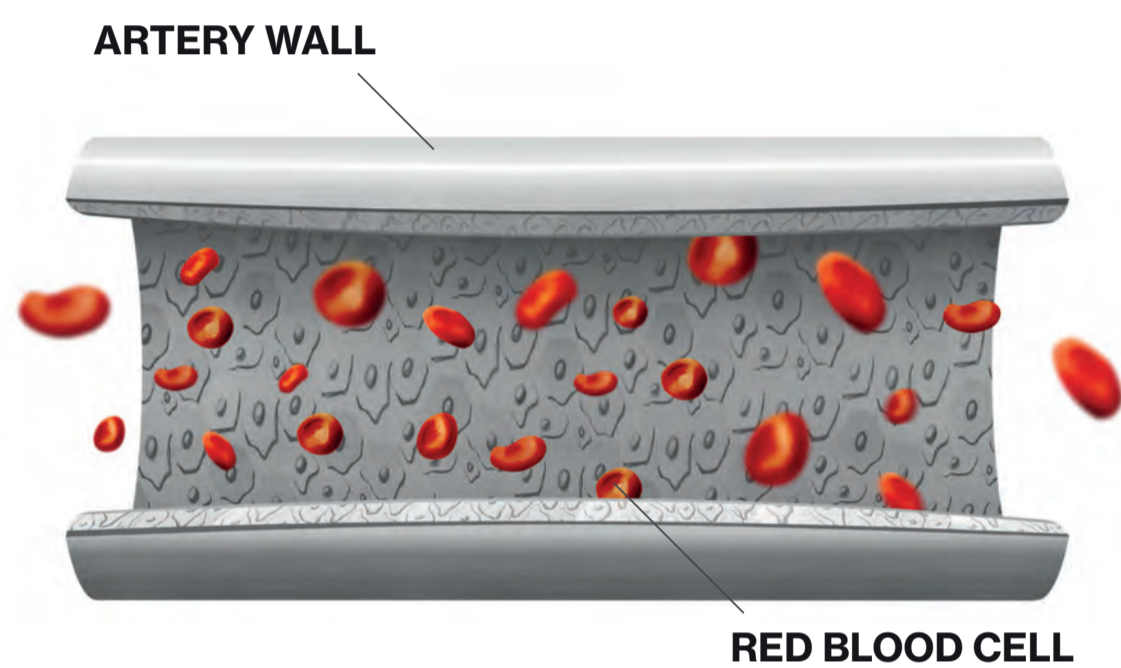


Inflammation and cardiovascular risk

Atherosclerosis – the build up of plaque in the lining of arteries – is a common cause of heart attack and stroke. **Atherosclerosis is an inflammatory disease** with inflammation acting as a key driver of disease at all stages.

Stage 1:

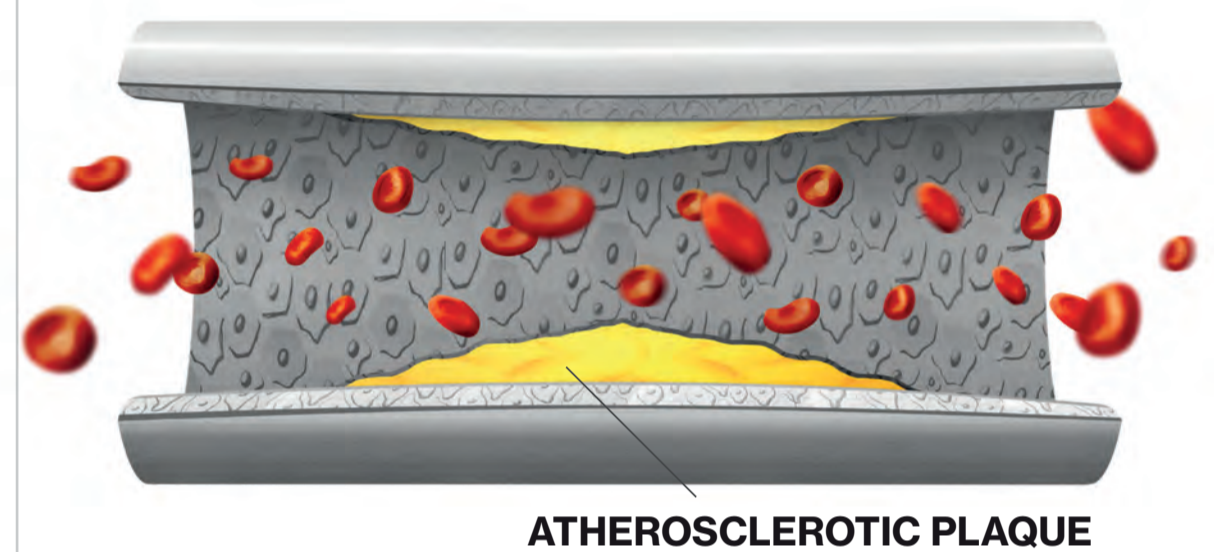
A normal artery



Blood flows freely through the artery.

