

HARTMANN



# Treating hypertension

With  
10 principles  
for patients with  
hypertension

# Veroval®

Step by step: Blood pressure management at home with easy to implement tips

## Start to take control again – it's worth it!

The aim of any type of hypertension therapy is to reduce the risk of secondary diseases. Treatment should take place regardless of noticeable complaints, because the high blood pressure initially exhibits no symptoms.

For successful treatment of hypertension, three elements are crucial:

### Monitoring

Blood pressure | Weight

Keep an eye on your blood pressure values and your weight!

### Motivation

Nutrition | Relaxation | Movement

A change of lifestyle is crucial to lower blood pressure values: eat healthy, avoid stress and do more sports!

### Medication

If necessary, your doctor will prescribe suitable medication for you.

### Consistency is important!

Remember: even if you have no discomfort, untreated high blood pressure leads in the end to more or less harmful damage to your body. **By the time you notice it, this damage is usually irreversible.** When you become active in time you can get the risk associated with high blood pressure under control.

So along with – or better instead of – medical treatment, you have to be active yourself. With this brochure, you will get to know different ways to improve your lifestyle that can be easily integrated in your everyday life.

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## The 10 principles for hypertension patients

These principles provide an initial overview of what you can do yourself – without medication. If you manage to comply with these rules, then you have done a great deal to lower your blood pressure values.

-  **1 Measure blood pressure regularly**
-  **2 Follow the doctor's recommendations**
-  **3 Strive for normal weight**
-  **4 Limit the consumption of alcohol**
-  **5 Reduce table salt and replace with spices**
-  **6 Eat plenty of fruits and vegetables**
-  **7 Use vegetable fats and high-quality oils**
-  **8 Stop smoking**
-  **9 Ensure that you do physical exercise regularly**
-  **10 Make sure that you can take some rest and relax**

## Monitoring – why it is important

By monitoring vital signs and maintaining a healthy lifestyle, problems can be detected at an early stage and preventive measures can be taken. In the case of overweight sufferers, the normalisation/regularisation of hypertension can be achieved through weight reduction. A weight loss of about 10 kg can lead to a reduction in blood pressure of 5–10 mmHg (systolic).



### Control of blood pressure values

Regular monitoring of blood pressure helps to prevent, for example, strokes and heart disease, and supports medical treatment. Since blood pressure values are subject to large fluctuations, it's important to measure your values regularly at home – if possible, twice a day – with a precise high-quality blood pressure monitor.



### Control of weight

When you change your nutrition to lose weight and are additionally doing plenty of exercise you might find that your weight remains the same, which can be very frustrating. Therefore, purchasing a body analysis scales can be a good idea, because a physical analysis can show that indeed you are losing fat, but at the same time the proportion of muscle is increasing. This effect leads to a sense of achievement instead of frustration.

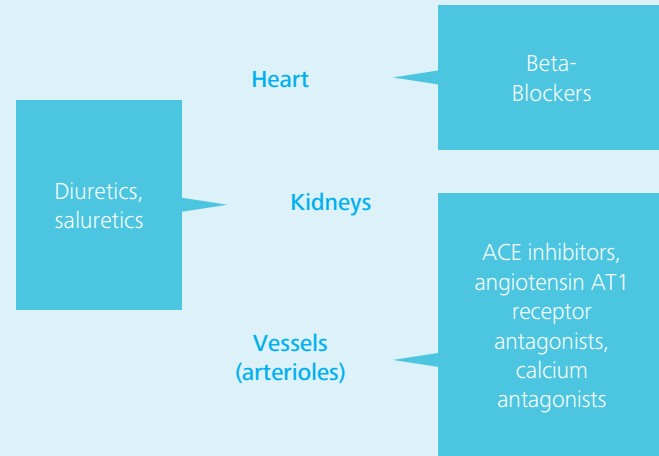


# Medication – different medicines to lower your blood pressure

Today, a whole range of very effective and well-tolerated medicines is available for the treatment of hypertension: ACE inhibitors, angiotensin receptor blockers, calcium channel blockers and thiazide diuretics. None of these are suitable for self-medication, but your doctor will prescribe the appropriate medication for you. Often, the different medicines are also prescribed in combination. In most cases of high blood pressure, values return to their previous high levels if blood pressure medication is stopped. Therefore patients, who take no further measures to combat high blood pressure, are more likely to take pharmaceuticals for an unforeseeable future.



