

Note: In this research study Dr. Manzanares was able to determine that the areas of the foot referred to as *deposits* in reflexology have an organic composition as opposed to previous theory of inorganic matter, calcification crystals or toxins.

Biopsies of Foot Deposits Reveal Organic Composition and Mechanism of Action for Reflexology by Dr. Jesus Manzanares, M.D.

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Biography below

Purpose: To study biopsies of deposits taken from human foot tissue; to determine anatomical characteristics and tissue composition of the deposits to understand the relation to pathologic conditions in the body and demonstrate the role of the nervous system in reflexology. *Deposits* can be located throughout the feet in *reflex areas* that correspond to specific organs, glands and body parts

Method: To understand exactly what a deposit is, bi-lateral biopsies were performed on tissue from the feet of three (3) adult patients. This task was a difficult one over a period of years from **1989 through 2002**, finding patients willing to undergo biopsies without personal benefit and for the advancement of reflexology research.

Biopsies were done on non-deposit tissue and biopsy from reflex areas with deposits and associated with: (1) the stomach reflex area of a patient with gastro duodenal ulcer; (2) the L5-S1 reflex area of a patient with a disk hernia; (3) the thymus reflex area of a patient with asthma.

Results: There is not one characteristic structure that represents a reflex area that contains a deposit but rather it is a mixture of different tissues. A fundamental difference exists between non-deposit biopsy and subcutaneous cellular tissue in an area where deposits do exist. The proportion of nervous fibers in a deposit compared to the low number in the non-deposit biopsy were shown to be:

Proportionate variances between tissue with deposits and non-deposit biopsies

Non-Deposit Tissue	Deposit Tissue
8% nervous fibers	42% nervous fibers
27% vascular elements	28% vascular elements
65% connective tissue	30% connective tissue

Conclusion: This anatomical-pathological study reveals the neuro biochemical character of reflexology.

Deposits are formed by a net of hypodermic connective tissue with abundant neurovascular elements. The presence of abundant nervous fibers in tissue with existent deposits supports the relationship between reflexology and the body's neurological system. **The mechanism of action** of reflexology has a neuro biochemical basis.

Deposits are located in the hypodermis (subcutaneous cellular tissue), where existent receptors (Pacini and Golgi) are extremely sensitive to pressure. Deposits reflect the imbalance (anatomical or functional) of the organ or body part represented in the corresponding reflex area in the foot.

Physical characteristics of deposits depend on the organ imbalance, the zone of the foot where that organ is reflected and the pathology phase. Deposits are palpable for size, consistency and sensitivity.



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Dr. Manzanares was born on October 27, 1959 in Barcelona. He graduated in Medicine and Surgery from the Autonomous University of Barcelona in 1982. He specializes in Family Medicine, Homeopathy and Reflexology. He has participated as a speaker at numerous conferences and congresses, including the Fourth European Conference of Reflexology held in Odense in 2000, the Reflexology Association of America – RAA Conference held in Newport, RI (USA) in April 2002, the Conference of Aesthetic Medicine Sorel in Barcelona in October 2002, the Conference of ICR (International Council of Reflexology held in Jamaica in September 2002 and in Anaheim, CA in September 2009. His career is divided between medical care and teaching. He teaches an advanced reflexology training program in Catalonia which is accepted by the government. He also teaches his Manzanares Method of Reflexology courses internationally and in the United States.

Dr. Manzanares research in the field of reflexology began in 1980 and focused on three basic aspects of reflexology, starting with studying the neuro-physiological basis. This aspect was critical because it explains the mechanism and structures that intervene in the process of reflexology. To explain the neuro-physiological basis of reflexology he used EEG studies and concluded that there are "pathways for the reflexological impulse toward the central nervous system."

Secondly, he saw a need to identify the specific anatomical locations (reflex areas of the feet). He developed precision mapping of the foot-to-body connection over 27 years of research on 70,000 clinical cases. Patients were chosen under 47 years of age with one diagnosed acute disease.. Finally, he established treatment protocols in reflexology according to the pathology of the patient.

In his book, *"Principles of Reflexology"* he diagrams his investigations, charts his protocols and illustrates areas such as the toes reflecting the reticular core of the brain stem, the common pathway for information from the feet to internal organs of the autonomic nervous system.

With Dr. Manzanares' contribution of the first research specifically aimed at identifying such a mechanism for reflexology, communication can be opened between reflexologists and the medical community. Dr. Manzanares is now interested in researching exactly how the "back to normal" balance occurs in the organs.