Stage 2:

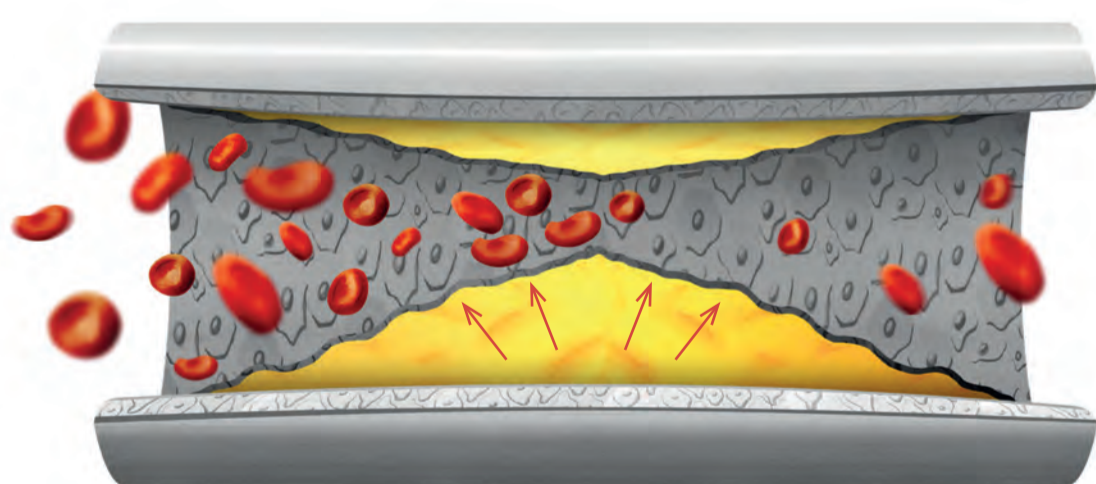
Arterial plaque formation



Fibro-fatty deposits, called plaque, build up in the artery wall and reduce blood flow. This is known as atherosclerosis.¹

Stage 3:

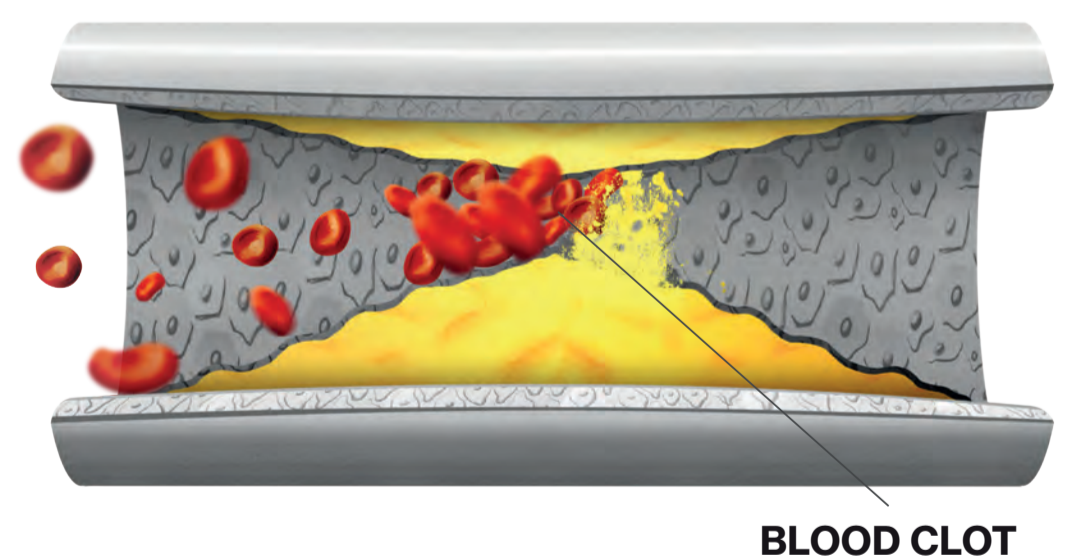
How inflammation fits in



These deposits release messenger molecules that increase levels of inflammation in the blood. This inflammatory response in turn drives the build up of more plaque further reducing blood flow.^{2,3}

Stage 4:

Risk of heart attack or stroke



High levels of inflammation also plays an important role in 'destabilizing' the plaque. This can eventually cause the surface of the plaque to rupture, creating a blood clot and leading to heart attack or stroke.^{2,3}

REFERENCES

1. NHS Choices. Atherosclerosis (arteriosclerosis). Available at: <https://www.nhs.uk/Conditions/Atherosclerosis/Pages/Introduction.aspx>. Last accessed: October 2017.
2. Ridker PM, et al. Inflammation as a cardiovascular risk factor. *Circ*. 2004; 109(21):II2-II10.
3. Ridker PM, et al. C-reactive protein and the prediction of cardiovascular events among those at an intermediate risk: moving an inflammatory hypothesis towards consensus. *JACC*. 2007; 49(21):2129-2138.