the main osteopathic teachers in France. Recently he started 3 year educations for osteopaths at medical schools in Spain, Chile, Argentine, and Japan.

Whenever possible, we refer to Alain’s interpretation of the cranial work as French Cranio-Sacral Therapy to distinguish it from the American tradition which is most widely known in the popularized interpretation by John Upledger. In several important ways, Alain’s form of cranial sacral therapy is quite different. (see chapter 19 in Lærebog om Kranio-Sacral Terapi – download gratis [www.stanleyrosenberg.com](http://www.stanleyrosenberg.com))

Alain has taught courses for us in not only cranio-sacral osteopathy, but also in visceral massage (organ massage), treatment of the joints of the extremities, tensegrity and Sacro-Occipital Technique. He himself studied Sacro-Occipital Technique and was many years with Major DeJarnette, the founder of that system.

## **The living Matrix - the Continuum**

As Jim Oschman rightfully points out, the connective tissue is one large entity. Whereas it may be helpful to break it down into separate kinds of connective tissue for study as well as for application, it is useful to look at the interconnectedness of the entire system, or as Jim calls it “the Living Matrix”.

In his second book, Jim writes of the movement practices of Emily Conrad called Continuum. She has found a way to move the body from the connective tissue itself bypassing the usual nervous connection to the muscular skeletal system.

In addition to students with a wide variety of backgrounds, Emily has had success getting people with spinal cord injuries to move their bodies. Emily has taught several times with Jim Oschman and another of our guest teachers, Benjamin Shield. Last year in Denmark, several of our teachers took the intensive 5-day experience with her in Continuum movement.

[www.continuummovement.com](http://www.continuummovement.com)

## **Tensegrity**

The more that we understand the living matrix, the more we can see that it plays an important role not only in the circulation of fluids, but also in terms of our movement, posture and important functions like breathing, digestion, reproduction, the production of hormones, and the role of the immune system. We take hold of the entire system and its interconnections in the techniques which we call tensegrity.

## **Social Engagement Protocol**

Another possibility for the therapist is in relationship of the connective tissue to the nervous system. In our development of cranio-sacral therapy at our institute, we have combined the cranial techniques of Alain Gehin with the insights from Dr. Stephen Porges in his new interpretation of the autonomic nervous system.

The protocol that we have developed from this combination is unique in the world and we call it the Social Engagement Protocol. We use this combination of specially selected techniques to free up the function of five cranial nerves. We are able to lift people out of states of stress and depression and into social engagement. We have had successful treatments of people with diagnoses of autism, Asperger, Tourettes, ADHD (Damp), and learning difficulties.

Until now, our success with these problems has been limited to individual case studies from our work in our clinics. However, we are starting a research project with an out-patient department in a large psychiatric hospital in Denmark. We are also planning a clinical project in the treatment of autism in another hospital in the USA under the supervision of a psychiatrist.

In terms of the interrelationship of the connective tissue system and the nervous system, we have for years examined what I call neuro-myofascia. This is how the nervous system in a living human being response to touch, especially being touched with various connective tissue techniques applied to different parts of the connective tissue system.

## **Courses with Guest Teachers at our Institute**

We are presenting seminars with guest teachers not only to increase the knowledge and abilities of our own students and teachers, but also to share

this approach and these wonderful teachers to the wider health care community in Denmark and beyond.