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# VIBROSAUN

“A Natural way to health and fitness”

**Viewed medically by  
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## **Preface**

Most people find it sufficient to know that the Vibrosaun lets the whole body vibrate pleasantly, massages it, so to speak and simultaneously warms it, excluding the head. The head can be kept cool by adjustable, double sided ventilation.

Relaxing music rounds off a session of approximately thirty minutes in the Vibrosaun, after which an incredibly relaxed feeling remains.

Muscle pains, back pains, painful and stiff joints, over-tiredness and stress symptoms disappear or decline clearly after one or more treatments. The feeling of wellbeing increases.

### *But:*

There are also people who find that description lacks depth. They require more medical background; want to know what really happens to you and why using the Vibrosaun has these relieving and relaxing effects.

The following report is for these people; somewhat medical but written so you do not have to be a medical professional to understand the main points.

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### **The tension in the blood vessel wall**

Using the Vibrosaun means, in medical terms, widening the blood vessels. The width of the blood vessels is regulated by muscles in the wall of the blood vessels. Talking about the width of the blood vessels means, therefore, talking about the muscle tension (tonus) in the blood vessel wall.

Muscles relax due to warmth. This also applies for the muscles in the wall of the blood vessels. Warmth stimulates the widening of the blood vessels.

### **Do wider blood vessels have advantages?**

Yes, because food and energy substances can be supplied better through wider blood vessels, similarly for oxygen, whilst waste products can be disposed of more easily.

This is particularly advantageous for sickness, traumatic or overload processes of muscles, tendons, synovial joints and for the whole body.

With Vibrosaun, we are dealing with a sophisticated combination of vibration, warmth and ventilation and music. These four factors can be adjusted and regulated separately by the users themselves.

1. Vibration from shoulders to heels, the intensity can be set by the client. The whole body is, so to speak, massaged.
2. Dry heat from 20-80° C, adjustable by the client
3. Ventilation, which directs the warm current evenly along the body, by which the head can be supplied with a double-sided, self-adjustable cool, ionised air current
4. Music with an effect aimed at relaxation

The above combination of factors ensures a long-lasting, mentally and physically relaxed feeling.

We shall examine this more in depth

### ***Muscle innervation***

Muscles are stimulated, pricked, innervated as that is called respectfully, by nerves.

### **Voluntary – or Cerebrospinal nervous system**

With regard to our arm and leg muscles, in general, our skeletal muscles, that prickling (innervation) takes place by nerves from our voluntary – or cerebrospinal nervous system.

These nerves go, therefore, from the brain via the spinal cord (cerebrospinal) to the muscles. Voluntary means here: influenced by our will.



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### **Muscle Tension**

A muscle that contracts itself more or less closes its own blood vessels simultaneously and by this soon lacks oxygen.

That is why, for example, you can only hold a bucket of water in front of you on an outstretched arm for just a short time. As known, the muscles holding up the arm are stretched tight, blood vessels to the muscle fibres are closed off, the muscle does not get enough oxygen, so the arm becomes tired and sags.

The example above is used primarily to illustrate that tension in muscles means shortening of muscles, gives a feeling of stiffness caused by an obstruction of the blood stream.

We can state the following:

The more relaxed the muscle, the longer the muscle, the more supple the feeling, the better the blood supply.

### **Autonomous – or vegetative nervous system**

There are muscles that cannot be influenced by our will, such as the muscles surrounding our blood vessels, the heart muscles, and around the intestines etc.

These muscles are stimulated by contact, in a given case, relax, by the **involuntary nervous system**. This is also called the Autonomous – or vegetative nervous system

### **Parasympathic and (ortho) sympathetic nervous system**

The autonomous nervous system has two components, which work contrarily (antagonistically). If the one component widens a blood vessel (vasodilation), the other component will act precisely to narrow it (vasoconstriction)

We call both components of the autonomous nervous system the parasympathic and the (ortho) sympathetic nervous system.