## Where medication against hypertension works in the body



# Motivation – yes, you can change your lifestyle, step by step

## Nutrition: Here's some help for your personal goals



- STEP 1:** Learn why in nutrition a little less can be a lot more
- STEP 2:** Eat more of the healthy stuff. It's really good, promised!
- STEP 3:** Remove food without nutritional value from your shopping list!

## Avoid stress: put a little more "OMMMM" into your life



- STEP 1:** Start to manage your time – you can only gain from it!
- STEP 2:** Be good to yourself – you're worth it!
- STEP 3:** Don't worry, relaxation techniques are easier than you might think

## Sports: it's not the distance that counts, but taking the first step



- STEP 1:** Just do it – more movement in everyday life
- STEP 2:** Do exercise in the perfect gym – your own home!
- STEP 3:** Now you're ready for outdoor sports

## Nutrition: Here's some help for your personal goals

For patients suffering from hypertension, a change of diet is in many cases, of particular importance, because with the right diet you can often prevent medication or at least reduce the dosage.

There are some aspects to consider when changing your diet, as it is not just about (often necessary) weight loss, but also about avoiding foods that may be harmful to your blood pressure values. Instead, eating heart-healthy foods is recommended.

Here are the most important aspects that are covered on the following pages.

- 1) **Reduction of salt intake**
- 2) **Avoiding saturated fatty acids**
- 3) **Choose food which is high in potassium and fibre**
- 4) **Put more fruit and vegetables on the menu**
- 5) **Reduce the consumption of food without nutritional value**

### THE DASH PRINCIPLE

The American scientific program DASH means "Dietary Approach to Stop Hypertension". The diet recommends a lot of vegetables and fruits, low meat intake, whole grain food, nuts and vegetable oils. Studies\* in this program have shown that blood pressure can be demonstrably lowered with this kind of nutrition.

\* For example: TOMHS-Study (Treatment of Mild Hypertension Study); Liebson, P.R., et al.: Circulation 1995, 91, 698



## STEP 1: Learn why in nutrition a little less can be a lot more

Keep a distance from foods which are high in salt and reduce salt intake

If the blood contains increased salt, the kidneys retain more water and excrete less water. The increased blood volume that results leads to an increase in blood pressure and the sufferer can develop hypertension. Moreover, in the case of certain diseases, e.g. heart failure, kidney and liver diseases, salt is very difficult to remove from the body.



If salt intake instead is reduced from the usual 12–15 g per day to 4–6 g per day, this can cause a moderate blood pressure

reduction of 8–10 mmHg in almost every other hypertensive patient.

### What foods should be avoided?

- Processed foods, such as frozen pizza, canned food and convenience products
- Salted biscuits, potato crisps and salt sticks
- Pickled, salted and smoked meat and fish

### How can the intake of salt be reduced?

- Avoid flavour enhancers
- Do not add additional salt
- When preparing food, use fresh herbs and spices
- Make do without seasoning salt or spice blends
- Keep an eye open for the sodium content of mineral water

Generally: Choose meals that taste good without salt!

**Pay attention to the types of fats that you choose and reduce fat intake overall.**

Cholesterol is one of the major risk factors for cardiovascular disease. Polyunsaturated fatty acids in fish and vegetable oils have been proven to reduce levels of cholesterol and blood pressure.

