



## Coronary Artery Bypass Grafting

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# Coronary Artery Bypass Grafting

**C**oronary artery bypass grafting (CABG) is a surgical procedure that uses another artery or vein to reroute blood around a blockage in the arteries (**coronary arteries**) that supply the heart with blood and oxygen. The April 16, 2008, issue of *JAMA* includes an article about CABG surgery. This Patient Page is adapted from one published in the April 21, 2004, issue of *JAMA*.

## CORONARY ARTERY DISEASE

- In persons with coronary artery disease (CAD), deposits of cholesterol and fats called **plaque** form in the coronary arteries. This process is called **atherosclerosis** (hardening of the arteries).
- If plaque continues to build up, blood vessels can become partially or completely blocked so the heart does not receive enough oxygen carried by red blood cells, leading to **angina** (chest pain) or even a **myocardial infarction** (heart attack).
- CABG surgery may be done to bypass blocked coronary arteries.

## CABG SURGERY PROCEDURES

- Before undergoing CABG surgery, a special dye that can be seen on x-ray film is injected into the coronary arteries while x-rays are taken.
- Blood-thinning drugs called **anticoagulants** are given to help prevent blood clot formation during the operation.
- If a heart-lung bypass machine is used, the machine takes over pumping blood for the heart (conventional "on-pump" CABG).
- If a heart-lung bypass machine is not used, the heart is positioned and the coronary artery to be bypassed is stabilized with special devices ("beating heart" or "off-pump" CABG).
- Another artery or vein is sewn into place so that blood flow can bypass the blockage in the coronary artery. If more than one artery is blocked, more blood vessels will be used to bypass them (called **double**, **triple**, or **quadruple bypass surgery**).

## RECOVERING FROM SURGERY

- After CABG surgery, the patient recovers in the intensive care unit (ICU).
- Many patients can go home about 3 to 6 days after surgery.
- It will take another 4 to 6 weeks for the patient to feel stronger and resume his or her normal activities.

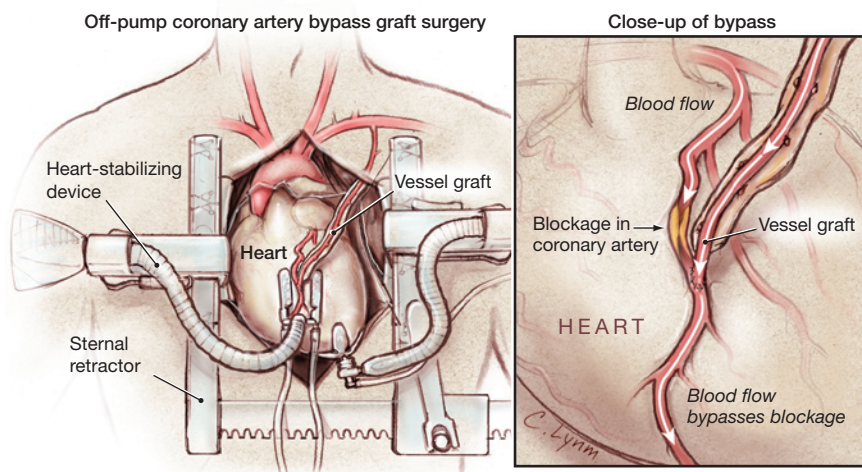
## FOR MORE INFORMATION

- American Heart Association  
[www.americanheart.org](http://www.americanheart.org)
- Cardiothoracic Surgery Network  
[www.ctsnet.org](http://www.ctsnet.org)

## INFORM YOURSELF

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Sources: American Heart Association; National Heart, Lung, and Blood Institute; Heart Information Network



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