

Cardiovascular disease and its causes

Give the four events leading to atherosclerosis.

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What is a foam cell?

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Why does atherosclerosis raise blood pressure?

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What does thromboplastin do?

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What does thrombin do?

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How can a blood clot cause a heart attack?

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List the risk factors for CVD in the specification.

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Give three ways smoking increases CVD risk.

A macrophage that has taken up large amounts of LDL cholesterol in the artery wall; part of the atheroma.

Endothelial dysfunction, inflammatory response, plaque formation, raised blood pressure.

Released by platelets/damaged tissue; catalyses the conversion of prothrombin to thrombin.

The plaque narrows the lumen and the artery wall loses elasticity.

A thrombus blocks a narrowed coronary artery, cutting oxygen to cardiac muscle, which dies.

An enzyme that converts soluble fibrinogen to insoluble fibrin.

Carbon monoxide reduces oxygen transport; nicotine raises heart rate and blood pressure; chemicals damage the endothelium.

Genetics, diet, age, gender, high blood pressure, smoking and inactivity.

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What is a risk factor?

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What is a free radical?

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How do antioxidants work?

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What does vitamin C do to DCPIP?

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In Core practical 2, what does a smaller volume of juice needed mean?

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Why must vitamin C solutions be fresh?

A highly reactive molecule that damages cells and oxidises LDL cholesterol.

Something linked to an increased probability of developing a disease, not a guarantee of it.

Reduces it, turning it from blue to colourless.

They neutralise free radicals, reducing LDL oxidation and endothelial damage.

Vitamin C is destroyed by heat, light and oxidation.

A higher concentration of vitamin C in the juice.