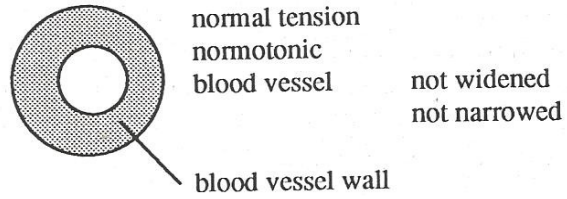
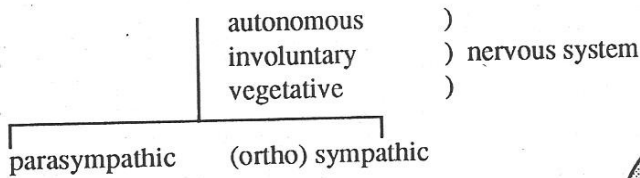
Normally speaking these components keep themselves in balance, but it's also possible for one to dominate the other.



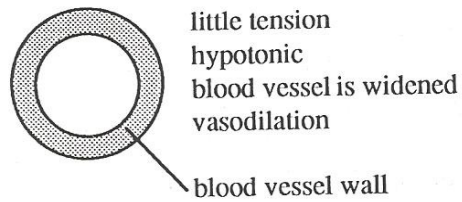
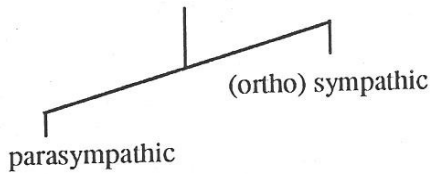


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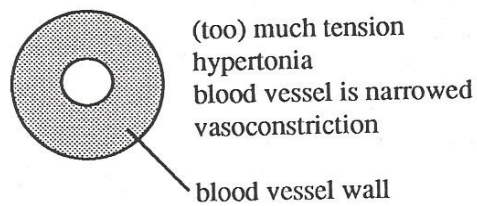
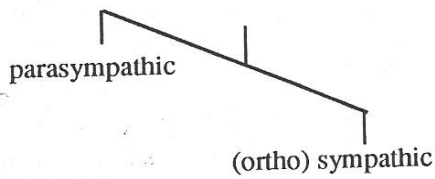
SITUATION 1- Balance Situation :



SITUATION 2 :parasympathic domination (= parasympathicotonia)



SITUATION 3 :sympathic domination (= sympathicotonia)





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### Continuation autonomous nervous system

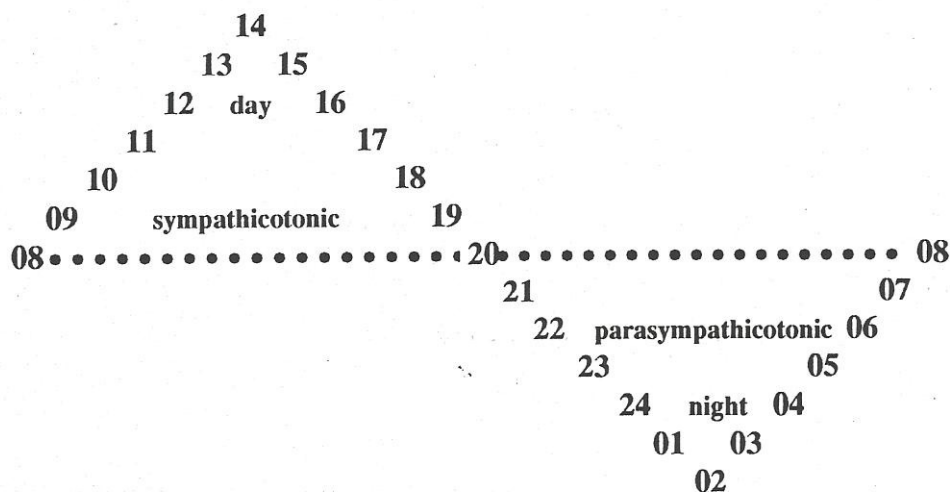
The basic tension (tonus) of our skeletal muscles is also influenced by the autonomous nervous system.

Given mental tension, the muscles also feel tenser. If, on the contrary, you are relaxed mentally, then the muscles often feel suppler.

