

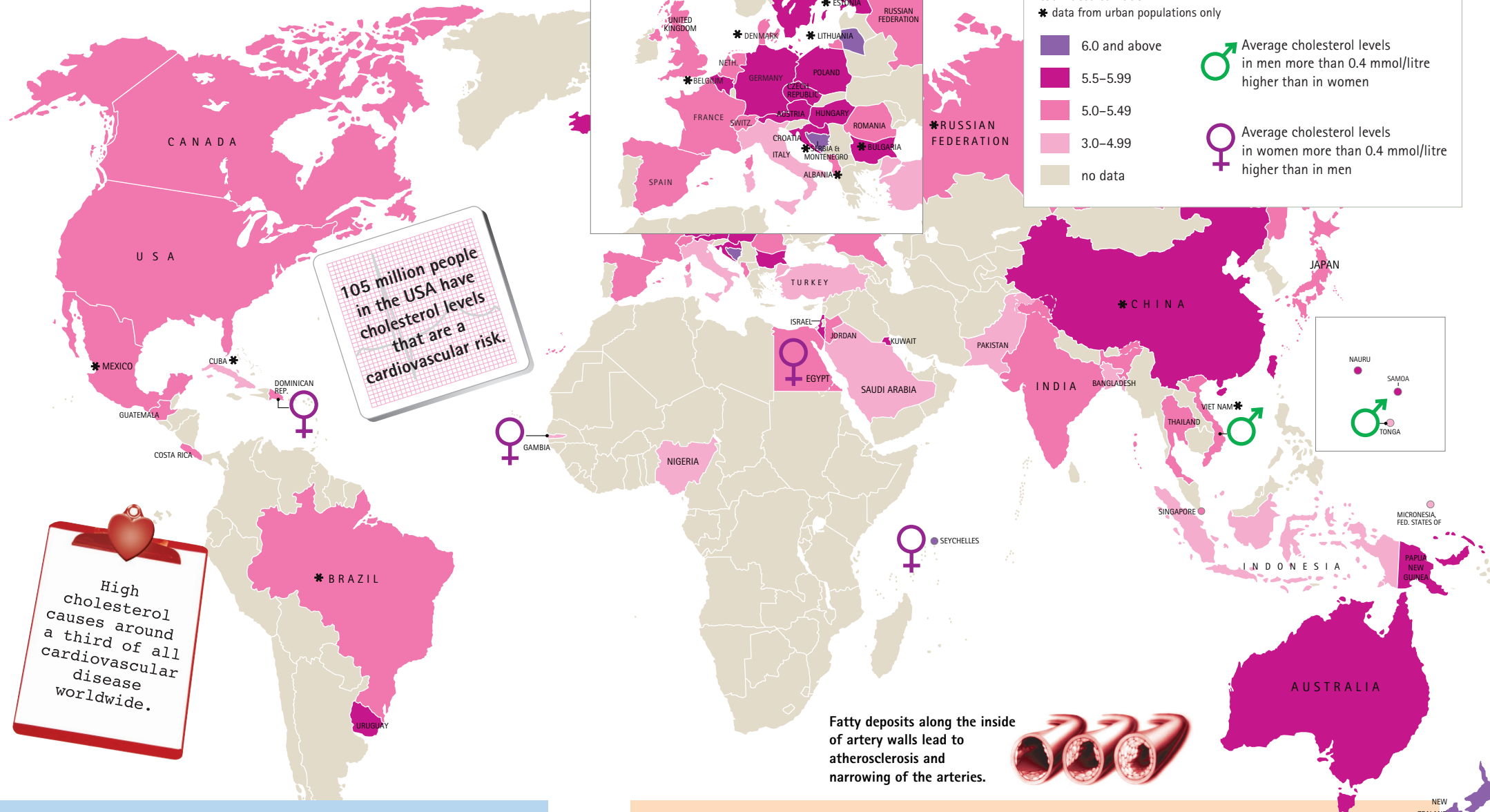
# Risk factor: lipids

High levels of LDL-cholesterol, and other abnormal lipids (fats), are risk factors for cardiovascular disease. Cholesterol is a soft, waxy substance found among the lipids in the bloodstream and in all the body's cells. It is needed to form cell membranes and hormones, and for other bodily functions.

The body can make cholesterol, or it can obtain it from food, especially animal products such as meats, poultry, fish, eggs, and dairy products. Certain saturated vegetable fats and oils, including coconut fat and palm oil, are cholesterol-free but cause an increase in blood cholesterol. Some foods that do not contain animal products may contain trans-fats, which also cause the body to make more cholesterol. Fruit, vegetables and cereals do not contain cholesterol.

Cholesterol is transported around the body in two kinds of lipoproteins: low-density lipoprotein, or LDL, and high-density lipoprotein, or HDL. A high level of LDL can lead to clogging of the arteries, increasing the risk of heart attack and ischaemic stroke, while HDL reduces the risk of coronary heart disease and stroke.

The female sex hormone estrogen tends to raise HDL-cholesterol levels, which may help explain why premenopausal women are relatively protected from developing coronary heart disease.



Current recommended lipid levels		
	European guideline	US guideline
Total cholesterol	less than 5.0 mmol/l	less than 240 mg/dl (6.2 mmol/l)
LDL-cholesterol	less than 3.0 mmol/l	less than 160 mg/dl (3.8 mmol/l)
HDL-cholesterol	1.0 mmol/l or more in males 1.2 mmol/l or more in females	40 mg/dl (1 mmol/l) or more
Triglycerides (fasting)	less than 1.7 mmol/l	less than 200 mg/dl (2.3 mmol/l)

### Trends in cholesterol levels in Beijing, China

Average total cholesterol in people aged 25 to 64 years 1984–1999 mmol/l

