

Runner's Stitches: No Real Mystery!

A recent article in the November 1-2, 2014 *Wall Street Journal* reported on the supposed mystery of runner's stitches. As a doctor treating athletes, as well as weekend warriors, for over thirty years, it seems that some basic common sense regarding the occurrence of "stitches" of pain in the right lower side of the chest and upper abdomen has been well known to general practitioners and chiropractic and sports doctors for many decades.

It is a fundamental of general diagnosis that pain originating from peptic ulcers or upper intestinal duodenitis will often be referred (radiate) to the area just below the right rib cage, known, interestingly, as the hypochondriac area in *Gray's Anatomy*, the anatomy text studied by virtually all doctors and physiologists. (The word "hypochondriac" is derived from "hypo," meaning below, and "chondriac," referring to the lower ribs. The word did, however, take on a psychiatric meaning, based on the assumption that most peptic ulcer disease was related to mental stress and executive worry and often resulted in pain in the hypochondria region. Indeed, treatments through the 1960's and 70's usually included some form of minor tranquilizer, as well as medicine to relax the smooth muscle cramping in the upper gastrointestinal tract associated with certain ulcers.)

To understand to runner's stitch we should understand that when the body is placed under stress cortisol and adrenaline typically rise, signaling the "fight or flight" survival response and shunting blood supply preferentially to the heart and large muscles of the body to enable greater action in the muscles to fight or flee - or to run a hard race! When blood is preferentially shunted to the larger muscles, it is taken from the otherwise plentiful bloody supply to the organs of digestion and reproduction (the vegetative functions). When we are anxious or tensed, many of the smooth muscles of the vegetative functions may receive reduced blood flow. This may result in dysfunctions such as cramping of intestinal muscles with referred "stitches" of pain as a result of the pain of the blood deprived smooth muscle cramping, or disturbed control of urinary and bowel smooth muscles, resulting in minor incontinence accidents as is not uncommon in marathon runners.

One of the more common compromises we see in athletic events is the small intestine pattern with right-sided stitches. This is known also as viscerosomatic reflex pain, referencing pain related to a body surface (or "soma") from an internal viscera (organ), such as the small intestine. The stomach may also generate similar pain, usually more central, at the same level in the epigastric area. Additionally, the gall bladder, which attaches to the upper small intestine, can be the culprit with reflexive pain, but its exact location of pain referral can be a little more variable since the exact anatomical location of the gall bladder does have some degree of variance amongst individuals.

In summary, stress, tension, over-exertion, and the pressure to "run a race hard" can cause preferential blood shunting away from the digestive organs resulting in smooth muscle tightening of the intestinal wall and resultant referral of pain to the area where "stitches" are common to runners, the "hypochondriac region." The repeated exposure to high cortisol levels during intensive trainings can erode the small intestine wall, making its tissue physiology even more vulnerable to the effects of blood shunting to the large performance muscles. If you add the complication of low blood sugar jerks in many athletes, especially those who carb-load prior to training or those who stop eating completely for too long of a period prior to events, it is not surprising that these tissues become susceptible and express painful referral symptoms like "stitches."

Those doctors with practical experience in diagnosing functional complaints of the non-life-threatened

patient, like general practitioners and chiropractors, are often the best at recognizing this phenomenon. Repeated trouble of this kind often leads to spinal vertebral nerve feedback with silent misalignments resulting. The skilled chiropractor or osteopath can bring manipulative help for this component. But lifestyle, dietary pattern, and blood sugar handling changes, as well as sports psychology and baseline anxiety control, may be co-factors that can be addressed. So while this is a complex area - stitches - it is not a mystery, and can be addressed with careful assessment to offer logical and relatively easy treatment that, in this author's experience, usually proves to be very successful.