

Nacional  Re

# Selección Vida



## Ischaemic heart disease

**Organic Law on the Regulation of Euthanasia**



# ISCHAEMIC HEART DISEASE

Ischaemic heart disease, also called coronary heart disease, occurs when the arteries that supply blood to the heart muscle become partially or completely blocked.

The heart muscle, like every other organ in our body, needs to receive oxygen-rich blood, in your case, through the so-called coronary circulation. The aorta, the main blood supply duct, gives rise to the different arteries; the ones in charge of carrying blood to the heart (coronary arteries) are two:

- Right coronary artery: supplies blood to the right side of the heart, which carries blood to the lungs.
- Left coronary artery: it is of larger calibre, since the left side of the heart is responsible for pump-

ing blood to the rest of the body; it branches in turn into the anterior descending artery and the circumflex artery.

## PREVALENCE AND INCIDENCE

It is a common disease in Western countries. It's estimated to kill four million people annually in Europe and accounts for 47% of all deaths.

The prevalence of ischaemic heart disease increases with age and is higher in men than in women, even in older age. It's estimated that the incidence of coronary heart disease at ages 65 to 94 years is twice as high in men and three times as high in women compared to ages 35 to 64 years.

## CAUSES OF CORONARY HEART DISEASE

The cause of ischaemic heart disease is arteriosclerosis, i.e. chronic inflammation of the arteries that causes hardening and build-up of cholesterol plaques (atheroma plaques) in the artery walls, which leads to thrombus formation.

Atherosclerosis is a disease that can affect all arteries in the body and cause different symptoms depending on the organ affected. If it occurs in the arteries that carry blood to the brain, it can manifest itself in the

form of stroke or cerebral vascular accident; if it occurs in the arteries that supply blood to the heart itself, it causes what is known as ischaemic heart disease.

Atherosclerosis begins in the first decades of life, however, symptoms do not appear until the coronary artery stenosis is severe and causes an imbalance between the oxygen supply to the heart muscle (myocardium) and its needs.

When this situation occurs, there may be chronic myocardial ischaemia (stable angina pectoris), i.e. a decrease in the oxygen supply to the muscle, or sudden occlusion due to thrombosis of the artery, leading to acute coronary syndrome (unstable angina and acute myocardial infarction).

Ischaemic heart disease is a disease that can be significantly prevented if its cardiovascular risk factors are known and controlled.

The main factors that cause it are:

1. Advanced age
2. Male sex, although the frequency in women becomes more common after the menopause
3. A history of premature ischaemic heart disease in the family
4. Increased total cholesterol and especially LDL-cholesterol levels
5. Decreased blood levels of HDL-cholesterol
6. High blood pressure
7. Diabetes mellitus
8. Obesity
9. Sedentary lifestyle

## TYPES OF ISCHAEMIC HEART DISEASE

We distinguish three forms of presentation of ischaemic heart disease:

