

Glossary

B.5.7. Blood Flow

Poiseuille's Law	Formula that calculates the amount of flow flowing through a vessel depending on the resistance, the length of the blood vessel and the viscosity of the fluid (i.e., blood).
Laminar flow	Typical flow of blood in a normal blood vessel whereby there is no turbulent (chaotic) flow but smooth layers (laminar) of blood flowing adjacent to each other. In a normal vessel, the flow in the center of the vessel is faster than at the edges where the blood flow is slowed down by the friction against the wall of the blood vessel.
Turbulent flow	Chaotic (i.e., non-laminar) flow of blood in a blood vessel due, most often, to an irregularity in the blood vessel such as a (atherosclerotic) mass protruding into the lumen. Such turbulent flow creates noise, which can be picked up with a stethoscope.
Autoregulation	A local system that regulates something (like blood flow) to a local area without the intervention of other systems such as the nervous or the hormonal system.
Oxygen-demand theory	Local blood system whereby the need of (local) oxygen makes the local blood vessels dilate in order to receive more blood to alleviate the local oxygen need.
Active hyperemia	Increased local perfusion of blood as 'demanded' by the local tissue to obtain more oxygen.
Reactive hyperemia	Increased local perfusion of blood following a period in which blood perfusion had been impeded.