CONDITION

Familial mediterranean fever

Familial mediterranean fever is an inherited condition that causes repeated attacks of fever and painful inflammation.

WHAT IT IS
Inherited autoinflammatory condition causing repeated fever and painful inflammation

BODY SYSTEM
Immune system, joints, abdomen, and chest

MAIN SYMPTOMS
Recurrent fever, abdominal pain, chest pain, swollen joints

WHAT CAUSES IT
Inherited MEFV gene changes affecting inflammation control

HOW IT IS DIAGNOSED
Clinical pattern, inflammation tests, and MEFV genetic testing

MAIN TREATMENT
Long-term colchicine; inflammation-blocking biologics when needed

CAN IT BE CURED?
No - treatment controls attacks and complications

IS IT AN EMERGENCY?
Sometimes - severe unfamiliar abdominal or chest pain

LONG-TERM OUTLOOK
Usually good with consistent treatment and kidney monitoring

Overview

Familial mediterranean fever, often shortened to FMF, is an inherited condition that causes repeated episodes of inflammation. These episodes are called attacks. They often involve fever and pain in the abdomen, chest, or joints.

FMF is an autoinflammatory condition. This means part of the immune system switches on inflammation too easily, even when there is no infection or injury to fight. It is different from an autoimmune condition, in which the immune system mistakenly targets the body's own tissues.

Attacks commonly begin during childhood or the teenage years, although some people develop symptoms as adults. An attack often lasts between 12 hours and three days. Joint symptoms can sometimes continue for longer. Many people feel well between attacks.

FMF matters because ongoing inflammation can cause complications even when attacks are manageable. The most important is a buildup of an abnormal protein called amyloid A, which can damage the kidneys. Consistent treatment greatly reduces this risk.

The condition is more common in people with Armenian, Arab, Turkish, Jewish, North African, Greek, or Italian ancestry. However, it can occur in people from any background.

Symptoms

The symptoms of FMF come and go. Their timing and severity can be different from one person to another, including within the same family.

Common symptoms include:

Abdominal pain can resemble appendicitis or another urgent abdominal problem. Chest pain may come from inflammation of the lining around the lungs. Less often, inflammation affects the lining around the heart.

Some people develop swelling and pain in the scrotum. Young children may have fever before they can describe where they hurt.

Attacks may follow a similar pattern each time, but a new symptom should not automatically be assumed to be FMF. Infections, surgical problems, and other conditions can occur at the same time.

Between attacks, symptoms often disappear. Some people still have low-level inflammation without feeling unwell, which is one reason ongoing monitoring matters.

- A sudden fever, sometimes with chills
- Severe abdominal pain caused by inflammation around the abdominal organs
- Sharp chest pain that may worsen with deep breathing
- Painful or swollen joints, especially the ankles, knees, or hips
- A warm, painful red rash, usually on the lower legs or feet
- Muscle pain, particularly in the legs

Causes and risk factors

FMF is usually caused by changes in a gene called MEFV . This gene provides instructions for making pyrin, a protein that helps control inflammation. Certain MEFV changes allow inflammation to activate too easily.

FMF is commonly inherited in an autosomal recessive pattern. This usually means a person has inherited one altered copy of the gene from each parent. The parents may carry the gene change without having symptoms. Some people have typical FMF with only one identified MEFV change, and genetic testing does not explain every case.

Having a close relative with FMF increases the chance of having the condition. Ancestry from a population in which particular MEFV changes are more common also raises the likelihood, but ancestry alone cannot diagnose or rule out FMF.

Attacks may be associated with emotional stress, another illness, strenuous activity, cold exposure, lack of sleep, or menstruation. Triggers are not the underlying cause, and many attacks happen without an obvious trigger.

FMF is not caused by diet, lifestyle, or anything a parent did during pregnancy. It is not contagious.

Diagnosis

There is no single test that confirms every case of FMF. Diagnosis usually combines the pattern of symptoms, family history, blood test results, and genetic testing.

A healthcare professional will ask about the length and frequency of attacks, which parts of the body are affected, and whether you are completely well between episodes. Other possible causes, such as infection, appendicitis, inflammatory bowel conditions, or other periodic fever conditions, may need to be excluded.

Blood tests taken during an attack can show inflammation. These may include C-reactive protein, erythrocyte sedimentation rate, and serum amyloid A. These results support the diagnosis but are not specific to FMF.

MEFV genetic testing can identify gene changes associated with FMF. Finding two relevant changes can strongly support the diagnosis when the symptoms fit. A negative or uncertain result does not always rule it out.

A clear improvement with colchicine may provide additional evidence, but treatment response should not be used as the only diagnostic test. Specialist assessment is particularly helpful when symptoms are unusual or genetic results are unclear.

Urine and blood tests are also used to look for kidney involvement and establish a baseline for future monitoring.

Treatment and management

FMF cannot currently be cured, but treatment can prevent most attacks and lower the risk of amyloid buildup.

Colchicine is the standard long-term treatment. It reduces inflammation and helps prevent attacks and kidney complications. It is usually taken regularly, including when you feel well. It does not reliably stop an attack that has already started.

Diarrhea, stomach pain, nausea, and vomiting are possible side effects. Serious toxicity is uncommon when colchicine is used appropriately, but the medicine can interact with certain antibiotics like amoxicillin or doxycycline , antifungal medicines, heart medicines, and other treatments. Kidney or liver problems can also affect how the body handles it.

