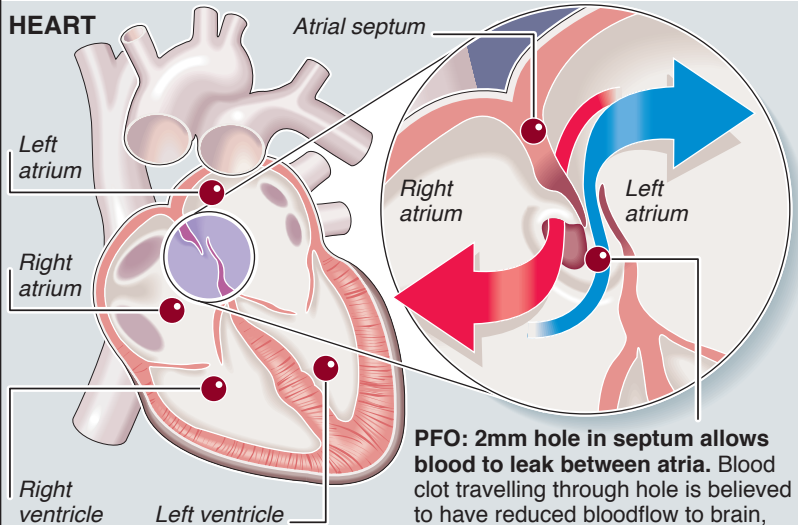


# Fixing a hole in the heart

Israeli Prime Minister Ariel Sharon will undergo an operation to seal a **patent foramen ovale (PFO)** – a hole in the wall, or **septum**, separating the heart's upper chambers. In a catheter-based procedure, an umbrella-like device will be inserted through a blood vessel to plug the hole



**PFO: 2mm hole in septum allows blood to leak between atria.** Blood clot travelling through hole is believed to have reduced bloodflow to brain, causing Sharon's recent stroke

## Cardiac catheterization

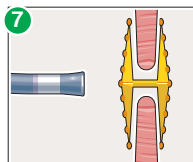
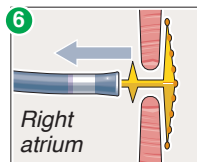
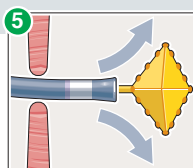
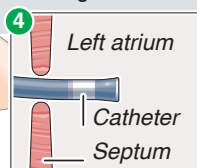
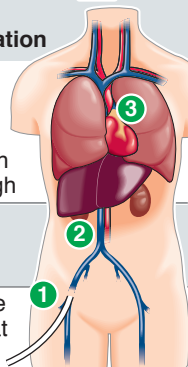
**1** Catheter – long, thin, flexible, hollow tube – inserted into femoral vein through small incision in thigh

**2** Catheter travels to heart via large blood vessels

**3** Ultrasound probe inserted down throat guides doctors

**4** Catheter enters atrium

**5** Spring-loaded occluder released



**6** Occluder forms umbrella shape

**7** Second umbrella completes patch