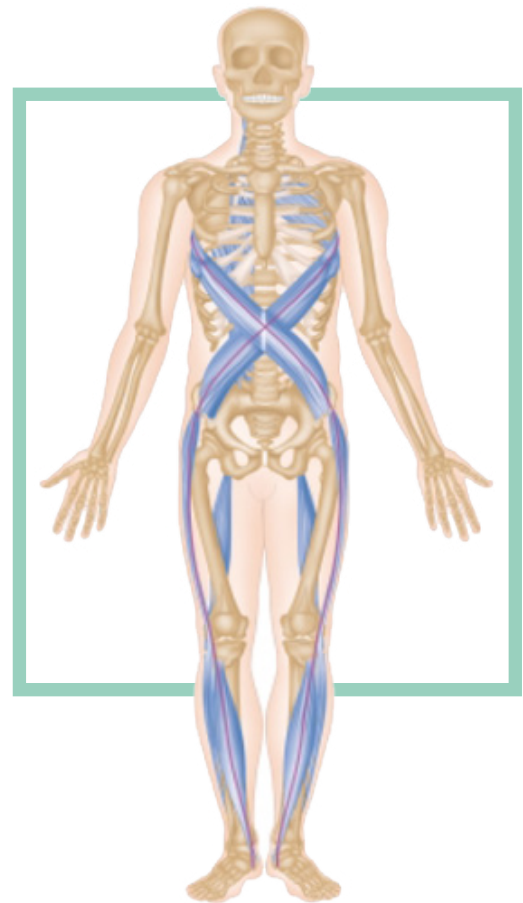


FASCIA: A COMMUNICATION TOOL

SENSITIVE TO MECHANICAL STIMULATION

The fascia, or connective tissue network, is traditionally relegated to a role of maintaining bone and muscle components. Today, new anatomical observations highlight the presence of fascia and its uninterrupted continuity through all parts of the body despite its great structural variety, with different shapes ranging from the most superficial to the deepest and from the loosest to the most organized. **This tissue has a dynamic behaviour and plays a role in the functioning of all human body physiological systems.** The most recent scientific data are shedding light on the role played by fascia in the functioning of the human body and are arousing renewed interest from conventional medicine. Despite these advances, there is still no unanimous definition in the various international nomenclatures, although various definitions have been proposed since 2007.



In addition to its support and protective function, the fascia also behaves as a **communication organ** transmitting information throughout the entire body system in relation to the central and peripheral nervous system. It is therefore important to take fascias into account in the understanding and treatment of disorders of the locomotor, nervous or visceral systems (chronic pain, fibromyalgia, irritable bowel syndrome, anxiety, etc.). Treatment of fascias could

even be considered as a way to promote the interaction between all the different body systems. Some believe that the fascia is the missing link in understanding the action of manual therapies. It seems clear that fascia science will become a promising source of information for manual therapy and physiotherapy in general in the short, medium or long term. Manual fascia therapies aim to act specifically on tension, twitching or even fascial contractures⁽¹⁾.

**TREATMENT OF FASCIAE
COULD EVEN BE CONSIDERED
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INTERACTION BETWEEN ALL
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Some maneuvers impact on the fluid pressure generated between 2 layers of fascia leading to an increase in the thickness between these layers. Thickening that fluid-filled space can improve the gliding system and allow muscles to work more efficiently. These maneuvers could act on the circulation of hyaluronic acid and modify its viscosity and allow the release of motion amplitudes. Fascia cells, especially fibroblasts and myofibroblasts, are sensitive to the intensity, direction, frequency and duration of the load applied to them. Manual treatments could influence these cells through **mechanotransduction phenomena: transformation of a physical force into biochemical information with modification of the cellular activity**.

Thus, a manual pulling maneuver can modify the orientation and the shape of myofibroblasts but also their behaviour and adaptations, by acting on protein synthesis, gene expression and secretion of inflammatory mediators. Manual maneuvers such as pulls, torsions, compressions, stretching exercises or even frictions can influence these mechanosensitive cells⁽²⁾.



Mechanotransduction is the basic mechanism of endermologie[®], a natural non-invasive and painless method of treatment of connective tissue transformations but also muscular and circulatory disorders. The mechanical forces exerted by the different treatment heads of the Cellu M6[®] medical device affect the cellular response. These treatments are used in various post-trauma or post-operative indications. They represent a revolutionary solution in tissue rehabilitation⁽³⁾. Combined with manual therapies, endermologie[®] may help improving the integrity of the body systems and fascia health.

SOURCES :

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