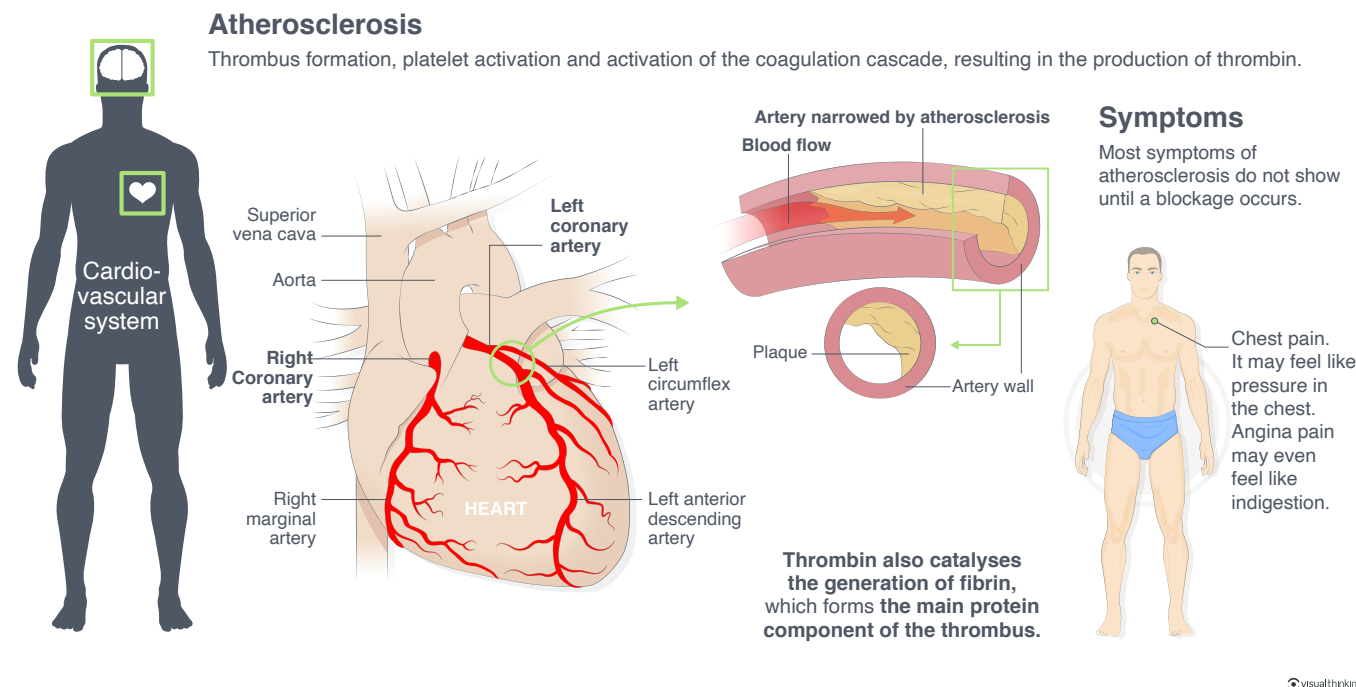
- Stable angina pectoris
- Acute myocardial infarction
- Unstable angina pectoris

### STABLE ANGINA PECTORIS

In the case of stable angina pectoris, there is chronic ischaemia (lack of oxygen to the heart muscle) so that



Plaque rupture results in **exposure of the contents of the atherosclerotic plaque and subendothelial fibres** to the blood.



visual thinking

the pain is triggered by physical exercise or emotions and is relieved within a few minutes with rest or after administration of certain medication sublingually.

Patients with stable angina pectoris should monitor cardiovascular risk factors and follow regular check-ups to prevent the development of new ones. To correct them, they should:

- Smoking cessation
- Monitor hypertension and diabetes
- Monitor weight and diet (low cholesterol and low fat)
- Reduce LDL cholesterol

In addition, patients will receive pharmacological treatment, unless contraindicated, aimed at increasing the supply of oxygen to the heart and reducing its workload.

## ACUTE MYOCARDIAL INFARCTION

Acute myocardial infarction is a serious disease, with high mortality, that occurs because of the obstruction of a coronary artery by a thrombus. The final consequence of this process is death (necrosis) of the territory that irrigates the blocked artery.

From this first approximation, it is clear that the severity of the myocardial infarction will depend on the amount of damaged cardiac muscle: the more extensive it's the greater the risk of death or serious sequelae.

The necrosis of the muscle territory that is deprived of blood supply is progressive. The damage increases over time and, once the portion of heart muscle dies, it is impossible to recover its function.

Importantly, however, the damage can be interrupted if the myocardium is restored to blood supply by procedures that unblock the blocked artery, which will be discussed below.

