CONDITION

Familial hypertriglyceridemia

Familial hypertriglyceridemia is an inherited tendency to have high levels of triglyceride fat in the blood.

WHAT IT IS
Inherited tendency toward high blood triglycerides

BODY SYSTEM
Heart and circulation, pancreas

MAIN SYMPTOMS
Usually none, abdominal pain, nausea, small skin bumps

WHAT CAUSES IT
Inherited genetic changes, often worsened by other factors

HOW IT IS DIAGNOSED
Repeated lipid panels and exclusion of secondary causes

MAIN TREATMENT
Lifestyle changes, risk-factor control, and triglyceride-lowering medicines

CAN IT BE CURED?
No - inherited tendency remains lifelong

IS IT AN EMERGENCY?
Sometimes - severe abdominal pain may signal pancreatitis

LONG-TERM OUTLOOK
Usually manageable; severe levels raise pancreatitis risk

Overview

Familial hypertriglyceridemia is an inherited tendency to have too much triglyceride in the blood. Triglycerides are fats that the body uses for energy and stores in fat tissue.

After you eat, triglycerides travel through the blood in particles called chylomicrons. The liver also places triglycerides into very-low-density lipoproteins, or VLDL. Familial hypertriglyceridemia often involves increased production or slower removal of these particles.

The condition usually results from the combined effects of several genes rather than one identifiable gene change. Alcohol, diet, body weight, diabetes, pregnancy, certain medicines, and other conditions can raise triglycerides further.

Many people have no symptoms and learn about the condition through a blood test. Very high

triglycerides can cause inflammation of the pancreas, called acute pancreatitis. Raised triglycerides may also be part of a blood-fat pattern that increases the chance of heart attack and stroke.

Familial hypertriglyceridemia is different from familial chylomicronemia syndrome, a rare genetic condition that usually causes extremely high triglycerides from childhood or early adulthood. Distinguishing them can affect treatment and may require specialist assessment.

Symptoms

Familial hypertriglyceridemia usually causes no day-to-day symptoms. Triglycerides may remain moderately high for years without making you feel unwell.

When levels become extremely high, possible signs include:

Severe abdominal pain may be caused by acute pancreatitis and needs urgent medical assessment.

Symptoms cannot show whether triglycerides are high. A blood test is required.

- Severe, persistent upper abdominal pain, sometimes spreading to the back
- Nausea and vomiting
- Small, yellow-red skin bumps called eruptive xanthomas
- A pale or creamy appearance to blood vessels at the back of the eye, found during an eye examination

Causes and risk factors

Familial hypertriglyceridemia runs in families. Several common genetic differences may act together to affect how the liver produces triglycerides and how the body clears them from the blood.

Levels can differ between relatives and change considerably during a person's life. Factors that may worsen them include:

These are called secondary causes because they raise triglycerides for reasons other than inherited susceptibility. More than one may be present.

A family history of high triglycerides, pancreatitis, early heart attack, or stroke can support the diagnosis, although relatives may have different blood-fat patterns.

- Poorly controlled diabetes
- Regular or heavy alcohol use
- Diets high in added sugars or refined carbohydrates
- Excess weight, especially around the waist
- An underactive thyroid
- Kidney or liver conditions
- Pregnancy
- Limited physical activity
- Some steroids like prednisone or hydrocortisone , hormones, blood pressure medicines, antipsychotics like olanzapine or risperidone , immune treatments, and HIV medicines

Diagnosis

Diagnosis starts with a lipid panel, which measures triglycerides, total cholesterol, high-density lipoprotein cholesterol and, usually, low-density lipoprotein cholesterol. These are often shortened to HDL and LDL.

A repeat test commonly confirms that the level remains high. A fasting test may be needed, especially when the initial result is very high or could affect treatment. Fasting means having only water for the period specified by the testing service.

Assessment may include questions about relatives, alcohol, diet, pregnancy, medicines, and previous pancreatitis. Blood or urine tests may check for diabetes, thyroid problems, and kidney or liver conditions.

Testing may also include non-HDL cholesterol or apolipoprotein B, which help estimate cardiovascular risk.

No single genetic test confirms most cases. Genetic testing may be considered when triglycerides are extremely high from a young age, pancreatitis keeps occurring, or familial chylomicronemia syndrome is suspected.

Treatment and management

Treatment aims to lower triglycerides, reduce pancreatitis risk, and manage the overall chance of heart attack or stroke. The approach depends on the level, contributing causes, and other health risks.

Eating changes may include reducing added sugars, sugary drinks, refined starches, and alcohol. Replacing saturated fats with unsaturated fats may support heart health. For severely elevated triglycerides, a clinician or dietitian may recommend temporary or longer-term restriction of dietary fat. This is more intensive than the plan used for moderate elevations.

If appropriate, modest weight loss and regular physical activity may improve triglycerides. Changes should account for your health, mobility, culture, and access to food.

Alcohol can have a large effect. Complete avoidance may be recommended when triglycerides are very high or pancreatitis has occurred.

