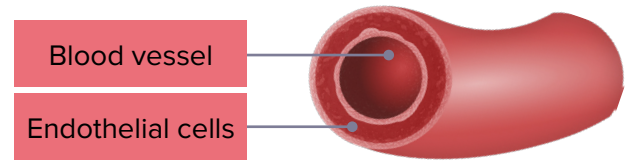


COMPLICATIONS OF POORLY CONTROLLED DIABETES



The endothelial lining of the vasculature is particularly sensitive to the toxic effects of hyperglycemia. When blood sugar remains chronically elevated, a cascade of inflammatory factors leads to endothelial dysfunction and oxidative stress. Combined with the high cholesterol and hypertension often associated with chronic hyperglycemia, these vascular changes lead to microvascular and macrovascular complications throughout the body.



Microvascular

1 Eyes

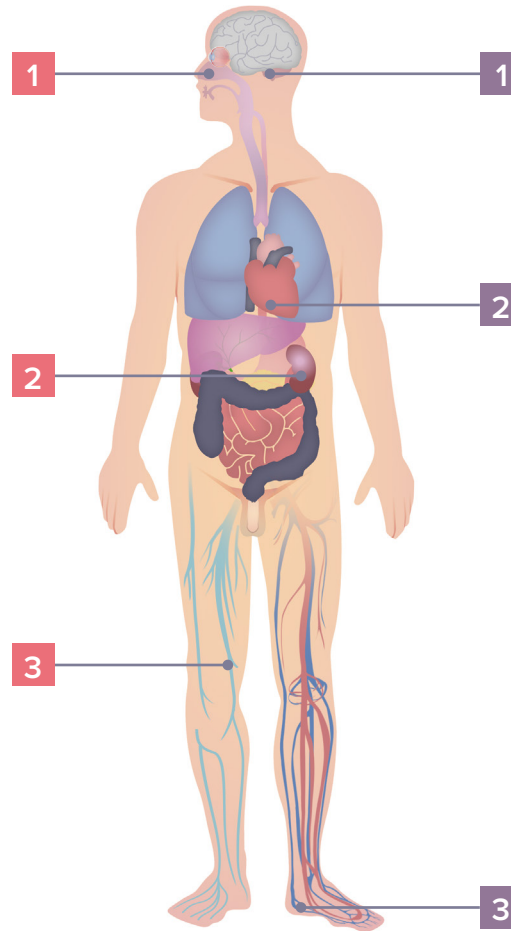
Hyperglycemia and hypertension damage blood vessels in the eyes, leading to retinopathy and risk of blindness.

2 Kidneys

High blood sugar causes hyperfiltration, which overworks the kidneys. Hyperglycemia and hypertension both damage small renal blood vessels, resulting in nephropathy.

3 Nerves

Hyperglycemia damages nerve cells in the peripheral nervous system. This may result in neuropathic pain or numbness. Numbness in the extremities puts clients at risk of injuries going undetected and becoming infected.



Macrovascular

1 Brain

Vascular changes and increased coagulability contribute to risk of stroke, transient ischemic attack, and cognitive impairment.

2 Heart

Endothelial dysfunction causes stiffening of blood vessels and plaque formation, leading to hypertension, coronary artery disease, and risk of myocardial infarction.

3 Extremities

Peripheral vascular disease resulting from stiffening and narrowing of blood vessels compromises blood flow to the extremities. Impaired wound healing can lead to infection and risk of amputation.

Other complications of poorly-controlled diabetes

Cancer

Chronically elevated blood sugar encourages proliferation of cancer cells.

Infection

Hyperglycemia creates an ideal environment for rapid growth of bacterial cells.

NOTES

