



E81 Forensic Podiatry and Human Identification — The State of This Art in European Countries

*Pablo Martinez-Escariuza**, Av Sabino Arana 45, Bilbao, Basque Country, SPAIN; *Sara C. Zapico, PhD*, Smithsonian Institution, Dept of Anthropology, NMNH, MRC 112, 10th & Constitution Avenue, NW, Washington, DC 20560; and *Joe Adserias, DDS, PhD, C/ Balmes 62, Barcelona, SPAIN*

After attending this presentation, attendees will better understand the present situation of forensic podiatry in European countries, in order to initiate its use in forensic casework.

The presentation will impact the forensic science community by illustrating the usefulness of forensic podiatry as a tool for human identification.

Forensic podiatry is defined as the application of podiatry knowledge and experience in forensic investigations: (1) to show the association of an individual with a crime scene; or, (2) to answer any other legal question related to the foot or footwear that requires knowledge of the functioning foot anatomy and biomechanics. Although the scientific aspects of podiatry knowledge are used in clinical practice, the application of this knowledge to the forensic practice must be a cautiously approached practice.

Forensic podiatrists assist in the identification of perpetrators of crime in which bare footprints, footwear, and Closed Circuit Television (CCTV) evidence are involved. The tools used to assess the individual's identification consists of: (1) the effects of foot and lower limb function; (2) the evaluation and matching of wear associated with the foot/shoe interface; and, (3) comparisons based on shoe size.

In Europe, forensic podiatry is an optional subject in Bachelor of Science (BS) Podiatry programs at the universities. Basically, training in this field is carried out through postgraduate programs like the Master of Science (MSc) in Forensic Podiatry at the University of Huddersfield and Salford University. Scientific societies offer certificates of different competencies; for example, the Chartered Society of Forensic Sciences offers the Certificate of Professional Competence – Forensic Podiatry Bare Footprints. In addition, forensic podiatry is represented in different forensic entities such as the International Association for Identification, Fingerprint International Scientific Corporation, and the International Criminal Police Organization (INTERPOL).

Pedal evidence can comprise a number of different forms related to the static or dynamic foot as well as the type of footwear. Footprints, shoeprints, shoes, and their track and trail are evidences that can be easily found in crime scenes. Their collection must be accurate to be able to study the individual's pedal characteristics, leading to the individual's identification. Moreover, biomechanics can also be used for identification through individual walking traits. Currently, neonatal units in hospitals are responsible for taking the imprint of the footprint of newborns. The imprint goes into the annals of hospital documentation and eventually deteriorates. To avoid this, one of the current suggestions is to have a podiatrist or doctor at the time of delivery take those footprints and include them in a digital record.

Even though forensic podiatry can be of great help in crime scene investigation, its representation in European police departments is not that extended.

In conclusion, this presentation highlights the contributions of forensic podiatry toward individual identification.

Forensic Podiatry, Footprints, Biomechanics