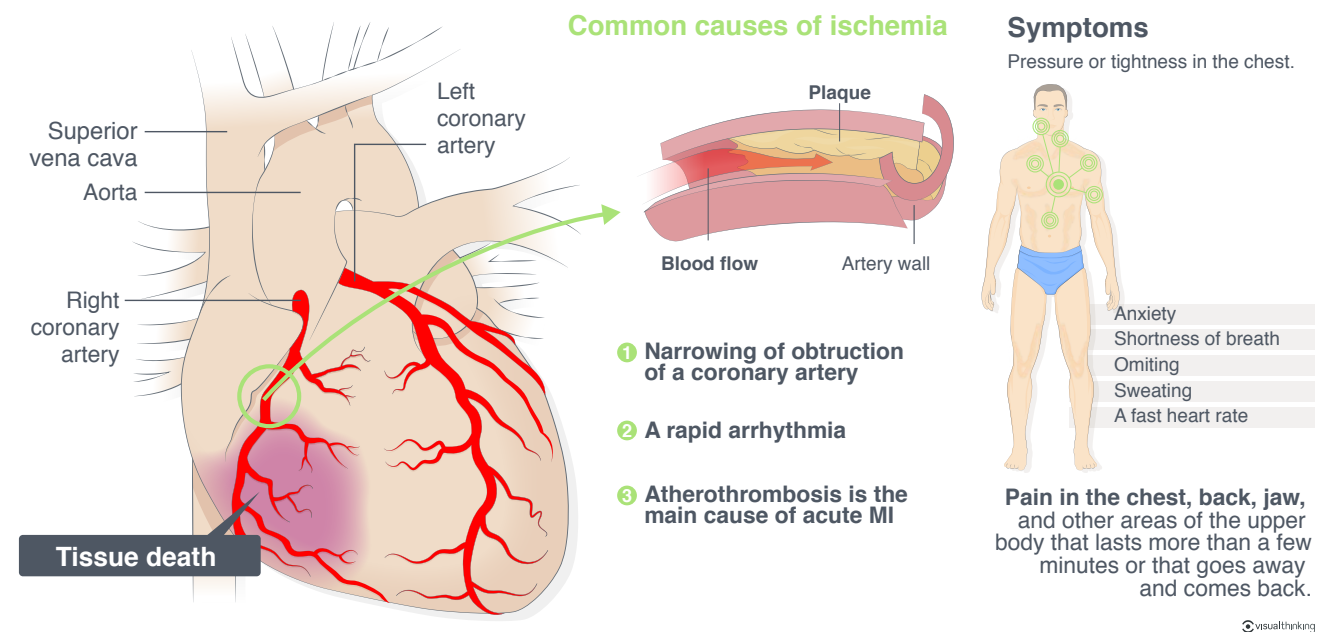
## Treatment of acute myocardial infarction

It is very important to go to a hospital as soon as possible for effective treatment to "unblock" the coronary artery. This treatment can be:

- Thrombolysis or fibrinolysis: drugs are administered intravenously to dissolve the thrombus.
- Angioplasty or stenting: the blocked artery is mechanically recanalised with catheters.
- Bypass: a vein or artery is placed to bypass the thrombus area.

Myocardial infarction refers to **tissue death of the heart muscle**.

Ischemia occurs when part of the myocardium is deprived of oxygen and nutrients.



visual thinking

The choice of one method or the other depends on clinical factors and personal history, as well as the time course of the infarction.

## UNSTABLE ANGINA PECTORIS

Unstable angina pectoris is triggered in a similar way to myocardial infarction, except that there is no complete occlusion of the coronary artery, so that cardiac cell death does not occur.

The symptoms are indistinguishable from myocardial infarction, but of shorter duration and intensity. Patients with unstable angina pectoris are at high risk of developing a heart attack, severe arrhythmia or even sudden death.

## Diagnosis

The diagnosis of ischaemic heart disease is established with the help of:

1. High clinical suspicion (presence of chest pain)
2. Stress test or ergometry: allows the diagnosis to be confirmed and a prognosis to be established. It consists of continuous exercise on a treadmill or ergometric bicycle while the patient's clinical response is assessed (if

pain appears) and monitored by means of an electrocardiogram

3. Arteriography, catheterisation or coronary angiography: this is the reference method for assessing the presence of cardiac stenosis. It also allows dilatation of the stenosis and, if necessary, stenting

## Prognosis

The prognosis of ischaemic heart disease is highly variable, as it depends on:

1. Extent of the disease
2. Damage to the heart muscle
3. Speed of treatment after a heart attack, ideally within 90 minutes of the first symptoms
4. The patient's response to treatment in the first 28 days after suffering a heart attack. Studies have shown that approximately half of all people who suffer an acute myocardial infarction die within 28 days of their heart attack
5. Patient risk factors and their optimisation

# ORGANIC LAW ON THE REGULATION OF EUTHANASIA (LORE)

The Organic Law for the Regulation of Euthanasia (LORE), Law 3/2021 of 24 March 2021-09-15, aims to provide a legal, systematic, balanced and guaranteed response to a sustained demand in today's society, namely euthanasia.

**E**uthanasia etymologically means “good death” and can be defined as the deliberate act of ending the life of a person, produced by the express will of the person themselves and with the aim of avoiding suffering.

