

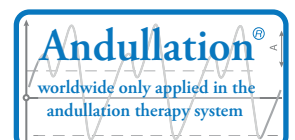
IMR

Institute For Medical Research



> Research Andullation Therapy Influence on Stress

*Prof. Dr. Nazarov, Prof. Dr. D. Schmidtbleicher, Prof. Dr. C. Bosco
Prof. Dr. M. Krauß, Prof. Dr. J. Waldmann, Prof. Dr. P. Knolle*



Stress Investigation

Andullation therapy using andullation therapy system. Effect on physiological stress parameters.

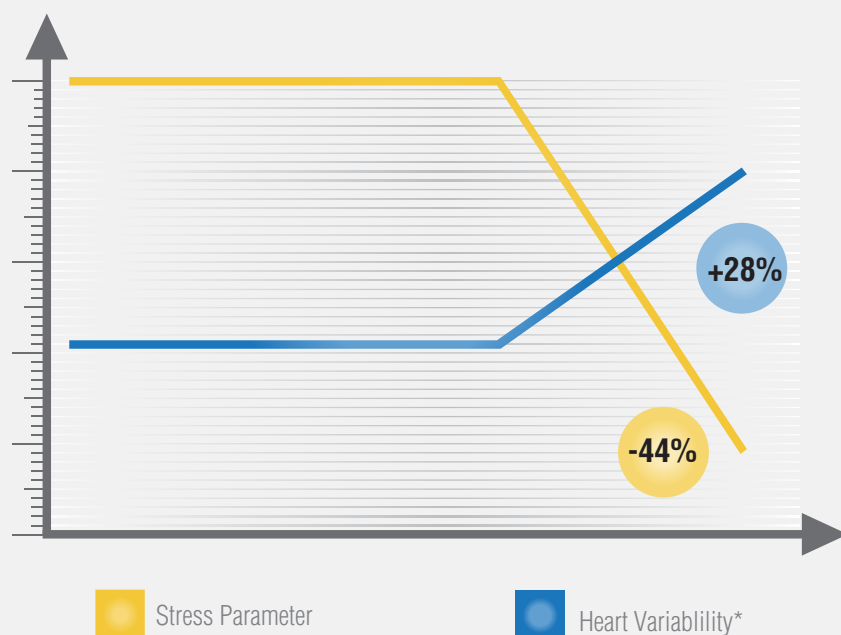
> Introduction

In the context of a large-scale evaluation concerning the influence of stress factors, 500 guests at a health spa were checked at the beginning of their stay with respect to the effect of stress on their vegetative sympathetic and parasympathetic nervous system. In 83% of them an increased stress condition was noted, resulting from a large amount of business travel and from working in unusual circumstances. These patients were the target group for an investigation into the effects of andullation therapy on the known physiological stress parameters in their echocardiogram.

> Method

All the individuals were treated for 15 minutes with the P05 programme on the andullation therapy system. This programme was adjusted to produce a deep level relaxation. The average age of the spa guests of both sexes was 62.4 years. The investigation concentrated on the effect of andullation therapy on the stress parameters in the echocardiogram. The latter were checked via the sympathetic and parasympathetic nervous system. The variability of heart frequency was noted. A higher activity of the sympathetic nervous system, accompanied by a reduced status of the parasympathetic system indicates an increased stress factor. In order to register the echocardiogram (ECG) the telemedical measurement system Cluemedical from the company Felovital (Wenen) was used. The global ECG was registered within a period of 2 minutes. After this the heart frequency variability (see Fig. 2a and 2b tachogram) were investigated and subsequently a frequency analysis (Fig. 2a and 2b spectrum) was carried out.

Andullation treatment reduces the stress parameters (fig. 1)



* Heart Variability or Heart Coherence Variability: Indicator which allows objective measurement of cognitive effort that is invested in a task. The measurements in the temporal domain, i.e. the immediate heart rate, give a total amount of variation. By contrast, the analysis in the frequency domain, i.e. the variability of heart rate, allow the sympathetic and / or parasympathetic influence to be determined.