In principle, both the components of our nervous system – the parasympathic and the (ortho) sympathetic system are in balance.

The balance is never precise. Some fluctuations can always be observed. If, for example, you are somewhat busier, then the scale tips slightly towards the sympathetic side. If you are more at rest, then the parasympathic component will dominate more.

This can be reproduced diagrammatically as follows:







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A sympathetic reaction on the muscles is:

- Energy consuming » catabolic
- Reserves consuming » catabolic
- Adrenergic
- Sympathicotonic

A parasympathic reaction on the muscles is:

- Energy saving » anabolic
- Reserves saving » anabolic
- Growth stimulating
- Cholinergic
- Parasympathicotonic

### **The sympathicotonic type**

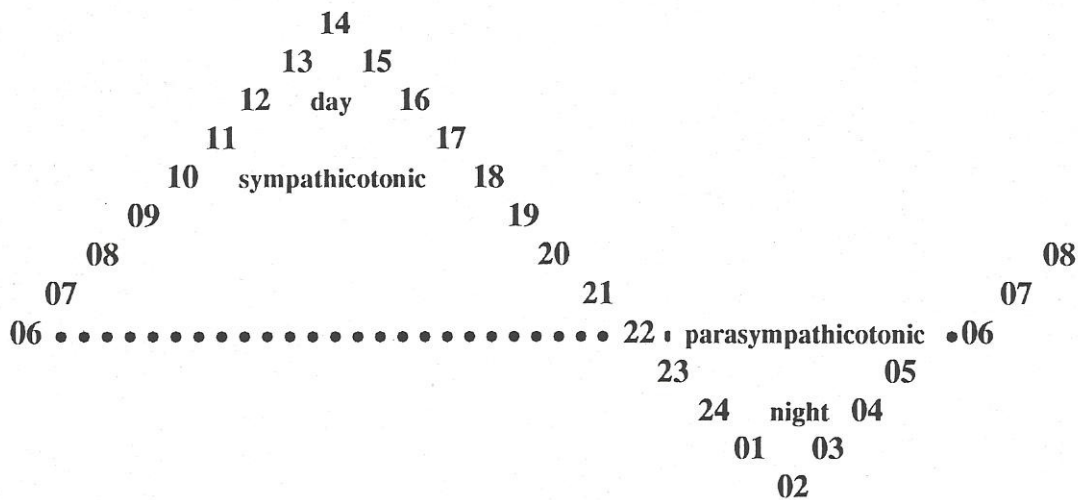
In today's society, many people are burning themselves out (a so-called sympathicotonic, adrenergic, catabolic lifestyle).





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This can be reproduced diagrammatically as follows:



We can see here that the sympathetic part has become much larger at the cost of the anabolic, reserve developing parasympathic part.

This type of person is called the sympatheticotonic type. These types can be compared with engines, which run too fast while stationary. They use too much energy and burn themselves out.

**Characteristics:**

- Accelerated heart beat (normally 60-80bpm)
- Accelerated breathing (normally 12-18bpm)
- Raised blood pressure
- Too rapid metabolism
- (by several fractions) raised temperature (normally 36.8-37.3°C)
- Shifting of the acidic level of their blood to the acidic side, by which the cell metabolism functions less effectively
- Dilated pupils
- Restless sleep

It appears that regular use of the Vibrosaun breaks through this pattern.



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First, the body is activated strongly by increasing warmth in the Vibrosaun. The heart beat, therefore pulse – and the breathing frequency, increase. The blood pressure will slightly rise.

After the motors, which produce the vertical vibrations, stop and after the heat supply also stops, then the rule is that the client remains lying down for at least 5-10 minutes more, or until the temperature in the Vibrosaun drops to  $\pm 40^{\circ}\text{C}$

During this 10 minute rest an enormous sweat production occurs. Simultaneously, a naturally deep relaxation occurs and the body is pushed, so to speak, in the parasympathic direction.

The wider blood vessels, the relaxed muscles, the relaxed mind, now bring the body in the desired state of parasympathicotonia.

