

If the major arteries are stiff (arteriosclerotic) the blood pressure after ventricular contraction (systole) tends to be higher because of the lack of distension (Fig. 3).

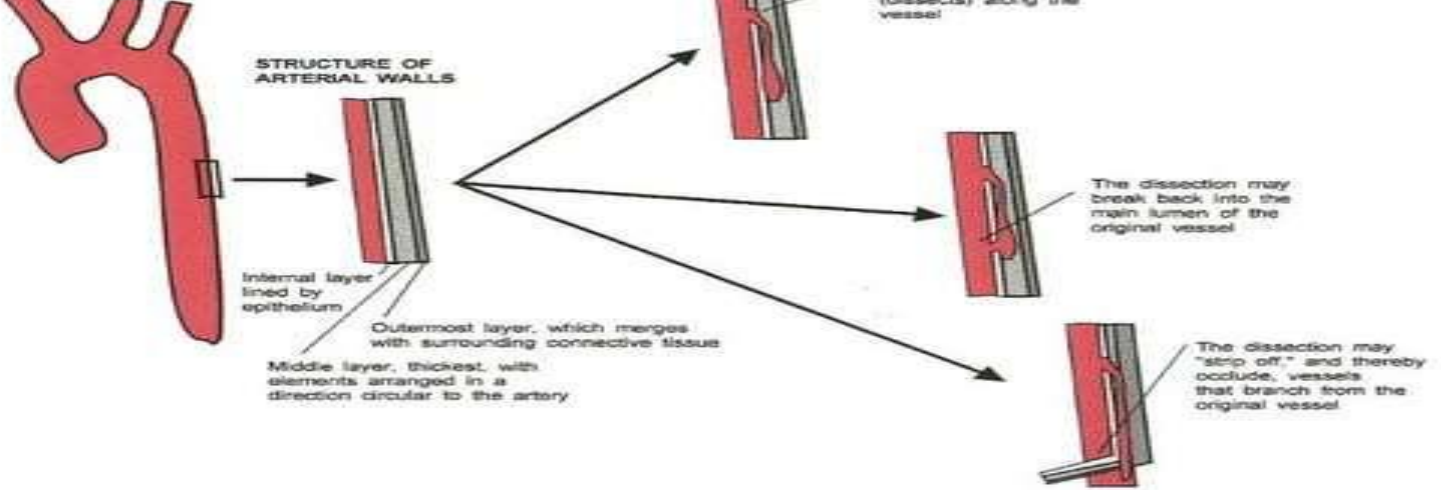
Peripheral resistance

Peripheral resistance mostly depends on the radius of the arterioles (=minute branches of the arteries). Sympathetic vasoconstrictor tone is derived from the vasomotor centre in the brain medulla. Increase in vasomotor tone leads to arterial vasoconstriction and causes a rise in arterial blood pressure (if cardiac output remains constant).

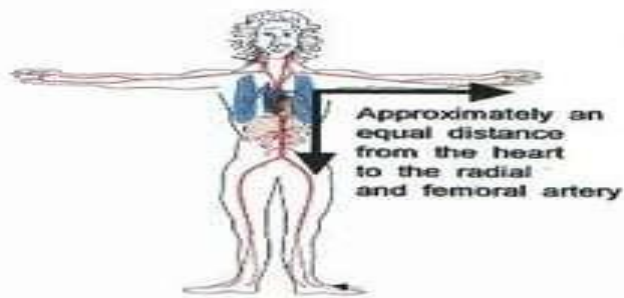
If there is rapid onset of arterial blockage the areas supplied become painful, pale, cold, anaesthetic (lost sensation) and gangrenous if the obstruction is not rapidly relieved (Fig. 4).



Fig 4.



Coarctation is a focal narrowing of the aorta which tends to occur between the left subclavian artery and the ductus arteriosus (Fig. 6). Coarctation may be associated with aortic valve abnormalities and/or weakness of the aortic wall. The pulse amplitude beyond the narrowing may be diminished, the blood pressure may be lower in the lower limbs, and the femoral pulse may be delayed when compared with the radial pulse (normally the pressure wave travels faster along the wider aortic route to



proximal to the coarctation find routes to bypass the obstruction

Femoral artery pulsation may be delayed when compared with the radial pulse (normally the femoral pulse slightly precedes the radial pulse as the pressure wave travels faster along the wider aortic route to the femoral arteries)

Raynaud's disease is a specific type of vasospasm that occurs in relation to cold or emotion. The extremities (usually the hands) become white (lack of blood caused by vasospasm), then cyanosed (because of deoxygenation of what blood there is) and then a bright red flush develops once vasospasm remits.

Thrombosis (=a clot developing in situ) may occur in veins or, more rarely on atheromatous arteries.

An embolism (=a wedge) is the transfer of an intravascular mass (usually a blood clot) from its point of origin to a distant site where it causes obstruction. A pulmonary embolism is impaction of a blood clot (formed as a thrombus, usually in the leg veins) in the lungs. Although the clot originates and travels to the right side of the heart in

