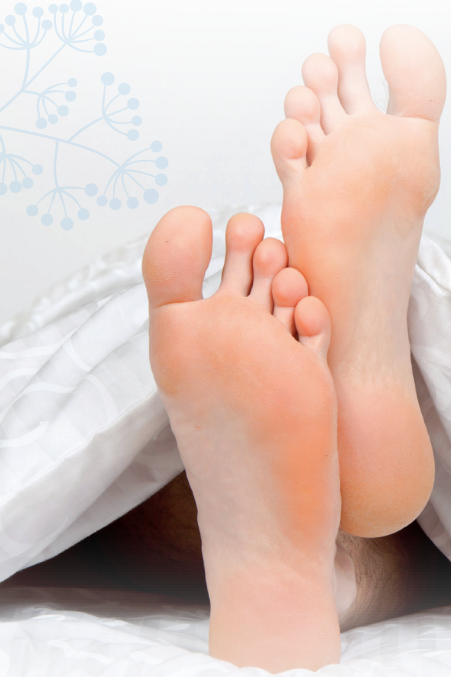
Ingham and Fitzgerald:
The Mechanism of Reflexology



"If you're feeling out of kilter, don't know why or what about, let your feet reveal the answer, find the sore spot, work it out."

EUNICE INGHAM

Regarded as the Mother of Reflexology, Eunice Ingham was the first person to recognise the existence of a relationship between the organs of the body and specific points or reflex areas on the feet.

Her work was based on the discoveries made by Dr William H Fitzgerald (a medical doctor) who, after numerous years of experimentation, believed that illness or disease could be "cured" by the application of a sustained direct pressure to any one of the 10 longitudinal zones which divided the body. Fitzgerald believed that the application of pressure would affect all body parts within a particular zone by inducing natural "opiate like" endogenous anaesthesia (thereby relieving any pain), causing relaxation of the lymphatic system, allowing more efficient functioning and clearance of interstitial fluid.

In order to achieve this effect, he employed the use of non-electrical applicators (clothes pegs, elastic bands and other such instruments), applying them for 1 to 4 minutes with as much pressure as the recipient could take. Having worked as Head Surgeon of the Nose and Throat Department of St Francis Hospital in Hartford Connecticut, Fitzgerald regarded the tongue and teeth as important areas capable of affecting the very core of all zones. He hypothesized that the mechanism by which his zone theory worked was by blocking the flow of impulses from an injured area to the brain, and he also postulated that many conditions disappeared as a result of the improvement in lymphatic flow. Fitzgerald believed in the vis mediatrix naturae, or, the healing power of nature as an additional healing mechanism.

Following extensive work and refinement of Fitzgerald's zone theory and techniques, Ingham remodelled and renamed it as reflexology. Through observation and experimentation, Ingham believed that the soles of the feet represented a microcosm of the human body, with the toes representing the head, the ball of the foot the thorax, and the heel the lower digestive organs and parts of the body below waist level. She adapted the form of pressure from that of a constant, deep pressure as used by Fitzgerald to the "caterpillar walking" with which we are familiar today.

Ingham's two books, "Stories the Feet can Tell" published in 1938, and "Stories the Feet Have Told" published in 1951, outline several mechanisms by which Ingham believed reflexology exerted its influence on the individual.

She believed that a specific collection of nerve endings on the sole of the foot represented the location of body parts or organs, and that these were all connected by means of a feedback loop, which not only relied on nerve endings, but also the interconnectedness of the circulatory system and in particular blood capillaries.

Ingham theorised that a weakness in the foot muscles (caused by general weakness in the body muscles) resulted in misplaced joints, which resulted in pressure on particular nerve endings. As each nerve ending was part of a unique, individual feedback loop related to a corresponding part of the body, any disturbance to it resulted in the feedback loop becoming blocked. This, according to Ingham, leads to reduced circulation and formation of waste matter, or deposits, in the tissues of the feet - with this ultimately affecting the corresponding organ, nerves or body part.

Ingham believed that if an organ was affected by a reduced supply of fresh blood, this ultimately affected its ability to function and also reduced its ability to eliminate waste matter. Under the influence of gravity, this waste matter settled in the feet around the specific feedback loop that was associated with its particular reflex area.

Based on these ideas, she surmised that detection of "crystalline deposits" suggested evidence of poor circulation within an individual feedback loop and was indicative of a localised peripheral imbalance or imbalance in the reflected body part.

Ingham referred to these crystals as "acid deposits in the nerve endings of the feet", which interfered with the circulation of blood to the liver, in turn preventing the liver from functioning normally - however, she did not specifically identify them. Subsequent debate as to the exact nature of these crystals was that they were possibly formed from uric acid, lactic acid or calcium carbonate deposits; all of which were speculation and unsubstantiated by pathological tissue analysis.

Ingham believed that these deposits could be broken down, thereby clearing the obstruction, improving the circulatory feedback loops and improving the circulation to the particular organ. Any residual healing would be performed by the healing power of "nature", which she also referred to as a form of "electro-mechanism", the flow of which was controlled by reflex areas in the feet which acted as "terminals".

> *"The more of this toxic material the blood contains, the more severe will be the reaction.*
>
> *Many times it manifests itself in the form of a severe cold."*

Ingham also speculated that inherited or constitutional organ weakness could manifest in organ malfunction, which also resulted in inability to keep the reflected nerve ending in the associated feedback loop functioning correctly, thereby culminating in accumulation of waste matter and toxin build up in the feet.

In summary, biological change was thought to be brought about by the application of pressure techniques and higher forces; Fitzgerald believing in the application of prolonged direct pressure whilst Ingham used her thumb walking technique, particularly on the soles of the feet, as she believed the feet represented a microcosm of the body. Ingham's reflexology mechanism involved blood circulation and feedback loops between specific areas of the foot map and organs of the body, whilst Fitzgerald believed the effects were much broader in the body, following the application of direct pressure to a particular zone.

Since the time of Ingham and Fitzgerald, our knowledge of anatomy, physiology and pathophysiology has increased tremendously and new theories have been put forward to explain how reflexology may work. So, whilst Ingham's ideas of feedback loops and acid crystal deposits may have been updated and superseded by alternative theories, it must be remembered that that without the work of Ingham in the first place, there would be no reflexology today.

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