> Results and Conclusion

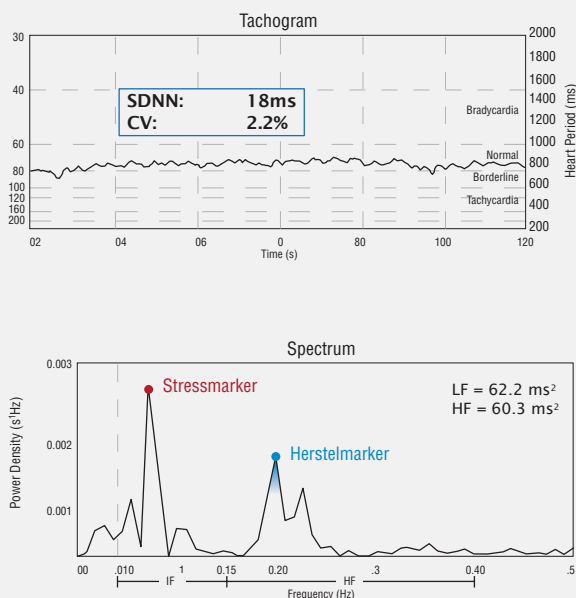
In the first test 415 out of 500 (83%) of the spa guests were found to have increased stress parameters. All individuals with an increased stress factor gave their agreement to voluntary treatment with andullation therapy. No one with low stress indicators took part in the analysis.

Changes in the following stress parameters were noted (Fig.2a and 2b): on the one hand, in the relationship between the surfaces of the curves for the low (LF) and high (HF) frequencies within the complete frequency spectrum, and on the other hand through the difference in their amplitude. On comparing the spectrum sections for both indicators before and after the andullation therapy very significant stress reductions of 44% were noted. Such a fast and clear reduction was not to be expected. A supplementary positive effect of the andullation therapy could also be deduced from the analysis of the heart frequency variability directly after treatment. Heart frequency variability increased by an average of 28%. This in itself it indicates an enormous gain for health with respect to cardiology, because the higher the variability, the greater is the ability of the heart and blood vessel system to adapt.

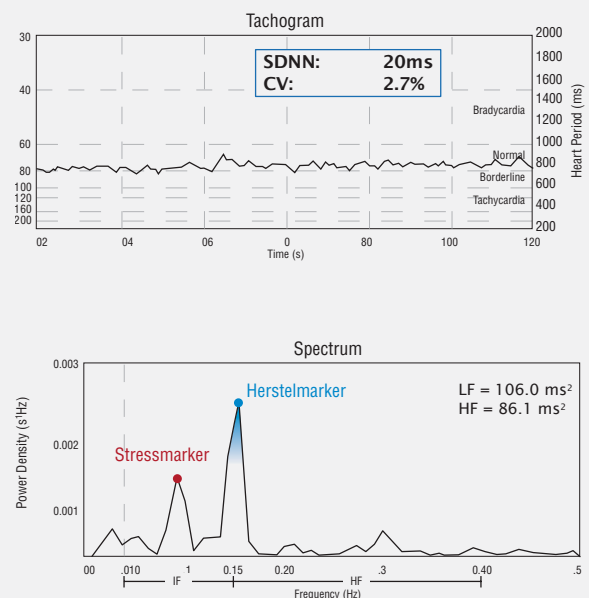
The findings that stress can be reduced through a 15-minute treatment with andullation therapy is a very important piece of information.

Analysis of the stress parameters sympathetic and parasympathetic. (fig. 2a & 2b)

a) 55 year old manager before stimulation using programme P05



b) After 15 minutes of stimulation with programme P05





> Research Centre
SPOREG
Ambulantes Rehasentrum
Strahlenbergerstrasse 105-107
D-63067 Offenbach am Main

> Andullation Centre UK
0800 -0124202
info@homehealthproducts.co.uk
www.homehealthproducts.co.uk
www.andullation.co.uk