During their lifetime, 50% of people risk breaking a bone that causes bones to become thin. Osteoporosis, a condition where bones become porous and fragile, affects millions. In the United States, all women and 25% of all men are considered at increased risk of osteoporosis-related fracture. Solutions to this growing medical issue have come a long way. In the 1980s, when Aspirin and Vitamin D were the standard treatments, it was estimated that only 44 million Americans had high blood calcium. By 2000, this number had increased to 100 million. As will be discussed here, there are many options for managing this disease. Risk Factors

Though osteoporosis is often considered a disease of older age, individuals can be at risk at any age. Women are at greater risk due to the loss of bone density over time, particularly after menopause, when the level of estrogen decreases. Males are also at risk, but for different reasons. As men age, they lose bone density due to a loss of physical strength and a variety of health issues, such as anemia and hormone abnormalities. These and other factors contribute to the development of osteoporosis. 

Calcium and Vitamin D are key nutrients in bone health. Calcium is needed in the bones to keep them strong and in the blood to regulate muscle contractions. Vitamin D is crucial in facilitating calcium absorption from the digestive tract and its transport to the bones. The ideal daily intake is 1,000-1,500 mg of calcium and 400-800 IU of Vitamin D. However, those with a history of hip fracture, medical conditions, or a family history of osteoporosis should consult their healthcare provider to determine the proper daily intake. 

Individuals with certain health conditions may also be at increased risk. Conditions such as Celiac disease, hypogonadism, hypoparathyroidism, and hyperparathyroidism can lead to decreased bone density. 

Interventions such as calcium and vitamin D supplements, hormone replacement therapy, drug therapy, and exercise can help manage the condition. 

Fighting Osteoporosis Through Physical Therapy

While osteoporosis cannot be cured, it can be managed with an interdisciplinary approach. A physical therapist can play a key role in the treatment of osteoporosis.

1. Physical Therapy: 

Physical therapy can be broken down into 3 main categories: 

- Hand Therapy: A specialty of physical therapy, hand therapy improves function and strength of the extremities. In osteoporosis, individuals often have decreased grip strength and a decrease in fine motor skills. A hand therapist can improve strength and function of the hand.

- Rehabilitation: Rehabilitation is the process of improving the performance of an individual. Physical therapy is essential in alleviating CTS symptoms. 

- Exercise: Types of exercise for osteoporosis include strengthening exercises, weight-bearing exercises, and balance exercises. These exercises, in conjunction with occupational and hand therapy, can improve function and strength.

Signs and Symptoms

The exact cause of CTS is typically unknown. Compression or pressure on the median nerve can happen in several ways:

- Repetitive use of hand and fingers
- Keeping the wrist in a bent position for a prolonged period of time
- Inflammation of the tendons that run through the carpal tunnel
- Water retention
- Pregnancy

Research has shown that conditions such as arthritis, wrist fractures, or dislocations may cause the carpal tunnel to narrow. According to the National Institute of Neurological Disorders and Stroke, individuals with metabolic conditions, such as diabetes, are at higher risk for CTS. Women are three times more likely to experience carpal tunnel syndrome than men and it rarely affects children. According to the American Society for Surgery of the Hand, in severe cases of carpal tunnel syndrome, numbness can be permanent and there may be a loss in the muscle mass at the base of the thumb.

Treatment Options:

There are several treatment options for CTS including occupational therapy. An occupational therapist is a skilled health professional who will evaluate your condition and how the symptoms are impacting your ability to complete your daily activities. Some treatment options include:

- Wrist splinting to provide support and keep the wrist straight to reduce pressure being applied to the median nerve. Wrist splints are typically worn at night to bed to reduce symptoms that may interfere with sleep.
- Activity modification techniques to continue to participate in daily and recreational activities without increasing CTS symptoms.
- Stretching and strengthening exercises to help reduce pain and improve grip strength and function of the hand. An occupational therapist will be able to design and implement a treatment program to assist in alleviating your symptoms.
- Corticosteroid injections, non-steroidal anti-inflammatory drugs, and use of vitamins such as B6, may also be used in conjunction with therapy to help reduce symptoms. If conservative treatment is not successful in alleviating symptoms, carpal tunnel surgery has proven successful in alleviating CTS symptoms.

Carpal tunnel syndrome can have a significant impact on all aspects of your daily routine. Early diagnosis is important to prevent irreversible damage to the median nerve and prevent you from participating in your daily activities. At All Care Physical Therapy, we are fully evaluated and offers the best treatment option for your condition.

All-Care Physical Therapy Center, L.L.C.

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