### What should one pay attention to when choosing fats?

- Avoid animal fats, such as butter, bacon and lard
- Choose fats with a high level of polyunsaturated or monounsaturated fatty acids (sunflower oil, olive oil, rapeseed oil, linseed oil or soy bean oil)

### How can the overall intake of fats be reduced?

- Choose low-fat food
- Choose low-fat ways of preparing food (e. g. coated pans, grill foil, etc.)
- Skim off solidified fats when preparing soups and sauces



## STEP 2: Eat more of the healthy stuff. It's really good, promised!

Potassium and fibre also play an important role. The positive effect of a potassium-rich diet is due to an increase in sodium and water being eliminated by the kidneys. Dietary fibre basically leads to the food being chewed for longer and more thoroughly. It has a filling effect in the stomach, the blood sugar rises more slowly, and digestion is regulated. Therefore, a diet which is rich in potassium and fibre (especially fruit and vegetables) also leads to a moderate reduction of blood pressure.

### Foods which are rich in potassium and sodium are:

- Wholemeal products (cereals, bread, pasta etc.)
- Vegetables (e.g. potato, peas, broccoli, sweet potatoes, beet root, cooked spinach)
- Fruit, also dry fruit (e.g. bananas, oranges, apples, pears, raspberries, strawberries, figs, raisins, apricots)
- Nuts (hazel nuts and peanuts, pistachios, etc.)

### Recipe suggestion:

- Muesli with fresh fruit
- Wholemeal bread with cottage cheese and chives
- Soups made of vegetables or pulses
- Fruit salads, refined with nuts
- Oven-baked potato with fish and salad
- Vegetable burgers with wholegrain rice

**In general:** The WHO recommends at least 400 g of fruit and vegetables daily (excluding potatoes and other starchy tubers) to prevent chronic diseases, including heart disease.



## STEP 3: Remove food without nutritional value from your shopping list!

Food without nutritional value, also called "empty calories", refers to foods and beverages that are composed primarily of sugar, fats/oils or with alcohol. They have a low nutrient density (hardly any vitamins, fibre, minerals, essential fatty acids etc.), but a very high amount of energy, that is to say calories. For example, sugar contributes four kilocalories per gram, fat nine kilocalories and ethanol seven. Although they taste great, you should enjoy food or drinks with empty calories only in very small amounts as they promote obesity.

### Types of food with lots of sugar

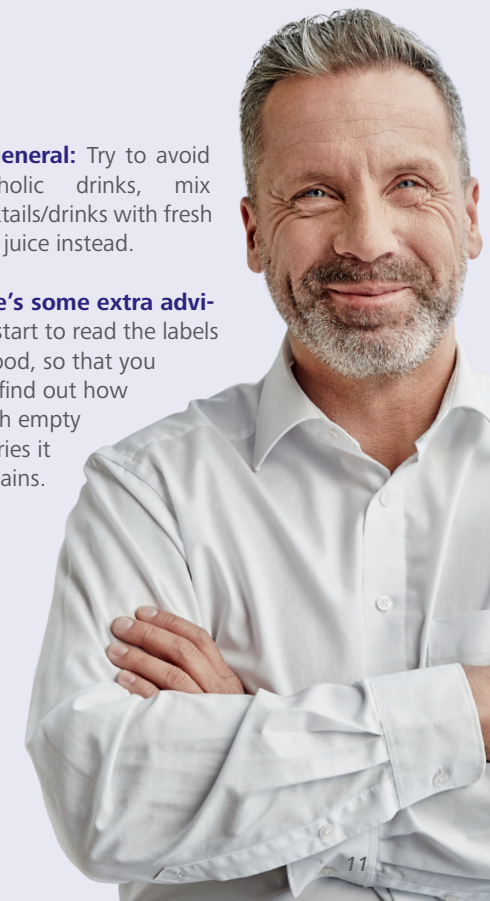
- Sweets
  - Soft drinks
  - Cake & cookies
- ➔ **Instead:** Eat fruits, use honey to sweeten, drink fruit tea

### Types of food with a high amount of fat

- High-fat pork
  - Potato crisps
  - Butter cake
  - Chocolate with low cocoa content
- ➔ **Instead:** If you have to use fat choose oil with polyunsaturated fatty acids

**In general:** Try to avoid alcoholic drinks, mix cocktails/drinks with fresh fruit juice instead.

**Here's some extra advice:** start to read the labels of food, so that you can find out how much empty calories it contains.



