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Fall Prevention Tips for Seniors With Foot and Ankle Problems

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One of many people's biggest fears about the physical aging process is the risk of injury from falling. Falls are the leading cause of fatal and nonfatal injuries for people 65 years of age and older. So prevalent that, in the United States, an older adult dies from a fall every 19 minutes, according to the National Council on Aging (NOAC). The damages from falling are not only physical, but financial. The council estimates the toll for older adult falls is expected to increase as the population ages and possibly reaching \$67.7 billion by 2020.

Despite all these grave statistics, it's a myth that falling is an inevitable part of aging. It is not. Seniors have the power to reduce their risk of injury from falling by taking preventive measures to maximize their independence and quality of life.

Podiatrists play a key role in the prevention of falls for seniors, because they are trained to identify patients who are at risk for falls and able to address the primary biomechanical problems that cause falls. Problems that contribute to falls include osteoarthritis, unstable foot and ankle joints, pain, weak muscles, Dropfoot (Hemiplegia), posterior tibial tendonitis, tendon contraction, peripheral neuropathy, flatfeet, malformations in the toes, Equinus Foot, Charcot Foot, gait abnormality, and lack of muscle coordination (Ataxia). The foot and ankle problems that place seniors at highest risk of falling have Chronic ankle instability, Hallux Rigidus (big toe arthritis), and Ankle, Hindfoot, and Midfoot arthritis. Here is a brief overview of the symptoms, causes, and treatments for these conditions.

Chronic ankle instability

Chronic ankle instability is characterized by a weak ankle that "gives way" on the lateral (outer) side of the ankle on a fairly regular basis. This occurrence is unpredictable and can occur while walking, running, or when standing. Common symptoms include pain, tenderness, and swelling.

The primary cause is usually the result of a prior ankle sprain or injury (i.e. fracture) that did not rehabilitate properly or fully heal. Consequently, ligaments surrounding the ankle remain stretched, weak, and sometimes torn. Other causes are not injury related. These include arthritis, inflammation in the synovium (joint lining), and a buildup of scar tissue, a damaged nerve, or nerve entrapment condition.

Physiotherapy is the most common treatment to rebuild ankle strength. Special bracing is also used to provide support. Surgery is considered if ligaments need to be tightened on the outside of the ankle to add support. In some cases, a tendon may be grafted from the other ankle to rebuild stability.

Hallux Rigidus (big toe arthritis)

Hallux Rigidus (hallux rig-i-dus) is a form of degenerative arthritis in the metatarsophalangeal (met-a-tar-so-pha-lan-gel-al), "big toe," joint (MTP) that usually develops in adults between the ages of 30 and 60. This condition is the most common form of arthritis in the foot. It is a progressive condition that limits the toe's range of motion over time.

This condition occurs when the cartilage of the big toe is injured or because of abnormal foot anatomy that puts an excessive stress load on the MTP joint. The deterioration of articular cartilage covering at the end of the bone results in a bone-on-bone condition.



Initial symptoms include joint stiffness, swelling, pain, discomfort, and restricted range of motion. The condition tends to be aggravated during cold and damp weather. Walking becomes abnormal and is usually associated with a limp that results in balance impairment. Recreational and fitness activities are restricted and so is manual labor that requires stooping or squatting.

As the condition advances, pain is present even during rest. Walking is difficult and evidenced with a limp. Bone spurs in the heel often develop, making it uncomfortable to wear shoes, especially high heels. Often, these conditions lead to pain in the knee, hip, and lower back.

Biomechanics and structural abnormalities are the primary causes of Hallux Rigidus. It is not caused by genetics, but it can be the result of inheriting a foot type that is prone to developing this condition. People who have excessive pronation (rolling in) of the ankles or fallen arches are more prone to develop this condition.

This condition can also result from injury such as stubbing your big toe or from work activities that require excessive stooping and squatting or caused by gout or rheumatoid arthritis (inflammatory diseases).

Early diagnosis will help avoid further problems. Diagnosis is usually made after X-rays are taken to determine the extent of degeneration and bone spur formation. Blood tests and aspiration may also be used to confirm diagnosis of septic arthritis.

Non-surgical treatments include anti-inflammatories and pain medications. Shoes that provide a larger toe box and stiffer sole with a rocker panel design feature should be used. Sometimes a metal brace is placed inside the sole to limit toe bending. Cold and hot therapy is sometimes used as well as cortisone injections.

Surgery may be done if therapy fails. Depending on the severity of the condition, there are three types of surgeries that may be performed including: a Cheilectomy (kl-lek'-toe-me) for mild to moderate MTP damage, an Arthrodesis (are-throw-dee' sis) permanent fusion of bones if the cartilage is severely damaged, or Arthroplasty (are-throw-plas'tee) ankle replacement with an artificial joint.

Ankle, hindfoot, and midfoot arthritis (degenerative joint disease)

Arthritis is also common in three other locations of the ankle, hindfoot, and midfoot. There are three types of arthritis. Osteoarthritis, commonly referred to as wear-and-tear arthritis, typically occurs after reaching middle age. Rheumatoid Arthritis is a system-wide disease that attacks and destroys cartilage. Post-Traumatic Arthritis occurs following an injury such as a sprain, fracture, or torn/stretched ligament.

Arthritis symptoms of the foot vary depending on where it is present; however, the common symptoms include swelling, stiffness and reduced mobility, tenderness and pain, and difficulty walking.

Nonsurgical treatment may include the following: cold therapy; anti-inflammatories and pain medications; use of supportive footwear, custom orthotics, foot braces, balance braces, and casting; home therapy; participating in non-load bearing recreation activities; corticosteroid injections; and laser therapy.

Surgical treatment is considered when nonsurgical treatment does not provide sufficient response or pain relief. Surgery consists

of Arthroscopic Debridement, Arthrodesis (fusion), and Arthroplasty (joint replacement).

Arthroscopic Surgery is typically done during the early stages of arthritis; and Arthrodesis and Arthroplasty are done at end-of-stage arthritis.

Arthrodesis is a complete fusion of the joint accomplished by the use of hardware to hold the bones in place while the joint fusion occurs. Bone grafts are sometimes used to replace a missing bone or if there is bone loss to fuse the bones of the joint completely.

Fusion is usually very successful and has does not present problems for healing. Additional surgery is necessary if problems occur from a lack of bracing. Arthritis may be a long-term problem if stress is applied to the fused and adjacent joints.

Candidates for Arthroplasty Surgery (joint replacement) are at end-stage arthritis, ankle joint surfaces are destroyed, and patients are in severe pain and unable to do normal daily activities. Because of advances in implant design, this procedure is gaining popularity and becoming the treatment of choice.

A wide range of strategies is available to prevent falls. If you have a balance problem or arthritis in your feet or ankles, call 217-787-2700 to schedule an appointment at the Foot & Ankle Center of Illinois in Springfield, Decatur, Carlinville, Shelbyville, Monticello, Taylorville, or Sullivan. Call the clinic to obtain a free Fall Risk Assessment Tool. View our website blog at myfootandanklecetner.com for information about the 10th annual Falls Prevention Awareness Day (FPAD) on Sept. 22, 2017.

Resources available upon request.



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