



E28 Forensic Podiatry — How Gait, Footwear, and Footprints Convict Criminals

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After attending this presentation, attendees will understand the value of forensic podiatry with regard to the interpretation and analysis of pedal- and gait-related evidence encountered at crime scenes.

This presentation will impact the forensic science community by providing insight and knowledge of the exciting, new, and emerging field of forensic podiatry, which can provide valuable, often overlooked, interpretation of pedal- and gait-related evidence, including footwear, human remains, and footprints, in criminal and civil matters.

Forensic podiatry is a subspecialty of podiatric medicine that offers investigators an exciting new tool in the analysis of pedal and gait evidence in criminal and civil matters. Forensic podiatry has been described as "... the application of sound and researched podiatry knowledge and experience in forensic investigations, to show the association of an individual with a scene of crime, or to answer any other legal question concerned with the foot or footwear that requires knowledge of the functioning foot."¹

Forensic podiatry allows interpretation and analysis of footprints to provide an estimation of the person's sex, height, and other anatomical and biomechanical features, allowing forensic podiatrists to establish a link (or show a lack of association) between a footprint and the perpetrator of a crime. Footprint placement, including such aspects as step length and stride, may furnish information about the person who made the footprints. Footprints at crime scenes are often bare or sock-clad, and may be partial or complete.

Discarded footwear found at crime scenes can provide similar information and, by forensic podiatry analysis, can be linked to and provide information about the wearer of the footwear.

In cases of dismembered human foot remains, forensic podiatry can assist in establishing the victim's identity. Often shoes or boots provide protection for feet, allowing them to be the only surviving aspect of a person in a mass fatality, such as an explosion. A dismembered foot may be linked to the footwear, medical records, and/or radiographs of the suspected victim.

Perpetrators captured on surveillance video whose faces are hidden or not visible can be identified by their gait. The use of gait to assist in the identification of criminals is growing as video surveillance is increasing and devices that enable recording of crimes are becoming more widespread.

Reference(s):

1. Vernon D.W., McCourt F.J. Forensic podiatry—a review and definition. *British J Podiatr* 2:45, 1999.
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Forensic Podiatry, Footprints, Gait