

History of Physiotherapy Foundation

## Physiotherapy in perspective, 50 years past - present.



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*Diadynamic flow in Herpes Zoster, disappeared treatment*

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### Introduction

The diadynamic current was part of the electrotherapy that originated in the West and was especially embraced in the Western world. The application of diadynamic flow in the 1970s as part of physical therapy had to do with the requirements for the 1970 state physical therapy exam.

<sup>1,2</sup> without it partial diploma "Physical Therapy" the remedial gymnast/masseur was not allowed to bear the protected title of 'physiotherapist'.<sup>1,2</sup> Another reason was that treatment with diadynamic current was in keeping with the biomedical view of the time. The logical consequence of biomedical thinking was that with the help of an electrical device, in this case the diadynamic current, you could solve the problem, ie fighting the pain.

Over the past 15-20 years, the collection of applications in physical therapy, without apparent scientific effort into efficacy, has been forgotten. The diadynamic flow is now a completely unknown application among newly graduated physiotherapists because physical therapy has been removed from the training curriculum, although the title of 'physiotherapist' has been retained.

We wondered what the reason was that this drug disappeared from our 'toolbox'.

### Creation slide dynamic flow

The Swiss physicist Gallebert introduced electricity as a applicable agent in medicine. as early as 1750

The use of electricity as a therapeutic agent (better known as electrotherapy) was increasingly applied by physicians and therapists and thus fell under physiotherapeutics.<sup>3</sup> The definition of physiotherapeutics was (1957): "*The provision of physical-therapeutic assistance on indication and under supervision of the doctor.*"<sup>3</sup> The diadynamic current was one of the many applications that we know from electrotherapy and was part of physiotherapeutics.<sup>3</sup>

1. The diagnostic equipment where electrotherapy was based on the measurability of the problem. The IT curve was the best-known example of this for establishing a paresis and was used until the late 1980s, especially in the hospital for paresis and paralysis in peripheral nerve injury.
2. The therapeutic equipment consisted of high, medium and low frequency currents whose low frequency current was the slide dynamic current form and consisted of alternating current with

a low voltage, 40 to 60 Volts (developed by Michael Faraday 1791-1861).<sup>2,3</sup> The diadynamic current was aimed at stimulating the nerves and muscles that were not functioning properly. In addition, these forms of therapy have an analgesic effect. With diadynamic current, an alternating current is applied with two electrodes (electrotherapy) with a device for diadynamic current. <sup>2,3</sup> See photo.



Diadynamic Flow Device (Stimudyn®), Collection SGF.

### Diadynamic Flow Applications

The most famous application of diadynamic current as a painkiller was with Herpes Zoster. In 1974 the Dutch Journal of Physiotherapy reported on the efficacy of diadynamic current in Herpes Zoster.<sup>4</sup> Due to its frequent application in physiotherapy, the Dutch Journal of Medicine came up with a response in 1979: *"There is no evidence*

*for the efficacy of diadynamic flow"*, although it is reported that there is evidence that diadynamic flow would help in the acute stage. There is also room for nuance: *"It is of course always possible that a form of therapy is effective, even if its effectiveness has not been proven"*.<sup>5</sup> Very bad

At that time, doctors were no longer convinced of diadynamic flow, although they often prescribed the drug themselves and the treatment form had once been devised and developed by the doctors."

### How did it go?

The doubt from the medical discipline about the efficacy of diadynamic current would have been a good moment for physiotherapy to scientifically

to investigate, but it failed to materialize. We also forgot too quickly that physical therapy was actually a set of instruments for doctors. They were prominent physicians such as Dr. R.

Kuipers, Dr. W. Mazee Dr. Mol and Dr. j. Mom who practiced this form of therapy. It can be read in the book *"Manual of physical therapy for physiotechnical assistants"*.

<sup>3,6</sup> With many assistants

(physiotechnical assistants) the physical technique was applied by them. Also in 1955 an association for physical therapy was founded by doctors Miedema and de Groot: *Dutch Association of Physicians for Rehabilitation and Physical Therapy"*.



Book Physical Therapy 1957

Physical therapy from the medical world was finally adopted by doctors in the late 1960s.

transferred to the remedial gymnast masseur and the starting physiotherapist for years. But it didn't take long before it disappeared from our toolbox. The scientific development of physiotherapy only started in the 1990s. Before the physiotherapists could demonstrate its effectiveness, the health insurance fund no longer wanted physical therapy

compensation for lack of evidence. With that, this part of medicine disappeared after 120 years of application, with the silent drum. There is actually nothing to be read of resistance against this and physiotherapists in fact became 'heiligymnast-masseur' again. L'histoire se repète.

### What can we learn from it?

Perhaps a better move would have been if doctors and physiotherapists had worked together here for the benefit of the patient and had looked for well-founded foundations for the physical therapy, in this case the application of diadynamic flow in

Herpes Zoster. There are countless such examples. One attempt to collaborate and jointly search for evidence was made in 1977 by general practitioner J. van Ree, who led a study in collaboration with physiotherapists.

<sup>7</sup> He fed

a controlled pilot study (n=39) in patients with Herpes Zoster. Van Ree concluded that *"diadynamic flow treatment could not be shown to accelerate the healing process or to prevent post-herpetic neuralgia.* Almost 20 years later, in 1996 a review (n=55) by Lanting et al on physiotherapy in Herpes Zoster was published.<sup>8</sup> In this review, which included 4 studies on diadynamic flow, three studies came out with positive results and one study without demonstrable effect (Van Ree et al). The studies turned out not to be comparable, which is why Lantink concluded for this review: *No decision can be made about the effectiveness of physiotherapy for Herpes Zoster because of the incomparability of the studies.*<sup>6</sup>

However, the diadynamic flow had already been forgotten in 1996. The outcome really didn't matter anymore.

Is diadynamic flow rightly history forever? Who dares to do an investigation?

In any case, what we have left is a beautiful collection

diadynamic equipment in the workshop of the History Physiotherapy Foundation in Urk. See website: <http://www.sgfinfo.nl/diadynamicstroom-machines/>

### References

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### Imagery

History of physiotherapy foundation (SGF). Meeting point for Medical History in the Netherlands (TMGN) Foksdiep 8 Urk.

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