The Cardiovascular Risk Factors

Even though many preventive progress have been made in recent decades, the impact in terms of mortality and morbidity of cardiovascular diseases remains major.

These diseases are the leading cause of death worldwide. In Luxembourg, in 2018, 1193 people died of cardiovascular disease, i.e. 589 men and 604 women.

What are cardiovascular diseases?

Cardiovascular diseases (CVD) are a group of disorders that can affect the heart and blood vessels of our body. Some of the best known are myocardial infarction and stroke.

These diseases can affect both the elderly people and those who are still working.

What are the cardiovascular risk factors (CRFs)?

A CRF is a measurable characteristic whose presence increases the risk of developing cardiovascular disease.

We distinguish two categories of CRFs:
- the environmental cardiovascular risk factors we can influence and which are thus avoidable,
- the so-called constitutional cardiovascular risk factors, i.e. those that cannot be modified.

Modifiable environmental risk factors:

— **There are 4 main ones:**
- Current smoking or smoking cessation within the last 3 years.
  A smoker has a 5-fold increase in the risk of myocardial infarction and sudden death compared to a non-smoker and a 2-7-fold increase in the risk of developing lower limb arterial disease.
  For the same amount of cigarettes smoked, it is more dangerous to double the duration of smoking than to double the amount.
- Cholesterol:
  It is an essential and fundamental element. However, when its level in the blood is too high (in association with other risk factors), it accumulates in the artery walls and forms plaques. This leads to a narrowing of the arteries, which can become blocked and disrupt the flow of blood through the heart (atherosclerosis).
- Treated or untreated high blood pressure:
  It is defined by a blood pressure > or = 140/90 mmHg on three separate measurements. A large majority of hypertensive subjects are unaware of it and 95% of hypertensive subjects have it due to external risk factors such as excessive alcohol consumption, obesity, excessive salt consumption, stress.
- Type 2 diabetes, with or without treatment
  This chronic disease is characterized by high blood sugar levels and usually affects people aged 40 and over.
  A diabetic male is twice as likely to have heart vessel damage as a male without diabetes. In a woman with diabetes, the risk is multiplied by 3.

— **Other modifiable environmental cardiovascular risk factors exist:**
- Overweight and Obesity;
- Too much fat and sugar in the food;
- Sedentary lifestyle;
- Excessive alcohol consumption;
- Psychosocial risk factors: these are difficult to quantify but are very closely related to other behaviors (smoking, diet, etc.).

Unmodifiable constitutional cardiovascular risk factors:

- Age: Cardiovascular risk (i.e. the risk of suffering from a cardiovascular disease or accident) increases with age throughout life. A man of 50 years or older is considered to have a cardiovascular risk factor because of his age. In women, an age of 60 years or more constitutes a cardiovascular risk factor.
- Gender: the cardiovascular risk is higher for men than women with a tendency to equalize after the age of 60.
- Heredity or family history: the presence of cardiovascular disease in family members increases one's own cardiovascular risk:
  - A myocardial infarction or sudden death, before age 55, in the father or a brother is a cardiovascular risk factor.
  - A myocardial infarction or sudden death before age 65 in the mother or a sister is a cardiovascular risk factor.
  - Early stroke in a close relative before age 45 is a cardiovascular risk factor.

It is useful to assess one's own overall cardiovascular risk based on the presence or absence of these risk factors in order to implement appropriate measures.

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Recommendations

To prevent the occurrence of cardiovascular disease, it is important to act on modifiable and avoidable cardiovascular risk factors.

— Quitting smoking:
After 3 years of smoking cessation, the coronary risk of an (ex-) smoker is significantly similar to that of a non-smoker.

— Healthy and balanced diet
It is essential to adopt a healthy lifestyle and to favor foods such as vegetables, whole grains (whole grain breads, brown rice, whole wheat pasta...), legumes (lentils, chickpeas, white beans), oilseeds (walnuts, almonds, hazelnuts...) and seeds (sunflower, chia, flax...).
It is also important to limit as much as possible processed sweet foods such as cookies, candies, cakes, pastries, jams .... Their consumption should remain in reasonable quantities and occasionally.
Hydration is also important: 1.5 - 2L of water per day is recommended.

— Regular physical activity
Like healthy eating, physical activity plays an essential role in the prevention of cardiovascular disease.
To benefit from all these positive aspects, it is important to be physically active on a regular basis. It is important to move every day and stay active by adopting daily habits (use the stairs, get off the bus earlier or park your car further away…).

— Limit alcohol consumption
The WHO (World Health Organization) recommends not to consume more than 21 glasses per week for regular use in men and not more than 14 glasses per week for regular use in women. It also recommends never to consume more than 4 glasses per occasion for occasional use and to abstain at least 1 day per week from any alcohol consumption.

— Stress management
It can be done through different techniques: meditation, yoga, sophrology…
A regular practice is necessary 2 to 3 times a week to take maximum advantage of its beneficial effects on our health.

The ASTF offers its member companies free medical check-ups for their employees

These check-ups make possible to identify cardiovascular risk factors (blood pressure, glycaemia, cholesterol, weight, etc.) and thus to provide tailored and personalised prevention advice for each individual. We invite you to contact your HR department if you are interested in this program.
https://www.astf.lu/check-up