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| **Name:** |
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| 1A-3 |
| **Basic Science Question:** |
| What is myofascial tissue? |
| **Report:** |
| Fascia is synonymous with connective tissue of which many layers and types exist. Its main function is to hold everything together and support form and function of the rest of the body. Myofascia can be understood by breaking down the word into its roots: myo- meaning muscle and -fascia meaning connective tissue; combined it is muscle connective tissue. Because myofascia is connected to the rest of the fascia in the body like an intricate network, the clinical significance is profound and most often associated with orthopedic problems and non-traditional referred pain patterns (McKenney, K. et al., 2013).  Hisologically speaking, myofascia exists on three levels (superficial, intermediate & deep) with subtypes of varying functions and compositions. Some categories of fascia (of which myofascia fall into a few of) include:    - Linking-dynamic (investing layers)  ~Components: Collagen types 1, 12, 14; Pacinian corpuscles; Free nerve endings  ~Function: aids in movements and stability  ~Connective Tissue Type: Dense regular    - Linking-passive (tendons, aponeuroses, sheaths, etc.)  ~Components: Collagen types 1, 3, 12, 14; Elastin; Pacinian and Ruffini’s corpuscles  ~Function: maintain continuity and proprioception  ~Connective Tissue Type: Dense regular  - Fascicular (endomysium, perimysium, epimysium, etc.)  ~Components: Collagen types 1, 3, 4, 5, 12, 14  ~Function: muscular force transmission, proprioceptive feedback, neurovascular bundle protection  ~Connective Tissue Type: Loose, Dense regular, Dense irregular  - Compression (fascia of limbs)  ~Components: Collagen Type 1; Elastin; Ruffini’s corpuscles  ~Function: stocking, tendon compression, proprioception, venous return  ~Connective Tissue Type: Dense regular  - Separating (Parietal, Visceral, Extraserosal fascia)  ~Components: Collagen types 3, 5, 7; Extracellular matrix (reticular & elastic fibers); Pacinian and Ruffini’s corpuscles  ~Function: compartmentalization  ~Connective Tissue Type: Loose, Dense irregular  Ref. Kumka, M. & Bonar, J. (2012).  As you can see, the various layers of the myofascia each contribute to proper form and function of the muscle it surrounds. It is an integral part to proper function at not only in the musclular system but also extending beyond to other body systems.  Key take-aways: myofascia assists muscles with function as well as general support beyond the muscles; the main fiber type in the connective tissue is collagen of which many subtypes exist; myofascia surrounds all muscles and is continuous with the rest of the fascia of the body; myofascia is integral to proper function at the local level as well as systemically; because of the body’s integrated fascial system, there is a profound clinical significane to the dysfunction of the myofasica which the patient typically experiences as pain. |
| **References:** |
| 1. Kumka, M. & Bonar, J. (2012). Fascia: a morphological description and classification system based on a literature review. *The Journal of the Canadian Chiropractic Association*, 56(3): 179-191. (<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3430451/>). 2. McKenney, K., Elder, A.S., Elder, C., & Hutchins, A. (2013). Myofascial Release as a Treatment for Orthopaedic Conditions: A Systematic Review. *Journal of Athletic Training*, 48(4): 522-527. (<https://0-www-ncbi-nlm-nih-gov.libus.csd.mu.edu/pmc/articles/PMC3718355/>). |