Managing diabetes, thyroid problems, and kidney or liver conditions can also lower triglycerides. Medicines that may be contributing should be reviewed, not stopped without medical advice.

Medication may be recommended when levels remain high or complication risk is substantial. Options include:

The best medicine depends on the full lipid profile, other conditions, pregnancy status, and possible interactions. Non-prescription fish-oil products are not substitutes for prescription products because their ingredients and strength may differ.

Follow-up blood tests show the response to treatment and may monitor liver, kidney, or blood sugar results.

- Statins like atorvastatin or simvastatin , mainly to reduce heart attack and stroke risk
- Fibrates, which can lower triglycerides
- Prescription omega-3 medicines
- Specialist treatments for selected severe genetic conditions

Complications

The main short-term concern is acute pancreatitis. Risk rises as triglycerides become severely elevated and is greatest at extremely high levels.

Pancreatitis can cause intense upper abdominal pain, vomiting, fever, and dehydration. Some episodes require hospital care, and repeated attacks can cause lasting pancreatic damage.

High triglycerides may also be associated with atherosclerosis, the buildup of fatty material inside arteries. Cardiovascular risk depends on the whole blood-fat pattern, including LDL, non-HDL cholesterol, and apolipoprotein B. Blood pressure, diabetes, smoking, age, and family history also matter.

Fatty liver and insulin resistance are common among people with high triglycerides, especially when diabetes or excess abdominal weight is present, but familial hypertriglyceridemia is not always their direct cause.

Prevention

You cannot prevent the inherited tendency.

You may be able to prevent triglycerides from becoming severely elevated by limiting alcohol, following an appropriate eating pattern, staying active, and managing diabetes or other contributing conditions.

Regular lipid testing can detect changes before symptoms develop, particularly during pregnancy, after a medicine change, with weight gain, or when blood sugar control worsens.

Close relatives may wish to discuss lipid testing during routine care. Genetic testing is not automatically needed because most cases do not result from one detectable gene change.

Living with it and what to expect

Familial hypertriglyceridemia is lifelong, but triglyceride levels are not fixed. They can change with health, medicines, diet, alcohol intake, body weight, and hormone levels.

Many people manage the condition with blood tests, attention to contributing factors, and medication when needed. It usually does not limit work, relationships, travel, or physical activity.

An improved result does not mean the inherited tendency has disappeared. Continue the agreed management plan. Follow-up may be more frequent after starting treatment or when triglycerides are very high, then less frequent once stable.

Pregnancy can substantially raise triglycerides, especially later in pregnancy. Someone with severe hypertriglyceridemia may need monitoring before and during pregnancy because treatment choices can change.

People who have had pancreatitis or repeatedly extreme levels may need long-term specialist care, a stricter eating plan, and closer monitoring.

When to get medical help

Seek emergency care for severe or persistent upper abdominal pain, particularly if it spreads

to the back or occurs with repeated vomiting, fever, faintness, or a swollen abdomen. These symptoms may indicate acute pancreatitis.

Emergency help is also needed for possible heart attack or stroke symptoms, such as chest pressure, sudden shortness of breath, facial drooping, one-sided weakness, or sudden difficulty speaking.

Contact a healthcare service promptly if you are told that your triglycerides are extremely high, especially at or above 1,000 mg/dL, or about 11.3 mmol/L. Even without symptoms, prompt assessment can help reduce pancreatitis risk.

Arrange routine follow-up if:

Do not stop prescribed medicine because of an abnormal result without discussing it with the prescribing service.

- A lipid test shows raised triglycerides
- High levels continue despite lifestyle changes or treatment
- You are planning pregnancy or become pregnant
- You start a medicine that may affect triglycerides
- Close relatives have very high triglycerides or unexplained pancreatitis

Common questions

Is familial hypertriglyceridemia the same as high cholesterol?

No. Triglycerides and cholesterol are different fats carried in the blood. Someone may have high triglycerides even when LDL cholesterol is not markedly elevated.

Can familial hypertriglyceridemia go away?

The inherited tendency does not go away, but levels can improve greatly when contributing factors are treated and an effective management plan is followed.

What foods raise triglycerides the most?

Alcohol, sugary drinks, added sugars, and large amounts of refined carbohydrates can raise triglycerides. When levels are extremely high, dietary fat may also need strict restriction.

Will I need medicine for life?

Not everyone needs medicine, and treatment may change. Long-term medication is more likely when levels stay high, pancreatitis risk is substantial, or cardiovascular risk needs treatment.

Can I pass it to my children?

Children may inherit genetic differences that increase their tendency toward high triglycerides. Because several genes are often involved, inheritance is not always predictable. Routine lipid testing can be discussed when there is a strong family history.

Does a high triglyceride result mean I will get pancreatitis?

No. Most people with raised triglycerides do not develop pancreatitis. Risk becomes more important at severely or extremely high levels, especially with triggers such as alcohol or poorly controlled diabetes.

Sources

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