

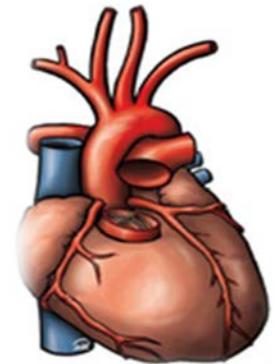
## Overview: Treatment options for stable CHD

	Medication alone	Medication + stents	Medication + bypass surgery
<b>Symptom relief?</b>	Yes	Yes	Yes
<b>Can treatment prolong life?</b>	Yes, compared to treatment <b>with-out</b> medication	No, compared to treatment <b>with</b> medication alone	Sometimes, compared to stents or medication alone: surgery prolonged the life of 3 in 100 patients.
<b>Side effects/ complications?</b>	Side effects of medication	Side effects of medication, minor <b>bleeding</b> : in around 5 in 100 patients, <b>serious complications</b> : in fewer than 1 in 100 patients	Side effects of medication, <b>strokes</b> : stroke caused by surgery is experienced by around 1 in 100 patients; <b>infection, bleeding, impaired wound healing, risks of anaesthesia</b>
<b>(Renewed/ revision) surgery needed?</b>	In around 30 in 100 patients (stents or bypass)	In around 20 in 100 patients after 4 years (stents or bypass)	In around 6 in 100 patients after 4 years (stents or bypass)
<b>Cardiac catheterisation needed?</b>	No	Yes	Yes

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## Suspected coronary heart disease (CHD): Do I need cardiac catheterisation (heart cath)?

Your doctor suspects you have “stable coronary heart disease” or has already diagnosed the disease. In certain cases a heart cath test is important to plan further treatment. But it is not always necessary. Before you decide to take the test, you should familiarise yourself with the main treatment options. This will help you to decide whether the cath test will be beneficial for you.



### What is coronary heart disease?

Coronary heart disease (CHD) is associated with narrowing of the coronary arteries. These arteries are positioned around the heart. They supply the heart with blood which transports vital oxygen. Narrowing is caused by fat and calcium deposits on the inside walls of the coronary arteries (plaque). The heart is then no longer supplied with enough oxygen. CHD is a disorder that should not be taken lightly. It can seriously impair daily life. It can lead to a heart attack or cardiac insufficiency. These conditions are linked to elevated mortality.



### What are the symptoms of CHD?

The symptoms associated with coronary heart disease are not consistent. Exertion can lead to pain behind the breast bone which frequently radiates into the nape of the neck, throat, jaw, arms or upper abdomen. The name for this is **stable** angina (tightness in the chest). The intensity of the pain can vary. It may be accompanied by sweating, shortness of breath or nausea. If the symptoms occur whilst at rest, this is called unstable angina. In this case there is an urgent need for action.

**This patient information leaflet is only relevant for stable CHD.**

## How is CHD treated?

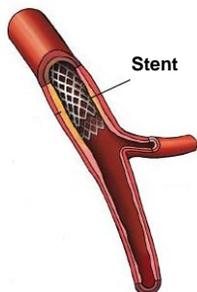
There is no cure for CHD. But with the right treatment you can enjoy a lifestyle that is similar to healthy individuals. Two of the treatment goals are: to relieve symptoms and to prevent dangerous consequences such as a heart attack. The most important thing is a healthy lifestyle. This means: plenty of physical exercise, a balanced diet and, if possible, not smoking. Furthermore, CHD can be treated with medication alone or in combination with stents or bypass surgery. Even if you are fitted with stents or have undergone surgery, you should regularly take your medication.

### Treatment with medication alone

Several active substances are combined in CHD treatment: antiplatelet agents, statins and, in some cases, beta blockers. Sometimes, other active substances are added, for instance ACE inhibitors or antagonists. Reliable studies have shown that these different types of medication reduce the risk of heart attack or stroke. It is important to take the medication regularly. There is also medication to immediately alleviate discomfort. Approximately one in three patients do not experience any symptom relief. In this case, it may be necessary to undergo surgery or have stents inserted. A heart cath test is recommended in order to choose between these two options.

### Stents

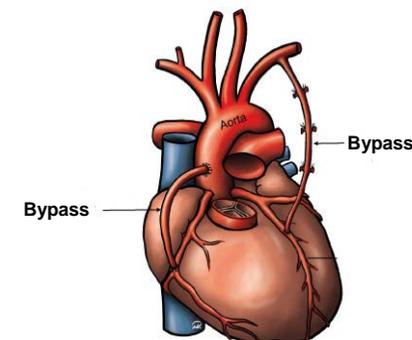
Stents are thin tubes that keep blood vessels open and ensure improved blood flow. A thin tube (catheter) is inserted into a blood vessel in the groin or arm and then threaded to the point of blockage. At its tip there is a balloon and a stent. The narrowed point is inflated and the stent inserted. In emergencies, for instance a heart attack, stents are the preferred option. Stents can bring relief where symptoms associated with **stable CHD** cannot be controlled with medication alone. However, reliable studies have shown that, in this case, stents do not reduce the risk of heart attack or prolong life compared to treatment solely with medication.



## Bypass surgery

During heart surgery narrowed blood vessels are bypassed. "Bypass" means going round. Veins or arteries taken from other parts of the patient's body can be used for the bypass. Reliable studies have compared bypass surgery with stents. They have shown that the surgery relieves symptoms in a more lasting manner than stents. This means: after surgery a renewed surgical procedure is required less frequently.

An overall assessment of all the studies has shown that surgery can increase life expectancy, too: 4 years after surgery 7 in 100 patients had died, compared to 10 patients who had been given stents. This means: around 3 in 100 patients lived longer thanks to the surgery. However, surgery does come with higher risks. Strokes occur more frequently within 4 years of surgery: in around 3 in 100 surgical patients compared to 2 in 100 patients given stents. This means: 1 in 100 had a stroke caused by the surgery. It also takes longer to recover from the surgery. In certain cases the bypass surgery did not offer any survival benefit: for instance when only one blood vessel was blocked.



### When do I need a heart cath test?

The purpose of a heart cath test is to allow the doctor to determine whether bypass surgery would be beneficial and how it could be conducted.

The test is **not necessary** when:

- surgery is not possible because of your physical condition.
- you opt initially to treat the symptoms with medication alone.