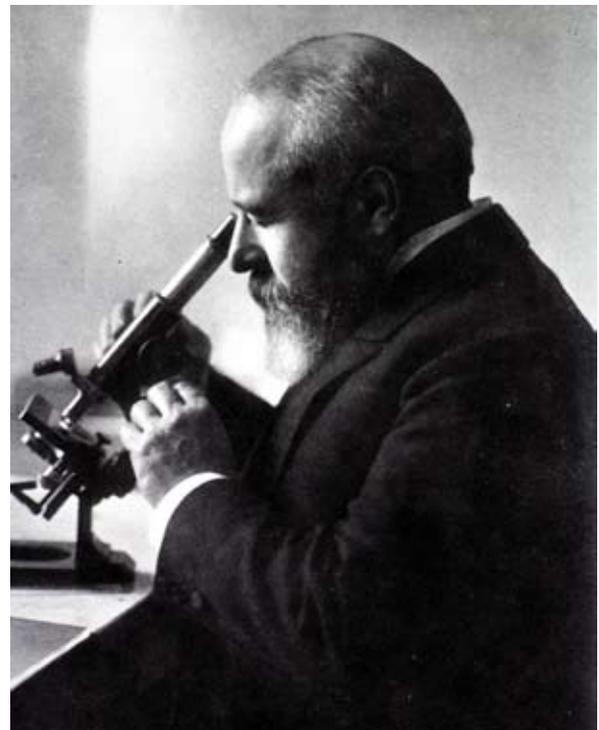


## The Unna Boot: A Historical Dressing for Varicose Ulcers

The German dermatologist Paul Gerson Unna (1850-1929) is a prominent figure in the history of medicine for pioneering modern dermatopathology and dermothrapy (Figure 1) (1). Aside from writing extensively on anatomy, histopathology, and treatment of skin diseases, he contributed to medicine in many other ways: he originated the idea of using coated pills to enhance local absorption in the intestine, introduced ammonium bituminosulfonate (ichthyol) and resorcinol into medicine, and described several skin conditions including seborrheic dermatitis. Moreover, in 1881 he established a private clinic in Hamburg, Germany, which became a leading expert center in the diagnosis and treatment of skin disorders, hosting postgraduate physicians from all over the world for training (2).

Unna also was one of the first to work with pharmacology of dermatotherapeutic agents (1). With the help of pharmacists Paul Carl Beiersdorf (1836-1896) and Oscar Tropolowitz (1863-1918), Unna greatly enriched dermatologic formulas with new ingredients (2). As an alternative option to the poorly tolerated compression bandages of his time, in 1885 he invented a special gauze bandage impregnated with a mixture of 15% zinc oxide in a glycolgelatin-based paste for treatment of varicose ulcers. This mixture had drying and cooling effects as well as antipruritic effects due to its continuous slight pressure on the skin (1).

After numerous tests on different forms of bandages in the following years, Unna presented a new form of skin-tone compression bandage at the Third International Congress of Dermatology in London in August 1896 and published a paper on the topic in the *Wiener medizinische Wochenschrift* (Vienna Medical Weekly) on 17 October 1896 (3). His bandage technique later became a widely recognized therapy because of its effectiveness and simplicity. Several companies subsequently introduced similar ready-to-use zinc bandages to the market after the turn of the



**Figure 1.** Dr. Paul Gerson Unna in the late 19<sup>th</sup> century (Courtesy of the U.S. National Library of Medicine).

century. Furthermore, in 1910 Unna's pupil Heinrich Fischer (1857-1928), MD also recommended a modified version of the Unna boot for deep vein thrombosis (1,4).

Having partially lost its earlier prominence in the first phase of compression therapy, the historical paste dressing and its modified versions are still used effectively to contribute to quicker healing in patients with chronic venous ulcers, and are sometimes used for diseases such as nummular dermatitis, lichen simplex chronicus, and atopic dermatitis on the extremities (4,5). Although the current trend in the use of medical eponyms is likely to decrease in literature,

the Unna boot is one of those that have been fortunate to survive, honoring its inventor's name.

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