A MEDICAL CATASTROPHE HIDDEN IN PLAIN SIGHT

No field of science is considered more settled than gross human anatomy (best known as the most difficult course in medical school). Virtually nothing new of significance has been discovered about the visible features of the human body since it was comprehensively described in 1858 in *Gray's Anatomy*. Nevertheless, extraordinary new scientific evidence now indicates conclusively that much of what has been long believed to be normal about the structure and function of the modern human body is not normal after all. Instead, the "normal" body is badly deformed. As a result, much of modern medicine is focused on treating the superficial symptoms of major diseases like arthritis, unaware that the true underlying disease is the abnormal deformity.

The overlooked cause of the unsuspected deformity has been hidden in plain sight for centuries and could not be more unlikely: the everyday, ordinary elevated heels common to nearly all modern footwear. That includes all types of such heels, including the raised heels of athletic shoes and sneakers, not just women's high heels. The hidden anatomical deformity begins in the feet during the millions of running strides that occur during the critical growth years of childhood and continues to a significant extent during adolescence and often afterwards in adult runners.

The unanticipated new evidence is based on two peer-reviewed biomechanical studies, one of which based on a true technical breakthrough: a new gold standard in 3D joint measurement. For the first time, it provides accurate measurement of subtalar joint motion during running. The new evidence conclusively indicates that elevated shoe heels interact biomechanically with the subtalar joint, supinating it (not pronating it) throughout the stance phase of running. The subtalar joint supination forces the ankle joint to tilt out 8° and externally rotate 20° at peak load in running.

That artificial misalignment means a runner's legs are each pointed 20° to the outside, each leg at a 40° horizontal angle to the other, instead of both legs being aligned, pointed straight ahead and parallel to each other. But far worse, the misalignment occurs precisely when a runner's body is subjected millions of times to a peak load of 3 times bodyweight – the greatest force experienced routinely by the human body, with the power conferred by Wolff's Law to control its formation.

Catastrophically, the resulting misaligned ankle joint – artificially tilted and twisted – misaligns the critical structural foundation of the human body, altering its development throughout life. It twists and tilts every bone, joint, and organ above and below it, from toe to head, deforming their natural structure and degrading their function. The deformity includes bilateral asymmetry between the right and left sides of the bipedal human body (with asymmetrical hemispheres of a tilted and twisted brain). Created by running, it alters walking, standing, sitting and sleeping.

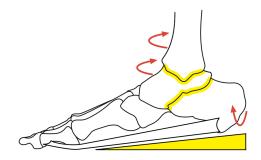
The effect on men and women is to exaggerate their genetic differences, usually making modern males more bow-legged, while generally making modern females more knock-kneed, with a twisted womb and tilted, narrowed birth canal. Like the sexes, racial differences are also exaggerated by the effect of shoe heels. Ironically, evidence indicates that significant bone and joint differences between shod modern and barefoot "primitive" races are due simply to modern shoe exposure, or lack thereof, and not to genetics. Although long overlooked by modern scientists, the preponderance of available formal and informal evidence clearly indicates that never-shod barefoot runners – regardless of race – are bilaterally symmetrical, without the artificially-induced tilting and twisting of legs and spine that is typical of modern shoe-wearing runners.

Just as the widespread crippling effects of the artificial deformity have remained perversely hidden, so too has its unrecognized cost in every facet of medical care, which may be as high as \$1.5 trillion every year in the U. S. alone. Moreover, the cost throughout life in terms of much poorer personal health and far lower quality of life, especially in old age, is incalculable.

How the everyday shoe heel manages to create such pervasive deformity throughout the modern human body is the focus of my new book. See the most recent abridged and full drafts in the **Research** section of my website: www.AnatomicResearch.com.

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