From the outset, it should be noted that it is a complex and extensive law, consisting of a preamble, five chapters and seven additional provisions. In this article, we will review the most important aspects of the law.

## CONTENTS OF THE CHAPTERS

Chapter I is designed to define its purpose and scope, as well as to establish the necessary fundamental definitions of the regulatory text.

Chapter II establishes the requirements for people to be able to apply for assistance in dying and the conditions for its exercise.

Chapter III is aimed at regulating the procedure to be followed for the implementation of the aid in dying benefit and the guarantees to be observed in the application of this benefit.

Chapter IV establishes the elements that guarantee all citizens equal access to the provision of assistance in dying.

Finally, Chapter V regulates the Guarantee and Evaluation Commissions to be created in all the Autonomous Communities and in the Cities of Ceuta and Melilla for the purposes of this law.



## RESPONSIBLE DOCTOR AND CONSULTANT DOCTOR

From the outset, a series of key points should be noted: a register of objectors has been established, which will be unique in each community - for both the public and private spheres; a commission of guarantees and evaluation has been created, where a series of experts will resolve the proposals, based on a procedure of good practice.

The figure of the responsible doctor, who is chosen by the patient and can belong to any medical speciality (from primary care to hospital care), is in charge of coordinating and closing the process, and is ultimately responsible for administering the drugs.

Alongside the doctor in charge is the figure of the consultant doctor, who is chosen by the doctor in charge, cannot be an objector and cannot belong to the same medical team as the doctor in charge.

## PATIENT REQUIREMENTS

The patient must meet a series of requirements:

1. Legal age
2. Spanish nationality or have been resident in Spain for at least two months
3. Be aware of the request they are making
4. Have a written statement of the diagnosis, treatment and expected course of the disease
5. To have made the application on at least two occasions, separated by a period of 15 days
6. Suffer from a serious or incurable illness, in which the physical or psychological suffering is constant and cannot be controlled
7. The choice must be voluntary and free

The request for euthanasia must be made in writing, must be dated and signed by the patient and must be made in the presence of health personnel. The request can be revoked, postponed or reactivated as many times as desired.

## ACTION PROTOCOL

The euthanasia procedure begins when the patient makes the request to the doctor responsible, who must allow 15 days for the patient to make the second request.

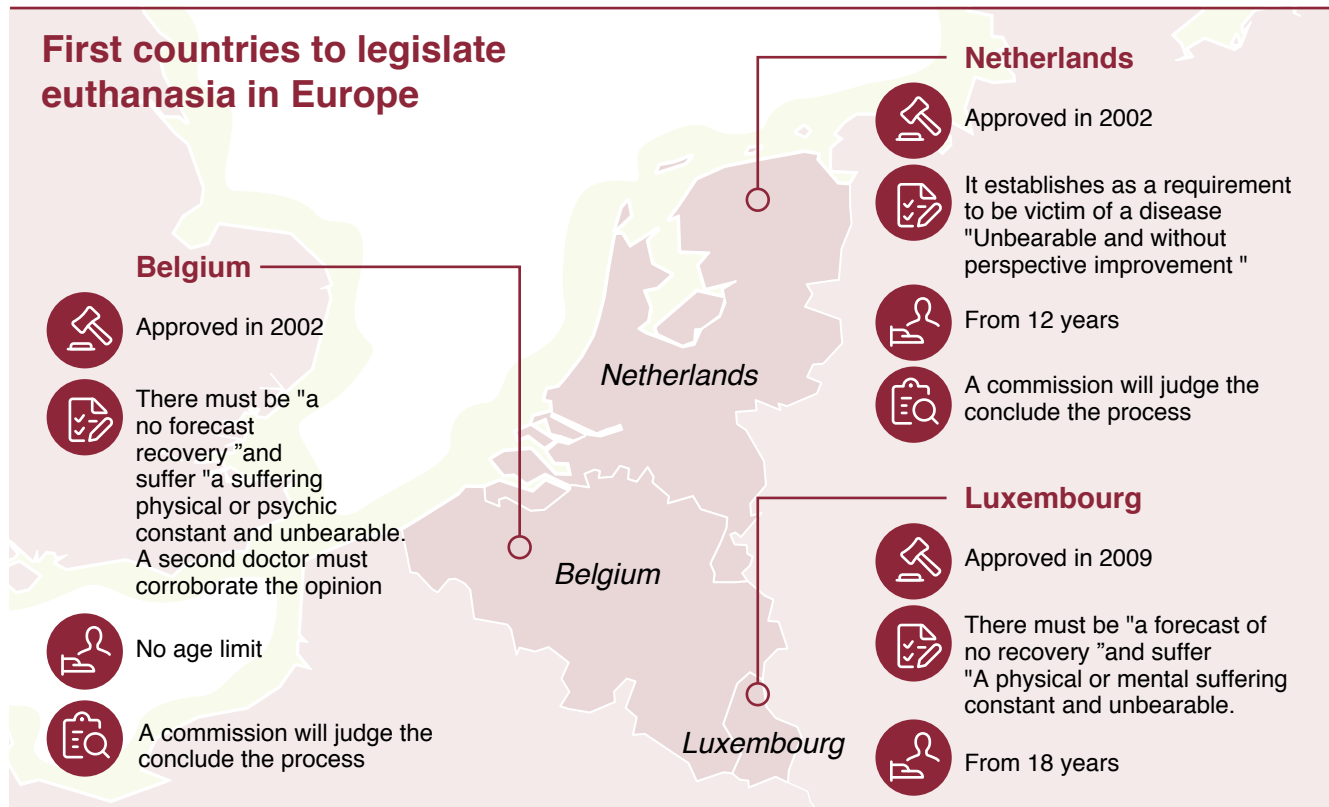
Once it has been assessed by both doctors, the proposal will be submitted to the guarantee and evaluation commission, which is made up of twenty-five members and whose function is to make the final decision, which will be communicated to the doctor in charge.