## Avoid stress: put a little more “OMMMM” into your life



Stress is the body's response to intense stimuli, e. g. a lot of work, cold temperatures or conflicts. There are ‚good‘ stress situations (eustress) that spur on life's activities and ‚harmful‘ stress (distress) situations. In a state of distress, the stress responses of the body are overextended and in the case of a chronic reaction, can adversely affect the course of hypertension and arteriosclerosis.

### Triggers for harmful stress can, for example, be:

- Noise
- Pressure to perform
- Agitation
- Lack of recognition

- Fear
- Family problems
- Work-related worries

The stress response prepares our bodies for difficult situations. The blood pressure rises, breathing increases, the heart beats faster and the muscles become tenser. Once the ‚danger‘ has passed, the body can once again relax and draw new strength.

Constant stress can, however, make us ill. Therefore, it is necessary to learn to cope with it. Since there is no single solution, there is no single answer to stress-management either. In the case of high blood

pressure, sufficient rest and relaxation are particularly important. Persons suffering from hypertension should ensure that they have sufficient sleep, recreational holidays and relaxing pastimes. They should also avoid unrest and conflict in everyday life. Simplifying the schedule, and relaxation techniques like meditation, are additional reliable approaches to fighting symptoms of stress.

## STEP 1: Start to manage your time – you can only gain from it!

Stress often occurs because of insufficient time management. Stress can be avoided with certain rules in planning your time.

It is possible to get a grip on stress on both the private as well as the professional level with the help of good time management. The setting of main tasks and fixed allocated times is an important prerequisite for successful time management. First, make yourself aware of your main tasks and then enter these as fixed times in a diary. After this, all other tasks and activities can be planned around these fixed dates.

### Rules for your daily planning

- Work units should not last longer than 60 minutes
- The same work should be grouped together in blocks
- From block to block, there should be variation within the areas of work
- Short breaks of 5–15 minutes should be sandwiched between the work units
- Difficult tasks that require concentration and strength should not be done at the ‚low period‘ of the day (12.00–15.00)

In addition, one should keep a to-do list, which contains the task, the estimated time that is required for it and the completion date. Based on such a detailed list, it is possible to plan tasks in a useful and stress-free way.



## STEP 2: Be good to yourself – you're worth it!

There are various measures in everyday life which help to cope with stress. Recreation (holidays) is helpful as well as a change of attitude (way of thinking) and also activities, which affect daily life.

### 1) Relaxing holidays:

- Try to have a holiday lasting three weeks at least once a year
- Prefer recreational holidays over active holidays
- A moderate climate is better than high temperatures
- Avoid rapid changes of climate and of time zones
- Also shun areas with a high level of humidity

### 2) Attitudes and behaviour traits:

- Avoid negative assumptions (e.g. everything always goes wrong with me, I can't do it, etc.). Change your attitudes into positive assumptions (e.g. I can do it, I shall succeed, etc.).
- If you are about to face a challenge or unpleasant situation, think about a viable way out and turn it to your benefit.
- Assess critical situations positively. Try to understand the action of your opponent and approach the situation again.
- Solve your inner conflicts to achieve a relaxed attitude.
- Analyse the stimuli that trouble you and think about how you can minimise or eliminate them.

### 3) Everyday activities:

- Give yourself breaks for relaxation. Not only during work, but also at week-ends. In particular, ensure that you have enough sleep.
- Promote positive communication.
- Work on problems in your relationship. Marriage or cohabitation problems have a negative impact and cause stress.
- Make your free time stimulating and varied. Sign up, for example, with a sports club, meet with friends, take a bath, go for a walk, enjoy good music at home, go to a concert or do other things with a wellness effect.



## STEP 3: Don't worry, relaxation techniques are easier than you might think

There are some relaxation techniques that have proven to be effective in dealing with stress.

### Autogenic training

The relaxation takes place through the silent repeated prompting with visualisations (auto-suggestion) e.g.: "My arm is becoming warm." or "My heart beats calmly, strong and evenly." The repetition of the formulae has a balancing effect on the autonomic nervous system. Fewer stress hormones are released. The basic exercises include heaviness, warmth, breathing, stomach, cardiac and forehead exercises each with a focus on a particular part of the body. It is recommended to learn the correct technique for autogenic training at courses run by professionals.