This means that one hour after a Vibrosaun treatment:

- The heart becomes slower
- The breathing has become slower
- The blood pressure has become lower
- The metabolism is less fast (the stationary motor no longer runs too fast)
- The temperature has dropped several fractions
- The acidic level has shifted to the alkaline side by which the cell metabolism becomes much more efficient. 'Acidity' occurs less rapidly
- The pupils have become narrower
- The sleep is more restful (anabolic – reserve developing)

Of course, this effect is not permanent after one session. But the more often a state of relaxation is reached, the greater the chance of stabilisation.

Many machines that provide localised warmth also create a localised widening of the blood vessels and a muscle relaxing effect but they will never be able, contrary to the much more integrally working Vibrosaun, to direct the autonomous nervous system so powerfully to the much more favourable parasympathic, energy developing, anabolic direction.

### **The relative balance of the Autonomous Nervous System**

We have seen already that for many people the sympathetic and the parasympathic nervous system is not in an absolute balance.

There are people (the sympathicotonic types) whose sympathetic nervous system is dominant.

In this case, we speak of a relative balance.



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As already mentioned earlier, the sympathicotonic, the power and reserves consuming catabolic types ( such as, e.g. McEnroe, Leconte, and Cruyff ) are the most grateful candidates for the Vibrosaun. This is because the relative balance moves itself more in the parasympathicotonic direction, the power and reserves developing anabolic direction.

We see then, therefore, a slower pulse and breathing rate, lower blood pressure, lower temperature, more efficient metabolism, narrower pupils and more restful sleep.

The parasympathic type (such as e.g. Bjorn Borg, Wilander and Clint Eastwood) will profit similarly in the Vibrosaun from the feeling of well-being and from an accelerated recovery phase during and after a heavy tournament. Here though we do not find a further increase of the domination of the parasympathic nervous system. At the most it will stabilize.



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## **THE VIBROSAUN IN COMPARISON WITH SEVERAL METHODS OF APPARATUS THAT ALSO WORK WITH VIBRATION, WARMTH, RELAXATION ETC.**

### **Vibration benches**

Benches which vibrate the whole body have been on the market for a long time. Similarly, apparatus exists that bring about localized vibrations. They are recommended and applied for their (supposed) general or local fat dissolving capacity.

The scientific foundation concerning the positive effect of this apparatus is extremely thin and disappointing.

This does not detract from a vibration bench perhaps being the first psychological stimulation for a person to slim, so that, naturally in combination with a slimming diet, a reduction in weight can be achieved.

### **Sauna**

A sauna bath also can be used to get excellent degree of relaxation.

Although the temperature of a sauna can be become higher (90°C on the upper benches) than in a Vibrosaun (maximally 80°C), it must be remarked that the human body has its greatest sweat production at 75°C and that this does not increase above 75°C.

In other words, sitting on the top sauna bench is not more effective than sitting on the middle benches where the temperature is  $\pm 75^{\circ}\text{C}$ .

(We do not consider here that you can sweat just as well either sitting or lying on hard wooden benches, but certainly relax less than when you lie pleasantly vibrating Vibrosaun bed.)

The sauna scene is a social occasion, which is appreciated as such by many.

But there is also a category of people who feel less comfortable naked amongst others, or who find that the company of others obstruct them from relaxing maximally.

On this point Vibrosaun and sauna could work not competitively, but supplementary to each other.

### **Physiotherapy**

Most physiotherapeutic techniques are based on the application of localised warmth, which then again leads to a localised blood vessel widening considered therapeutically desirable.

One may consider paraffin packings, massage and various electro-magnetic radiation apparatus. Damaged parts of the body show less tension (tonus) due to the treatment, and by that less pain.





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It seems a question of time before the physiotherapist recognised that the Vibrosaun can form a welcome addition to and a partial substitute for their chosen therapeutic arsenal.

The general warmth, blood vessel widening, tonus and by that more rapid pain reduction of muscles, tendons, ligaments and synovia must appeal to every physiotherapist who takes their profession seriously.

### **Yoga/Meditation**

Yoga and meditation give, if practiced well, an excellent degree of internal rest and relaxation. The Vibrosaun aims for the same internal rest, but adds physical relaxation to that due to the warmth and the vibration.

