

The Connective Tissue Manipulation® - The Necessary Stimulus for the Human Body

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Abstract

The Connective Tissue Manipulation®, developed by Prof. Dr. Renato Vilella and is a series of techniques with neurophysiological bases to re-establish the system's homeostasis. Based on the model of compensation and adaptation to internal and external demands, after tissue manipulation, the human body can develop new strategies to recover and improve functions.

Keywords: *Fascia; Connective Tissue; Fascial; Osteopathy; Manual Therapy*

The connective tissue manipulation®

The Connective Tissue Manipulation® developed by Prof. Dr. Renato Vilella and is a series of techniques with neurophysiological bases to re-establish the system's homeostasis. Based on the model of compensation and adaptation to internal and external demands, after manipulation, the human body can develop new strategies to recover and improve functions.

The manipulation (specific for each system – i.e. muscular, visceral, skeletal, immune) informs the brain that the manipulated site (can be an injury, tension, stiffness, dysfunction) needs to be reorganized (simple tissue dysfunctions) or be reconstructed (complex tissue dysfunctions).

What is connective tissue?

Fascial treatments have been used for a long time, and in the last decade, it has been the subject of several kinds of research [2,9-13,17,21].

If the connective tissue integrates our body, and it plays a significant role in all systems of the organism, all health care professionals should know. It helps to understand pathologies, dysfunctions and to make effective clinical decisions [4-8,18,20].

To deal with connective tissue, the therapist should know (Table 1) the primary basis of it [19].

Direct and indirect connections

The scope and resilience of the fascial system are indeterminable. Also is the resilience and adaptability capacity [3].

Although some authors and researches show that layers link Connective Tissue (Solid Fascia and Liquid Fascia), the Connective Tissue Manipulation® follows the hypothesis of polyhedral microvacuoles connecting all of our body [3,7,8]. The skin, subcutaneous tissue, muscles, tendons, bones, blood, lymphatic veins, and all other components of the human organism connected, working for local homeostasis and integrated for systemic homeostasis.

The components at cellular and extra-cellular levels	The mechanisms	The roles at the human body
Fibroblasts, Mast Cells, Adipose Cells, Macrophages, Plasmocytes; Collagen Fibers, Elastic Fibers, Reticular Fibers; Ground Substance, Proteoglycans, Glicocalix, Hyaluronic Acid, Integrin.	Biotensegrity, Fascintegrity, Thyxotropy, Fascial Plasticity, Neurophysiological adaptations.	Movement, Adaptation and Protection, Transmission of Force, Metabolic Role, Hemodynamic Role, Lymphatic Role, Visceral Role.

Table 1

These connections are capable of transmitting information by electrochemical stimulus (cell-to-cell) and transmit mechanical stimulus (major structures). It provides the incredible ability of adaptation, in most cases good, but in some cases can cause dysfunctions by overcharge. If some structure is not playing the way it should, another structure will overcharge, and it goes on and on until some pathology, injury or symptom appears.

How does the connective tissue manipulation® works?

Three bases establish it:

Water

- Water is necessary for the whole body function, and all systems are directly dependent on it. If our body is composed of approximately 70% of liquids, it should be refueled with the necessary amount of water (weight dependent) every day.
- Also, the water is attracted by Hyaluronic Acid to lubricate the tissues and improve the functions.

Sleep

Rest is the point when the individual rests, the cortisol levels reduce, and consequent, the pain reduces too. In the excellent sleep state, the body tissues recover with a series of local and systemic processes.

Inflammation and recovery

When some dysfunction happens, and it is not fully cured or leaves some sequela, there is an amount of collagen deposited, and it causes a disorganization of the tissue fibers. Then there is less blood, nutrients, water, and recovery cells. With the Connective Tissue Manipulation® (Figure 1), we can cause a localized and controlled inflammation process that will bring defense, cleaning, and recovering cells to the damaged tissue. When the process is over, the individual can start a movement therapeutic rehabilitation.

Which structure can be manipulated with connective tissue manipulation techniques®?

Indirectly, with the correct clinical reasoning, it can reach all of the human body structures. Directly the following structures and examples of treatment or palliative benefits:

- **Muscular System:** Trigger Points, Proprioception Dysfunction, Stabilization Dysfunction, Pain, Injury, Movement Coordination Dysfunction.
- **Skeletal System:** Stiffness, Movement Restriction, Pain.
- **Fascial System:** Unstable Joints, Chronic Pain, Myofascial Expansion Dysfunction, Connection Dysfunction.
- **Visceral System:** Specific Organs Dysfunctions (i.e., reflux, intestine constipation, menstrual cycle dysfunctions, metabolic capacity dysfunction), Visceral Pain.
- **Immune System:** Dysfunctions of the Immune System, Autoimmune Diseases, and Reduced Immune Response.
- **Endocrine System:** Endocrine and Exocrine Dysfunctions.
- **Neural System:** Peripheral Neural Dysfunction, Central Neural Dysfunction, Autonomous Neural Dysfunctions.
- **Cardiovascular System:** Deficit Dysfunctions, High Blood Pressure Dysfunctions, Chest Pain.



Figure 1: Connective Tissue Manipulation® Example.

- **Respiratory System:** Thoracic Expansion Dysfunction, Reduced Respiratory Function, Peripheral Oxygenation Dysfunction.
- **Psychoemotional System:** Depression, Anxiety, Insomnia.

Conclusion

In the Connective Tissue Manipulation® complete training (Figure 2), all the students need to pass theoretical and practical tests. Also, in the end of each module they are requested to attend four patients with the clinical reasoning, theory and practice they have learned. In the following module of course, they present and discuss the four clinical cases with the other participants.



Figure 2: Connective Tissue Manipulation® Logo.

Undeniably, our body is fully connected, and Connective Tissue Manipulation® is an effective technique to re-establish the normal function of the human body by treating dysfunctions of all systems.

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