

## ADHESIONS

One of the consequences of prolonged inflammation is the formation of *non-scar tissue adhesions* within the tissues that have been inflamed. They are so commonly a part of any of the conditions mentioned here-in throughout this text that it is a worthy topic of discussion, especially in light of the fact that they may be a direct and ongoing source of inflammation once they have formed. *Adhesions* of this sort do not generally evolve spontaneously and are considered to be just one of the components that make up a syndrome. They do not (in the author's view) collectively constitute a separate distinct "syndrome".

*Adhesions* are defined as tissue components that cause tissue layers, which normally slide freely over one another, to stick or bind together. The *adhesion* itself is usually a fibrous tissue constituted from a normal constituent associated with all tissues, *collagen*. Involved tissues, especially in chronic cases, will appear thickened and congested and are resistant to being rolled between the fingers or sliding over deeper tissues.

*Adhesions* are formed as a result of a reparative or reactive process to soft tissue stress and inflammation. They may result from disease, prolonged restriction of joint motion, or surgical procedures. They may also result from the trauma of bone fractures or external blows to muscle or other soft tissue structures. They may also result from other injuries causing soft tissue inflammation and effusion into muscle or other soft tissues. *Adhesions* may also develop in response to local infection, spontaneous hemorrhage, and are often

associated with joint capsulitis and other prolonged inflammatory conditions. The extent of an adhesion formation is largely dependent upon the individual system's propensity for producing excessive fibrotic material in response to trauma.

*Adhesions* are generally located through palpation of soft tissues in the suspect area. Adhesed tissues will not slide over one another and may be difficult to manually separate. Additionally, because of their irritating nature, adhesions are often accompanied by inflammation and may thus be located through DSR survey.

### Treatment

Treatment amounts to breaking or stretching any adhesion formations and relieving any predisposing conditions, such as inflammation or habitual joint positioning.

*Adhesions* between the dermis and underlying tissues (fascia, muscle, or tendon) have been successfully treated with a combination of soft tissue manipulation followed by phonophoresis of an effective non-steroidal anti-inflammatory. Perform soft tissue manipulation at right angles (transversely) to the long axis of the muscle or tendon fibers at the site of the adhesion (refer to Soft Tissue Manipulation in Tight Areas). Apply an effective anti-inflammatory, through phonophoresis, to defeat any inflammation that may already be present or caused by soft tissue manipulation.