Carpal Tunnel Syndrome Essay, Research Paper

Outline I. DefinitionII. IntroductionIII. Causes1. Genetic Predisposition2. Injuries and Trauma3. Health and Lifestyle4. Repetitive MotionIV. Treatment 1. Splint 2. Cortisone Cream 3. SurgeryV. Preventive Measures1. Exercises2. ChiropractorVI. Conclusion Carpal Tunnel Syndrome is a condition characterized by pain and burning sensations in the fingers and hand caused by compression of the median nerve as it passes between a wrist and ligament and the bones and tendons of the wrist. 1 The first symptoms of this Carpal Tunnel Syndrome usually appear at night. Symptoms range from a burning , tingling numbness in the fingers, especially the thumb, index and middle fingers, to difficulty gripping or making a fist. This is caused by a compression of the median nerve. There are four major causes of Carpal Tunnel Syndrome. They are:Genetic Predisposition: Certain people are more likely to get carpal tunnel syndrome than others. Doctors do not know why or how to establish which kind of person you are. From person to person there are differences in the amount of lubrication of the flexor tendons of the wrist. The less lubrication of those tendons the more likely you are to get Carpal Tunnel Syndrome. Injuries and Trauma: An impact to the wrist or lower arm can make tendons swell. A break in one of the wrist bones can cause the occurance of Carpal Tunnel Syndrome.Health and Lifestyle: People who suffer with thyroid diseases, amyloidosis, Rheumatoid arthritis, and diabetes are more likely than others to develop Carpal Tunnel Syndrome. People who experience hormonal changes such as pregnancy, menopause and the use of birth control pills also are more likely. People with high job stress and Alcoholics are also at a higher risk.Repetitive Motion: This is the most common cause of Carpal Tunnel Syndrome.It has been mostly connected to the workplace. Everything from typing on your keyboard, using hand tools, factory work, sports, and playing musical instruments have some repetitive motion. When you flex your hand or fingers the flexor tendons rub against the walls of the carpal tunnel. If you allow your hand time to heal this rubbing will probably not lead to any kind of irritation. The amount of healing time needed could be anywhere from seconds to hours. When you do not let your hand or wrist recover from the flexing or the work it was doing and start the flexing and working all over again that’s when Carpal Tunnel can begin. There are different treatments depending on the extent of damage caused by Carpal Tunnel Syndrome. In the early stages of Carpal Tunnel Syndrome, a splint will sometimes decrease the symptoms, especially the numbness and pain occurring at night. It may also help control the swelling of the tenosynovium. If this doesn t work, a cortisone injection into the carpal tunnel may be used. This medication will decrease the swelling of the tenosynovium and may give temporary relief of symptoms. If all of the previous treatments fail to control the symptoms of Carpal Tunnel Syndrome, surgery will be needed to decrease the pressure on the Median Nerve. A small incision, usually less than 5 cms, is made in the palm of the hand. In some severe cases, the incision needs to be extended into the forearm another 1cm or so. After the incision is made through the skin, a structure called the palmar fascia is visible. An incision is made through this material as well, so that the constricting element, the Transverse Carpal Ligament, can be seen. Once the Transverse Carpal Ligament is visible, it is cut with either a scalpel or scissors, while making sure that the Median Nerve is out of the way and protected. Once the Transverse Carpal Ligament is cut, the pressure is relieved on the Median Nerve. Finally, the skin incision is sutured. At the end of the procedure, only the skin incision is repaired. The Transverse Carpal Ligament remains open and the gap is slowly filled by scar tissue. A bandage is applied to the hand following surgery. This should be left in place until the first office visit after the surgery. Sutures will be removed 10 – 14 days after surgery. Avoid any heavy use of the hand for 4 weeks after your surgery. Expect the pain and numbness to begin to improve after surgery, but you may have tenderness in the area of the incision for several months. 2

There are different ways to prevent Carpal Tunnel Syndrome. A potentially useful exercise involves extending one arm forward, palm up while keeping the elbow straight, according to Sucher, who reported his research at a recent medical meeting in San Francisco. With the opposite hand, slowly pull down the fingers of the outstretched palm toward the floor. Hold the stretch for three seconds, then stretch slightly further, Sucher said. Rotate the outstretched fingers as far right as possible- without rotating the rest of the arm- and hold for three seconds. Repeat, rotating to the left .But research shows that this is not true, he said People should get their physician’s approval before trying the stretches, he stressed. The exercises do not help everyone, and symptoms patients believe to be caused by carpal-tunnel syndrome may be caused by another condition, he cautioned. 3 Chiropractic care can also help. Although it is not a cure-all for Carpal Tunnel Syndrome, it can be very effective when structural imbalances in the neck and upper limb are involved. Chiropractic adjustments to the neck, wrist, shoulder, and elbow can relieve pressure from the median nerve, thus reducing the symptoms. Unlike surgery, which leaves permanent changes in the wrist, chiropractic care permits a person to heal naturally. A chiropractor can recommend a program of adjustments, vitamin supplements, and exercises that will put the patient on the road to natural recovery. Carpal Tunnel Syndrome affects millions of people. You may have it and not realize it yet. People need to be aware of the warning signs and seek immediate treatment before it s too late. Bibliography1. Edith J. Applegate. The Anatomy and Physiology Learning System Textbook, Pg. 95, 1995. 2. Dr V Zielinski MB.,BS., (Sydney) FRACS, Plastic & Reconstructive Surgeon, Online, 1998. 3. ZDNN- World News from MSNBC, Online, 1998. 4. Carpal Tunnel Syndrome & Repetitive Stress Injuries: The Comprehensive Guide to Prevention, Treatment & Recovery Tammy Crouch, September 1996. 5. Treating Arthritis, Carpal Tunnel Syndrome, & Joint Conditions Alan Pressman, Karen Lane, Herbert D. Goodman, March 1997. List of

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