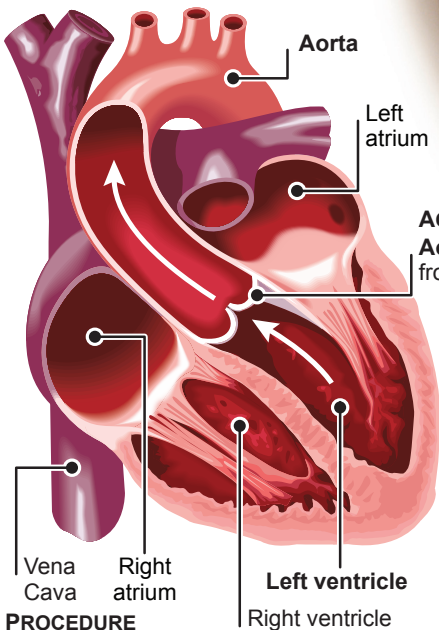


Berlusconi to have heart surgery

Four-time Italian prime minister Silvio Berlusconi is to undergo heart surgery after suffering an attack his doctor said could have killed him

Berlusconi, 79, who has had pacemaker for years, is suffering from severe aortic insufficiency



AORTIC INSUFFICIENCY

Aortic valve: Controls flow of blood from heart to rest of body

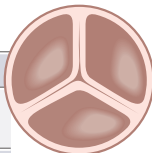
Berlusconi's aortic valve is leaky (aortic regurgitation), causing blood to flow in reverse direction, back into heart

AORTIC VALVE REPLACEMENT

Major operation involves removing faulty or damaged valve and replacing it with new one made from synthetic materials or animal tissue

PROCEDURE

- 1** Large cut made in chest to access heart
- 2** Heart stopped. Bypass machine takes over job of heart during operation
- 3** Damaged valve replaced with new one
- 4** Heart restarted. Opening in chest closed



Healthy valve closed



Diseased valve closed