wellion®

Your Austrian health brand

METABOLIC SYNDROME GUIDEBOOK



Dear Reader,

This guidebook deals with the topic „metabolic syndrom". Maybe a few of you has ever been confronted with this term. It means a number of symptoms which contribute together to an increased risk for cardiovascular diseases and an increased mortality.

Even among physicians there is no consensus for the correct definition of this term. But all physicians and health care professionals agree that the problems is caused by an improved standard of life in the industrial countries. The rapid increase of affected people up to about 25% of the population in many western European countries can be explained by malnutrition, lack of exercise and also by higher expectation of life.
These are the symptoms in detail:

- Hypertension
- Overweight with with an unfavorable distribution of fatty tissue in the abdominal region
- Diagnosed Diabetes type 2 (including pre-stages)
- Fat Metabolism Disorders

If there is more than one of these disorders present then you should perform more checks to clear up the above mentioned diseases. The following pages will provide more information about the „Metabolic Syndrome" and will explain about the risks for your health when more of these factors occur at the same time.

With best regards,
Claudia Donath and Frau Astrid Hofmann, Diabetesberaterinnen DDG
and your MED TRUST Team

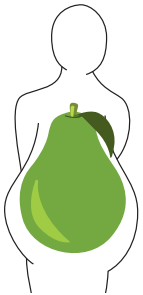
Overweight and waist circumference or: „What is the difference between apple and pear?“

Too much sugar, too many calories, too little exercise!
Statistics show that about every second person in western Europe is overweigth! Previously overweigth was defined over the BMI (Body Mass Index). This version only contributed to the body height and the body weight.

$$\text{BMI} = \frac{\text{Body weight (in kg)}}{\text{Body height (in m) x Body height (in m)}}$$

However, the more critical point for abnormal overweight is the distribution of fat in the body. And here we end at the apple- or pear-shape.

Pear-type

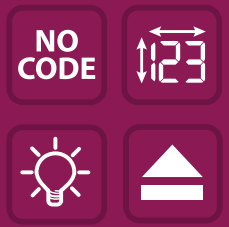


Apple-type



wellion
GALILEO





- NO CODE
- ADDITIONAL FUNCTION: KETONE
- ILLUMINATED TEST STRIP PORT

MED TRUST
THE MEDICAL SERVICES COMPANY



- **WITH 10% UREA FOR PARTICULARLY INTENSIVE CARE**
- **PROTECTION AGAINST DRY SKIN**

MED TRUST
THE MEDICAL SERVICES COMPANY

An excessive concentration of fat in the abdominal region (apple-shape) is clearly worse for your health than the rather cosmetically unaesthetic pear-shape where the fat is concentrated at the thighs and the buttoms. As a consequence nowadays the waist circumference is measured in addition to body weight. This waist circumference should not exceed 102cm at men and 88cm at women.

Excessive fat in the abdominal region contributes significantly to the developmen of hypertension, diabetes mellitus type 2 and fat metabolism disorders. A fat metabolism disorder can also have a negative impact on the liver where conversion processes can lead to „adiposis“ of the organ.

Additionally a higher blood volume is present when a person is overweigth. Due to this additional burden the heart has to provide a higher pumping performance which will lead to a weakening of the heart on the long-term.

Disorders in sugar metabolism / Diabetes mellitus type 2

The number of people with diabetes increased in the last years corresponding to the changed lifestyle in terms of nutrition and exercise.

There is an estimation – there are no exact numbers available – for Western European countries that 10% of the population suffers from diabetes. This number is alarming and does not even take the number of people with pre-diabetes into account (impaired fasting glucose/disorders in the depletion of sugar).

The genetic disposition has a huge impact on the development of Diabetes type 2. If this form of diabetes has occured within the next family members then there is a probability of up to 50% that somebody will also develop the same disease. The onset of diabetes will happen the earlier if overweight, malnutrition, lack of exercise and higher age are involved as risk factors.

This does not mean at all that every overweight person will develop diabetes. People with some overweight but an active lifestyle (with a higher percentage of muscels) will decrease the risk accordingly and significantly. Nevertheless will a higher percentage of fat in the body decrease the action of insulin, the only hormone that lowers blood sugar. Medical professionals call this an insulin resistency.

Permanently elevated blood sugar levels cause long-term late complications in the organism. Arterial blood vessels (heart, brain, eyes, kidneys) and the nerves at the feet are mainly involved.

wellion
CALLA light





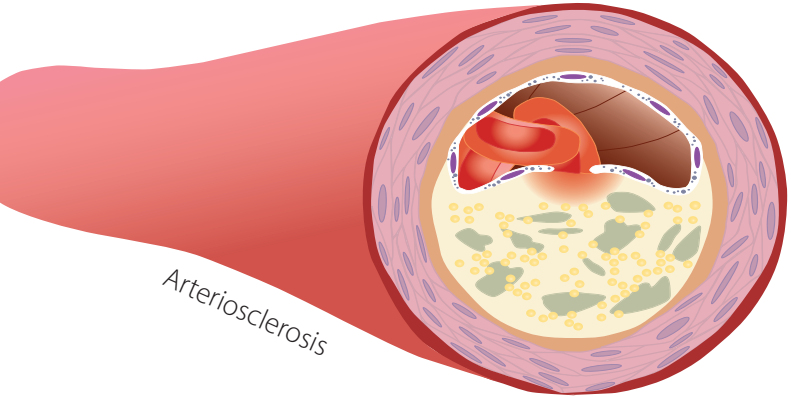


• BIG DIGITS
• MEAL MARKERS
• EASY OPERATION

MED TRUST
THE MEDICAL SERVICES COMPANY

Damage of these blood vessels is connected with a significant higher risk for acute and chronic cardiovascular diseases. The consequent therapy of diabetes is essential and requires permanent cooperation from your side.