### Progressive muscle relaxation (according to Jacobsen)

The aim of progressive muscle relaxation is to consciously experience the difference between tensing and relaxation as well as the application of pressure and pressure relief. All the muscles of the body – from head to toe – are consciously tensed and then relaxed again. When the muscle tension caused by stress is loosened, the stress is also released. The exercises are carried out while sitting with closed eyes. Self-tuition is possible with the aid of books, online tutorials or CDs. Courses are also offered in which you have the opportunity to learn the technique of progressive muscle relaxation.

### Meditation

The word meditation comes from the Latin meditatio and means something similar to: 'orientation towards the centre'. Through attentiveness and concentration exercises, the mind should be calm and collected. The meditative state is neurologically measurable as a change in the sequence of brain waves. The heartbeat slows, breathing deepens and muscle tension is reduced. You will find various courses online that teach first steps to meditate for yourself, and there are also courses you could attend. It is said that with meditation, next to other effects, also stress-related anomalies like sleeplessness, hypertension, and cardiac arrhythmias are reduced.







## Sports: it's not the distance that counts, but taking the first step

Regular sport is very important for patients with hypertension for two reasons:

1. Exercise helps keep their weight down. Moving around prevents obesity, a major cause of hypertension.
2. Moderate endurance training of 30 to 45 minutes five days a week, for example, can lower resting blood pressure by up to 10 mmHg.

This is why it is important to regularly undertake moderate endurance sports, which primarily put demand on the heart and circulatory system.

However, athletic sports, which lead to excessive strain due to blood pressure peaks, are unsuitable. If you do decide to try more strenuous activities, then you should always consult with your cardio-

logist beforehand and let him set your optimal training pulse.

As a basic rule, it can be said that sports and physical activities only become anti-hypertensive exercise therapy if they are:

- planned
- structured
- take place permanently

Under these conditions, it is not only the blood pressure that is lowered, but also a variety of positive effects on the disease pattern, the risk factors and complications result. In addition, hypertensive patients experience improved performance and quality of life. But do take note that the positive impact only lasts as long as you continue with the exercises.

## STEP 1: Just do it – more movement in everyday life

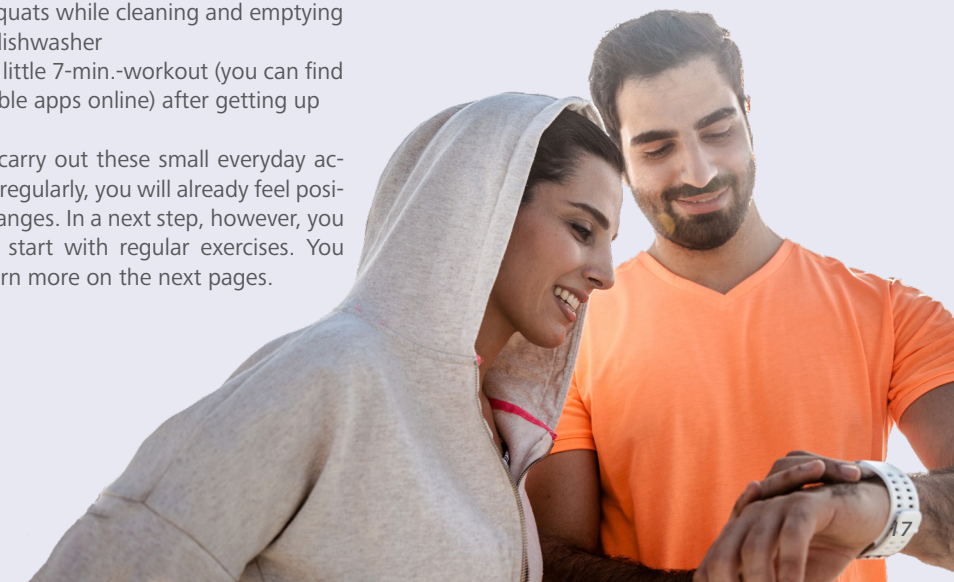
Excuses not accepted! Exercises to lower your blood pressure don't take much time, don't have to cost a penny and have a real impact on lowering your blood pressure.