### **The Recovery Phase after Strenuous Physical Effort**

Everybody who has read the above with care will understand that the Vibrosaun is pre-eminent treatment to let heavily burdened organic systems recover as fast as possible. The familiar stiff, painful and, therefore, poorly blooded muscles 1 or 2 days after, e.g. a football, basketball or rowing match, after a cross-country run, marathon, triathlon etc., recover much faster due to the mild warmth and vibration of the Vibrosaun, which, as known, leads to an improved supply and discharge of blood.

It has already become apparent that several top tennisers make use of the Vibrosaun several times per day for half an hour during long-lasting and exhausting tournaments because this method appears to win from the customary light training and sports massage.

### **Medical Applications in the Revalidation and Rheumatology**

For many patients with rheumatic complaints there is still not an adequate treatment aimed at the cause. Physiotherapy is mostly applied 'one-off', or sometimes alongside a medical treatment. Warm water baths, heated swimming pools and other forms of heat therapy often play a leading role.

Despite the short time since the Vibrosaun was introduced in the Netherlands, it can be determined already that it has an extremely favourable effect on the well-being of patients with fibrositis, fibromyalgia, myalgic encephalopathy, morbus Bechterew and the back pain in morbus Scheuermann.

The results follow on from earlier medical findings in Australia, the United States and Japan. In Sweden the Vibrosaun has been placed recently in several large hospitals with the intention of expanding the research, in a given case to evaluate it.



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### **Can Everybody use the Vibrosaun?**

In principle, every healthy person, but also those with the complaints already described above, can use the Vibrosaun.

There are, however, complaints for which the warmth produced in the apparatus may be disadvantageous.

These may be people with:

- A very high blood pressure (upper value higher than 200, and/or under value higher than 115)
- Recent (less than 2 years ago) heart complaints. Ask for expert medical advice!
- Recent (less than 2 years ago) diseases of the blood vessels, for example a brain haemorrhage
- Temperature higher than 38°C
- Patients with rheumatoid arthritis in an acute phase with swollen, warm, extremely painful joints.

Advice from a rheumatologist is required.

### **The Unstable Autonomous Nervous System**

There are also people with an extremely unstable autonomous nervous system.

Types who sweat more easily, blush, have rapid heart flutters, faint, etc., and all of this not separately, but in combination. This type can react strongly in the Vibrosaun (or particularly after it).

During the sessions with vibrations and warmth they can react strongly sympatheticotonic to parasympathicotonic occurs- and if, after the 10 minutes of obligatory rest, they stand up too briskly, they can then react so strongly that they faint (pulse is too slow, blood; a collapse or fainting follows).

This frightening view for non-professionals though it is, in fact, very innocent, is extremely rare and can be prevented through simple instructions.



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## Review

Throughout the ages warmth has been linked to well-being.

“Warmth and love”, “a warm reception”, “warm interest”, innumerable examples can be thought of in which warmth radiates in untouchable, positive status.

That certain vibrations have a massaging and relaxing effect has also been known for ages and it has also already been applied, more or less provisionally, as such for a long time.

Due to the multi-functional effect of the Vibrosaun, the patterns of expectations of the users, the mechanisms along which the improvement occurs, also cannot be reproduced unequivocally.

- The recreant in a holiday park who gets into the Vibrosaun expects and gets a state of more wellbeing, however vaguely defined.
- During a multi-day tournament, or after an exhausting match, a sportsperson expects and gets a more rapid recovery of muscles and tendons.
- A patient with muscle pains in legs, back, shoulder, neck, with fibrositis or with symptoms diagnosed as morbus Bechterew or Scheuermann, fibromyalgia or myalgic encephalomyelitis expects and gets less stiffness and less pain after several sessions.
- The stressed person expect and attain a more relaxed feeling because the sympathetic domination of their autonomous nervous systems is turned around into a parasympathic, reserve developing, anabolic direction.

The Vibrosaun is a cure for all complaints.

Many users with different intentions will benefit from it due to the improvement of their general wellbeing.