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## ADHESIONS

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**Adhesions** are defined as “the abnormal union of two surfaces that are normally separate”. Normally we think of adhering things together with tape, glue, and other bonding agents, but did you know the human body has the ability to adhere to itself? An adhesion in the body is a fibrous band of scar tissue that binds together normally separate internal body structures. They can occur pretty much anywhere, such as the abdominal organs, reproductive organs and musculoskeletal tissue → which, being within my scope of practice, is what we’ll focus on here. For your information: *fibrotic* tissue and *scar* tissue are often used interchangeably with *adhesions*, and is mostly internal based, however there are often external scars associated as well.

**Fibroblast** cells (shown below) are what make up the majority of our structural framework, and produce among other things, a variety of fibers including collagen. When tissue insult occurs due to surgery or injury, local inflammation is what sets the stage for adhesion formation. Fibroblasts are stimulated to lay down connective tissue fibers in a bid to knit wounds or incisions together, or simply to strengthen an area. Adhesions form when the connective tissue begins clinging to other nearby internal structures – they can often be painless and cause no difficulties, but the opposite can be true too. Much depends on where it’s occurring (functional uses), why it’s occurring (one time surgery or repetitive cumulative injuries), and if there are rehabilitative measures being taken during the healing process. The surface of all internal tissue layers are normally slippery and will slide against each other when the body is bent, stretched, and



twisted, giving us freedom of movement especially where tendons and ligaments attach at joints. In the case of muscle strain (torn muscle fibers), scar tissue forms across the contractile tissue to bind it back together, and takes about 5 to 8 days for closure. The collagen molecules laid down can be easily remodeled with gentle and persistent treatment for 8 to 10 weeks, but at 14 weeks, the molecule bonding has changed and is now unresponsive to remodeling. Scar tissue shortens as it ages, becoming compact, pale & shiny, and is very strong but lacks the cells, capillaries, flexibility and elasticity of normal tissue. Thus it also lacks the normal functions of the tissue it replaced, and can restrict movement and/or stretching of the tissues involved.

**So to sum up:** our body experiences injury and automatically sets out to repair damaged areas with scar tissue – and naturally we think we’re recovered after several days/weeks and the pain has gone away. You may not be aware of your “new” problem for weeks to years from the onset of the original injury depending on how much the area is stressed. You’ll recognize adhesions as a loss of function, such as decreased ranges of motion of a joint, weakness, stiffness, soreness, pain with exertion, or many of the symptoms that are associated with “getting older.”

**If you are experiencing any of these symptoms, I can help identify and resolve the problem with manual therapy techniques, including hand tools which break down adhesions in fascia and muscle fibers. I may also refer you to my personal trainer for strengthening or to another RMT for specialized manual release techniques. I look forward to helping you!**