However, for those who haven't been active in a long time, it is crucial to start slowly. Even if you aren't a sports enthusiast – nobody expects you to run a marathon by tomorrow – for a start, there are simple ways to keep moving:

- Take the stairs instead of the lift
- Cycle instead of taking the bus
- Start walking a bit more, for example leave the tube one station earlier
- Keep standing for a few minutes instead of sitting
- Don't call your colleague who sits a few doors further away, go to him or her

- Put the music on while cleaning your flat and do start moving
- Make a date to go for a walk instead of drinking coffee
- Try to walk and not to sit while on the phone
- Do squats while cleaning and emptying the dishwasher
- Do a little 7-min.-workout (you can find suitable apps online) after getting up

If you carry out these small everyday activities regularly, you will already feel positive changes. In a next step, however, you should start with regular exercises. You will learn more on the next pages.





## STEP 2: Do exercise in the perfect gym – your own home!

Not ready yet to go outside for exercise? Then you can also start your sports career – for example with yoga – at home. There are various apps and websites or DVDs with appropriate training units you can easily perform in your living room. Or maybe a home trainer could be a good investment.

### No matter if indoor or outdoor – what should be observed before training?

- In preparation, a medical examination should take place in order to answer the following questions: which sport is suited on an individual basis? How high is the individual capacity for exercise (exercise ECG)?
- In the case of blood pressure in excess of 200/120 mmHg in a state of rest, sports should, in any event, be avoided without medical consultation.

- It is the dosage that counts. Each week 2–4 training sessions lasting 20 minutes should be completed to start and then increasing to 60 minutes. The training intensity should only be increased slowly.
- During training, the heart rate should be checked using a pulse monitor and a break should be taken as appropriate (guidance value: training pulse = 180 – age).
- The training should begin with a warm up and after exercise, should end gradually.

The rule of thumb for hypertension is: endurance at low intensity.

## STEP 3: Now you're ready for outdoor sports

There are some types of sport that are especially suitable for hypertension patients. Training units of 30–40 minutes three times a week are recommended.

### Swimming

Swimming is recommendable as it is one of the healthiest sports. It trains the cardiovascular system and in particular, the muscles that are important for the spine and joints. Swimming is highly recommended for sufferers of obesity, as to a large extent the body is carried by the water and the weight is not put on the joints. Regular moderate training also burns calories and fat.

### Nordic walking

Nordic walking is training that exercises the extremities. This promotes the conditioning of bones and muscles. The heart strength increases, and in the long-term this relieves the heart and the blood circulation, as blood pressure is lower overall.

Fewer heartbeats are required to supply the body with enough oxygen. In addition, foot and knee joints receive less stress as about 20% of the body weight is distributed to the sticks. In order to prevent physical injury, a proper walking technique is crucial. You can learn it in special courses.

### Cycling

Cycling is ideal for endurance training; it strengthens the cardiovascular system, metabolism and the immune system. In addition, leg and back muscles are strengthened and the joints are not stressed too much. Blood pressure initially increases during the training, however in the longer term it drops to a lower level. Through regular cycling, the heart muscle is trained and better supplied with blood. Cycling also has a positive effect on the activity of the veins as it reduces the risk of venous disorders. An upright posture is crucial for the blood circulation to work.

### Jogging

Jogging promotes a good mood and reduces stress. In addition, the cardiovascular system is trained, and the body's defences are strengthened. Running also helps to combat obesity. Equipment plays an important role when running: Do not save when choosing the right running shoes. Good cushioning can prevent excess stress on joints. As this is sport in which the participant sweats a lot, breathable clothing should be chosen. In cold weather, several thin layers are recommended.

### Strength training in a fitness studio

It is recognised that moderate strength training can be beneficial in addition to endurance training. The reason: higher muscle mass.



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