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For Immediate Release

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STUDY CONFIRMS: HEIGHT OF HIGH HEEL MATTERS IN PREVENTION OF FOOT PAIN

New study details biomechanical changes in foot associated with high-heel height

ROSEMONT, IL, Dec. 3, -- For years orthopaedic surgeons specializing in foot and ankle care have been warning women about the perils of wearing high heels. High heel wearers risk foot injury, muscle imbalance, bone deformities, knee and ankle joint problems, bunions, hammer toes and more. Now a new study featured in the November issue of *Foot & Ankle International (FAI)*, the official scientific journal of the American Orthopaedic Foot & Ankle Society (AOFAS) details the biomechanical changes that occur in feet during high heel wear and the correlation between the heel height and amount of pain, pressure and strain it puts on your feet.

The study measured plantar pressure and soft-tissue thickness simultaneously using a load cell, a device which detects foot pressure, and a linear-array ultrasound transducer. Twenty one healthy men and women participated in the study. Measurements were taken with each participant standing barefoot on wooden blocks of 2 cm, 3 cm, and 4 cm in height placed below the heel. The study results revealed a significant increase in pressure on the metatarsal heads (the ends of the metatarsal bones that connect to the toes) as the heel height was raised. This increased pressure contributes to pain, callous and bony deformities. The study authors suggest limiting heel height to no greater than 2 cm (.8 inches) as well as the use of padding at the ball of the foot can significantly reduce discomfort and risk of injury to the metatarsal heads.

Chung-Li Wang, MD, PhD, an AOFAS member and co-author of the study adds, "This study demonstrates the close association between heel height, plantar pressure and soft tissue compressibility. This is helpful in the prevention of pain and damage to your feet from inadequate heel height." For those who like to wear high heel shoes, Dr. Wang offers the following advice, "Frequent removal of the shoe, unloading her/his foot, choosing a shoe with wide toe box, and adding a pad under the metatarsal head could be helpful in reducing discomfort."

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The AOFAS website www.aofas.org contains public education resources on the care and treatment of the foot and ankle, including a section titled: Smart Tips for Wearing High Heels. Tips include:

- Wear a shorter heel. A 2-inch heel causes fewer problems than a 4-inch heel. A shorter heel will give an elongated appearance if it is a thin stiletto type rather than a thick or chunky heel.
- Try to save the use of high heeled shoes for functions where you will not be on your feet for extended periods of time; treat them as a limited privilege accessory.
- Take your designer shoes to a pedorthist to have them custom fit to your feet. They may be able to stretch the toe box to better accommodate your feet.
- Try wearing a larger size than usual and insert heel cups into the backs for a better comfortable fit.
- Wear open toe shoes instead of a similarly styled shoe that causes discomfort in your toes. Partially open toe shoes have become more acceptable in many work environments, allowing you to further customize your shoes to your feet.
- Remember that however appealing high heel, high fashion shoes are, your feet need to carry you around for a lifetime. Treat them kindly!

Following the above tips as well as the study data which suggests limiting heel height to no greater than 2 cm (.8 inches) will go a long way in reducing foot discomfort.

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About the AOFAS

The AOFAS promotes quality, ethical and cost-effective patient care through education, research and training of orthopaedic surgeons and other health care providers. It creates public awareness for the prevention and treatment of foot and ankle disorders, provides leadership, and serves as a resource for government, industry and the national and international health care community.

About Orthopaedic Foot and Ankle Surgeons

Orthopaedic foot and ankle surgeons are medical doctors (MD and DO) who specialize in the diagnosis, care, and treatment of patients with disorders of the musculoskeletal system of the foot and ankle. This includes the bones, joints, ligaments, muscles tendons, nerves, and skin. Orthopaedic foot and ankle surgeons use medical, physical, and rehabilitative methods as well as surgery to treat patients of all ages. They perform reconstructive procedures, treat sports injuries, and manage and treat trauma of the foot and ankle.

Orthopaedic foot and ankle surgeons work with physicians of many other specialties, including internal medicine, pediatrics, vascular surgery, endocrinology, radiology, anesthesiology, and others. Medical school curriculum and post-graduate training provides the solid clinical background necessary to recognize medical problems, admit patients to a hospital when necessary, and contribute significantly to the coordination of care appropriate for each patient.