The responsible doctor then has a maximum of 10 days to analyse the case, check that the requirements have been met and, if so, notify the consultant doctor.

Health personnel can be conscientious objectors to euthanasia, but this must be an individual decision, made in writing in a confidential manner, and they can be discharged as many times as they deem necessary.

Finally, it should be noted that two types of euthanasia are established: direct and self-administered by the patient. It is important to stress that euthanasia can be carried out in public health care (health centres and hospitals), private health care, socio-health care centres and even in the patient's own home.

## First countries to legislate euthanasia in Europe



## EUTHANASIA IN EUROPE

### THE NETHERLANDS

The Netherlands was the first country in the world to legalise euthanasia, in 2002, and it did so through a law that also regulates assisted suicide. It establishes the requirement of being a victim of "unbearable suffering with no prospect of improvement" and the request must be voluntary, informed and conscious.

The doctor must state in writing that the patient has rejected all alternatives for care and must consult a second doctor, who must give an opinion on whether the criteria have been met. This includes minors from the age of 12, who require parental consent. At the end of the procedure, the so-called regional review commissions must judge whether the procedure has been carried out in accordance with the law.

### BELGIUM

Ten years after the legislative process began, Belgium approved the regulation of euthanasia, also in 2002, together with a palliative care programme. The law sets no age limit, but in the case of minors their "capacity for discernment" must be assessed by a paediatric team and they must be terminally ill.

In all cases the doctor must be reviewed by a second doctor, who must write a report. And also a psychiatrist if the doctor is of the opinion that death "will not occur within a short period of time".

The person must have "a prognosis of non-recovery" and suffer "constant and unbearable physical or psychological suffering, without possible relief, resulting from a serious and incurable accidental or pathological condition" the rule states. A federal commission evaluates the application of the law in all cases. The law does not distinguish between euthanasia and assisted suicide.

### LUXEMBURGO

In 2009, Luxembourg became the third country in Europe to legislate on euthanasia and assisted suicide. The law also includes a separate regulation on palliative care. It is only applicable to persons over 18 years of age, who must be in the same situation as described in the Belgian law, which is almost identical to Luxembourg's wording on this point.

The doctor must, unless the patient objects, consult not only a second specialist, who must draw up a report, but also his or her usual medical team and a trusted person designated by the patient.

*Fuente: eldiario.es*

# Selección Vida

Depósito legal:M-344-97



**SELECCIÓN VIDA** is a publication edited by the Department of Personal Branches of **NACIONAL DE REASEGUROS, S.A.** in collaboration with Doctor Pedro Gargantilla Zurbano, 8 - 28010 Madrid  
www.nacionalre.es - nr@nacionalre.es