Routine checks at your physician are crucial to detect late complications which might have been developed at an early stage and to take the appropriate therapy measures.



Arteriosclerosis

Hypertension

A permanently elevated blood pressure shows the risk of a cardiovascular disease. This refers to results higher than 139/89 mmHg (repeated measurement at rest) – in this case a therapy with appropriate drugs is necessary.

There are numerous anti-hypertensive drugs with a different way of action. Please refer to the list of the most important groups of drugs which are used for treating hypertension:

- ACE Inhibitors
- Beta-Blockers
- Calcium-Antagonists
- Diuretics
- Angiotensin-Receptor-Inhibitors and
- Renin-Inhibitors

Please refer for more detailed information about these drugs to our „Hypertension Guidebook".

High blood pressure (= arterial hypertension) is also caused in many cases by a genetic disposition and a hypercaloric diet. Together with a lack of activity this will lead to overweight.

The development from a normal to an over-weight changes the hormonal balance which is mainly responsible for the regulation of the blood pressure.

wellion
WAVE
Blood pressure monitor for the wrist


wellion
WAVE plus
Blood pressure monitor for the upper arm


MED TRUST
THE MEDICAL SERVICES COMPANY

wellion
GALILEO compact



NO CODE

123

- NO CODE
- SMALL AND COMPACT
- BIG DIGITS

MED TRUST
THE MEDICAL SERVICES COMPANY

The consequence is an increased heart rate which can lead long-term to a heart insufficiency. The first visible signs can be edema at the legs.

If the causes are well known it is of course possible to start the therapy exactly there. If possible try to reduce possible overweight by means of a change in nutrition and an increase of activity.

People tend to overestimate the activity which they perform in daily life. To „work off“ the calories of one yoghurt (150g = ca. 250kcal) a person would have to walk for at least 50 minutes (fast walking) or ride the bike for the same time. A weight loss of 5kg leads to a reduction of the blood pressures by 10mmHg without any medication.

Disorders in the fat metabolism

We eat a good quantity of fat with our daily nutrition. Fat is not only a source of energy (1g fat = 9kcal) but is responsible for many tasks in the body´s metabolism.

Some vitamins (A, D, E, K) can only be resorbed by the body in the presence of fat. There was a lot of discussion in the last years about cholesterol (only present in fat from an animal source). Also cholesterol has a lot of important tasks in our body. For example:

- Support of the immune system
- Synthesis of hormones
- Building of the cells

If nutrition does not provide enough cholesterol to the body it can be sythetized by the organism itself. The following parameters have to be determined to be able to judge about a disorder of the fat metabolism:

- Total cholesterol
- HDL
- LDL
- Triglycerides

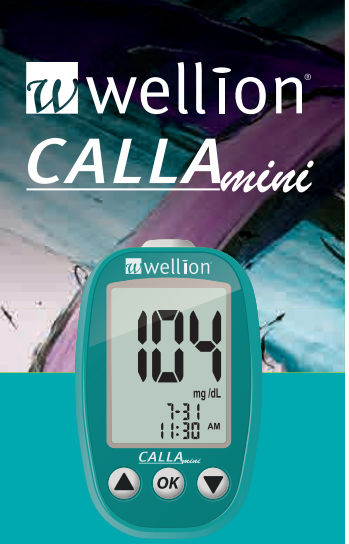
For the transport of fat through the blood vessels the liver packs cholesterol and proteins in smaller (HDL) and bigger (LDL) portions, as fat is not water-soluble. While HDL serves as a „drain-cleaner", LDL will restrict the blood vessels long-term.



GLU, CHOL & UA

- EJECT BUTTON
- NO CODE (GLUCOSE)
- ADDITIONAL FUNCTION: CHOLESTEROL & URIC ACID

MED TRUST
THE MEDICAL SERVICES COMPANY



NO CODE

123

- NO CODING
- SMALL & TRENDY
- BIG DIGITS

MED TRUST
THE MEDICAL SERVICES COMPANY

Therefore the measurement result of LDL is of high importance.

A change in nutrition, which has weight loss as main purpose, means always a reduction of the quantity of fat in the food.

Disorders in the fat metabolism can also be caused by genetic disposition, meaning that they occur cumulated within a family, and they require in most cases a pharmaceutical treatment with tablets as the cholesterol level can hardly be influenced by a nutrition change only. Increased body activity helps to enhance the muscle formation.

Closing words

There is no doubt nowadays that all mentioned changes occur frequently. All industrial nations with increasing prosperity which goes in line with over- and malnutrition, are aware of these complex problems which are the main reason for the development of cardiovascular diseases with heart attacks, stroke and circulatory disorders.

We hope that we could help you with this booklet to understand the connection which persists within the single changes and the importance of the lifestyle of every person.

Take care for your health in a responsible way:

„Take care for your body. It is the only place you own for living."
Jim Rohn

With best regards,
Claudia Donath and Frau Astrid Hofmann, Diabetesberaterinnen DDG
and your MED TRUST Team

wellion
1SHOT


WITH VANILLA FLAVOUR
MED TRUST
THE MEDICAL SERVICES COMPANY

wellion®

AUSTRIA

Your Austrian diabetes brand

MEDTRUST Handelsges.m.b.H.
Gewerbepark 10 • A-7221 Marz
Tel.: (+43)02626/64190 • Fax: DW 77
e-mail: office@medtrust.at
www.medtrust.at • www.wellion.at

MED TRUST
THE MEDICAL SERVICES COMPANY

WEL097EN 20260914