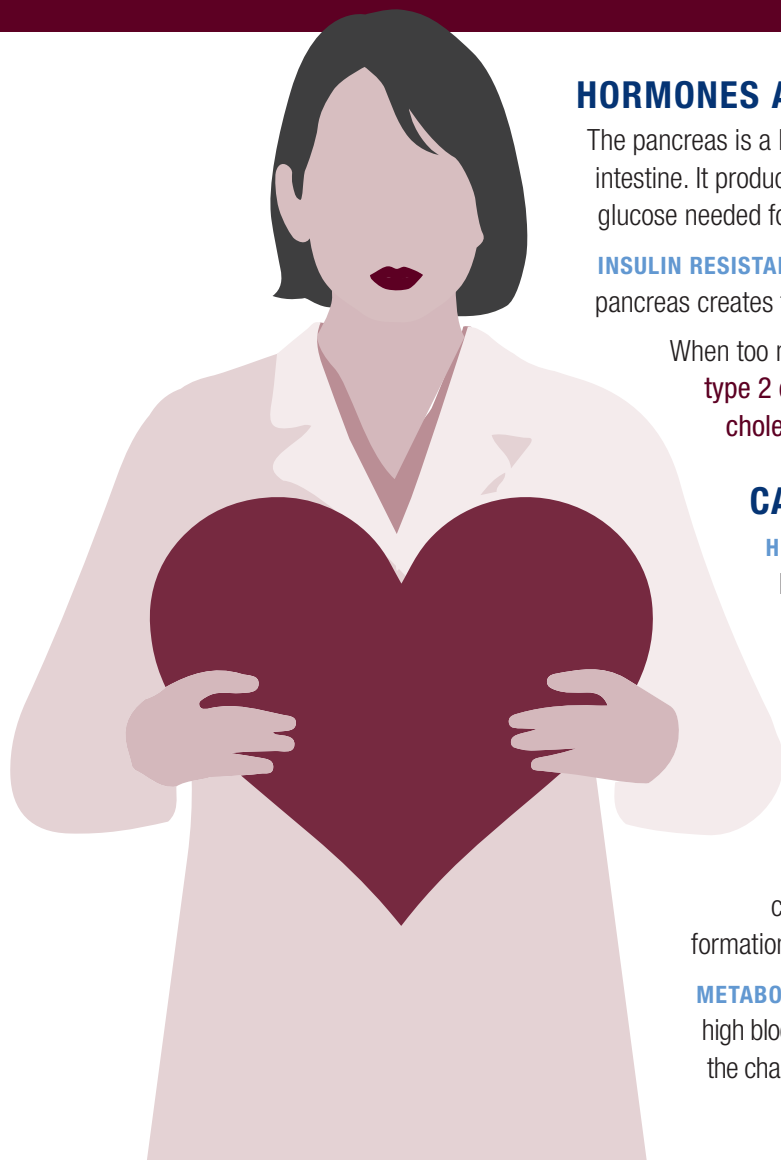


HORMONES AND YOUR HEART

WHAT YOU NEED TO KNOW

The endocrine system is a network of glands and organs that produce, store, and secrete hormones. Hormones influence many aspects of the cardiovascular system, which includes the heart and blood vessels. While hormones play a key role in maintaining cardiovascular health, high levels of some hormones can contribute to cardiovascular disease.



HORMONES AND HEART FACTS

The pancreas is a large gland behind the stomach and next to the small intestine. It produces insulin, a key hormone that “opens” cells to receive blood glucose needed for energy.

INSULIN RESISTANCE—cells don’t “open” normally and, in response, the pancreas creates too much insulin.

When too much glucose remains in the bloodstream, you can develop **type 2 diabetes** and **cardiovascular problems**, including **unhealthy cholesterol levels**, **high blood pressure**, and **heart disease**.

CARDIOMETABOLIC RISK FACTORS

HIGH BLOOD PRESSURE (HYPERTENSION) is a main cause of heart and blood vessel (cardiovascular) disease

UNHEALTHY CHOLESTEROL (HYPERLIPIDEMIA) occurs when low density lipoprotein (LDL) or bad cholesterol is too high and/or high density lipoprotein (HDL) or good cholesterol is too low. Either or both of these changes may lead to plaque accumulation on the inner walls of arteries

HIGH TRIGLYCERIDES (HYPERTRIGLYCERIDEMIA) in combination with unhealthy cholesterol may add to plaque formation on the walls of arteries

METABOLIC SYNDROME is a cluster of risk factors (high blood pressure, high blood triglycerides, low HDL, increased abdominal fat) that increase the chances of developing heart disease, stroke, and diabetes

Visit endocrine.org for more information.

Editor: Robert M. Carey, MD, MACP

Sources: American Heart Association

HEART HEALTHY RANGES

Your doctor can detect risk factors by taking key measures of your overall health.

MEASURE	HEALTHY RANGE
Waist circumference	under 40" (men); under 35" (women)
Triglycerides level	under 150 mg/dL
Fasting blood glucose level	under 100 mg/dL
Blood pressure	under 120 mm Hg (systolic) and 80 mm Hg (diastolic)
High-density lipoprotein (HDL) cholesterol	over 40 mg/dL (men); over 50 mg/dL (women)
Low-density lipoprotein (LDL) cholesterol	under 100 mg/dL

DID YOU KNOW?

Cardiometabolic problems often come from low activity levels and the foods we eat, but other factors—your genes, hormonal diseases, and certain medications—can also contribute to these conditions.

At least **68%** of people age 65 or older with diabetes die from some form of heart disease and **16%** die of stroke.

Adults with diabetes are **2-4** times more likely to have heart disease.

Diabetes is **1 of 7** major controllable risk factors for cardiovascular disease.

RISKS FOR HEART DISEASE:

- 2 to 4 times more likely to have heart disease or stroke if you have diabetes
- 1.8 times more likely to be hospitalized for a heart attack if you have diabetes
- 3 times more likely to have a heart attack if you are a woman with diabetes
- 2 times more likely to have a heart attack if you smoke

Source: American Heart Association

TREATMENT

A heart-healthy diet and brisk physical activity are nearly always part of a treatment plan for cardiometabolic risk factors. For many, medications will also be part of the plan. Be sure to follow your treatment plan exactly as your doctor prescribes so you can control your cardiovascular risk factors.

PREVENTION

- Control cholesterol
- Manage blood pressure
- Reduce blood sugar
- Eat right
- Lose weight
- Get moving
- Stop smoking

Source: American Heart Association



Patients have questions. We have answers.

Endocrine Society is your trusted source for endocrine patient education.

Our free, online resources are available at endocrine.org/patient-engagement

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