

# Quadrant Theory: a neuro'logic' explanation?

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In my book **Regulation therapy from the foot** (Regulatietherapie vanuit de voet, Tijdstroom, 1991) I have introduced the **quadrant theory**.

All 'podo professionals' talk about the same foot, often from a different point of view. Podiatrists, physical therapists, physicians, Shiatsu therapists, they all have their own theories how to examine and treat our podologic disorders.

Foot reflexologists sometimes claim results which from a neurophysiologic point of view does not seem to be realistic. The lower extremity becomes orthosympatic innervated (only efferent), through the truncus sympaticus, from Th 10 till L 2. There is no connective afferent. There is no parasympatic innervation to the extremities. Somatic the foot sole is innervated from the level L 4/5 to S 1/2. So a claim that you can 'treat' the total body from the foot sole seems questionable.

As a posturologist I have treated almost 25 years patients with postural disorders, mainly by podologic intervention. Starting from the ideas of René Jacques Bourdiol I more and more concluded that the therapy was effective but the theory behind it doubtful:

- It is difficult to believe that pieces of cork or any material with a thickness of 1 à 2 mm reaches the intrafusal  $\gamma$ -fibres, through dermis and epidermis, plantar tissue and ligaments.
- Bourdiol discussed the foot and the human posture in a two-dimensional way.

Although still theoretic it is, with my publication in 1989, my suggestion that the obvious effect of the so called Bourdiol proprioceptive insoles is obtained by influencing the mechanoreceptors of the glabrous skin of the foot sole. Only under pressure during stance and gait. In fact we are talking about 'exteroceptive' therapy soles. Today's literature also points in this direction.

Balance a moment only on your heels. Not really comfortable. The fore feet then: same conclusion. We are standing on four 'balance points' and all our body 'sway' happen here in between. Not only frontal and horizontal, but also sagittal. Optimizing the projection of the body's gravity point, as far as the patients body allows, is our goal.

My **quadrant theory** now is based on:

1. The body struggles against the gravity. Considering that we became a biped, we tend to 'fall' forward. So our struggle against gravity is toward dorsal.
2. Each move of a local gravity point (arm for example) lead to a compensatory reaction elsewhere and always affects the position of the general body gravity point.
3. A mirrored reaction takes place, i.e. a move under L 3 gives an opposite reaction above L 3.

## Considering this:

Looking at my scheme you can conclude which increased pressure under the foot is related to the move of a particular body part.

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