Do not increase, reduce, or stop colchicine without professional advice. Stopping it can allow inflammation and attacks to return. Your healthcare team should know about all medicines and supplements you take.

If attacks or persistent inflammation continue despite the highest tolerated colchicine regimen, a specialist may consider a biologic medicine that blocks interleukin-1. Interleukin-1 is an immune signal involved in FMF inflammation. These medicines require monitoring and can affect the body's response to infection.

During an attack, management may include rest, fluids, and suitable pain relief. Your healthcare team can help you plan what to do during a familiar attack and when symptoms need urgent assessment.

Follow-up commonly includes reviewing attack frequency, treatment side effects, inflammation markers, kidney function, and urine protein. A written record of fevers, pain, possible triggers, and missed medicine can make these reviews more useful.

If you are planning a pregnancy, pregnant, or breastfeeding, discuss your treatment with the relevant specialist. Do not stop colchicine because of pregnancy without advice.

Complications

The main long-term complication is AA amyloidosis . This happens when long-lasting inflammation causes amyloid A protein to collect in organs. The kidneys are affected most often.

An early sign may be protein leaking into the urine. This may not cause symptoms at first. Later signs can include foamy urine, swelling around the ankles or eyes, and reduced kidney function. Regular urine testing can detect changes before they become obvious.

Consistent colchicine treatment greatly lowers the risk of amyloidosis. The risk is higher when inflammation remains uncontrolled, even if attacks are not frequent.

Other possible complications include long-lasting joint inflammation, chronic muscle pain, and inflammation around the heart. Repeated inflammation in the abdomen or reproductive organs may contribute to fertility problems in some people, although many people with FMF have healthy pregnancies.

Treatment can also cause complications. Persistent diarrhea may make colchicine difficult to tolerate. Rarely, toxicity can affect blood cells, nerves, or muscles, particularly when colchicine interacts with another medicine or builds up because of reduced kidney or liver function.

Prevention

FMF itself cannot be prevented because it is inherited. Having the condition is not the result of personal choices.

Attacks and complications can often be prevented or reduced by taking prescribed treatment consistently. Keeping routine appointments and completing recommended blood and urine tests can help find ongoing inflammation or kidney changes early.

If you notice reliable triggers, adjusting activities around them may reduce some attacks. This does not replace treatment, and avoiding every possible trigger is neither realistic nor necessary.

Genetic counselling can explain how MEFV changes may be passed through a family. It may be useful when planning a pregnancy or when relatives want to understand their own likelihood of carrying a gene change.

Living with it and what to expect

FMF is a lifelong condition. Its underlying genetic cause does not go away, but its effects can often be controlled.

Many people have fewer or no attacks while taking colchicine regularly. Others continue to have occasional episodes. A smaller group needs specialist treatment for colchicine-resistant inflammation or cannot tolerate enough colchicine because of side effects.

The pattern can change over time. Attacks may become less frequent, more frequent, or affect different parts of the body. A change should be reviewed rather than assumed to be part of the usual pattern.

Most people can attend school, work, exercise, travel, and have families. Planning can help when attacks are unpredictable. This may include carrying a medicine list, knowing where to obtain care while travelling, and explaining the condition to a school or workplace if support is needed.

Regular follow-up remains important even when you feel well. Low-level inflammation and early kidney changes may not produce noticeable symptoms. Monitoring helps treatment focus on both day-to-day wellbeing and long-term protection.

Living with recurrent pain or uncertainty can also affect sleep, mood, relationships, and confidence. Support from family, patient groups, or mental health services may help if the condition is affecting your emotional wellbeing.

When to get medical help

Seek emergency medical care for:

These symptoms can have causes other than FMF and should not be managed as a routine attack without assessment.

Contact your healthcare team promptly if an attack lasts longer than usual, feels different from previous attacks, or comes with persistent vomiting or difficulty drinking. Foamy urine, reduced urination, or swelling around the eyes or ankles also needs timely review.

Severe or ongoing diarrhea, unusual bruising, marked muscle weakness, or dark urine while taking colchicine may indicate a medicine problem and should be assessed promptly.

Routine follow-up is appropriate if attacks are becoming more frequent, you are missing treatment because of side effects, or you want to discuss pregnancy, travel, genetic testing, or changes to your management plan.

- Sudden, severe, or unfamiliar abdominal pain
- Chest pain with breathlessness, fainting, sweating, or pressure
- Sudden testicular pain or swelling
- Confusion, a stiff neck, severe weakness, or difficulty waking
- Swelling of the lips or tongue, wheezing, or trouble breathing after medicine

Common questions

Is familial mediterranean fever an autoimmune condition?

No. It is classed as an autoinflammatory condition. The body's rapid, first-line immune response becomes overactive without the antibody-driven process typical of autoimmune conditions.

Can I have FMF without Mediterranean ancestry?

Yes. FMF is more common in certain Mediterranean and Middle Eastern populations, but it can affect anyone. Symptoms, family history, inflammation tests, and genetic findings are more useful than ancestry alone.

Can I pass FMF to my children?

MEFV gene changes can be passed to children. The likelihood that a child develops FMF is influenced by which gene changes each biological parent carries. A genetics professional can explain the inheritance pattern for your family.

Will colchicine cure FMF?

No. Colchicine does not remove the genetic cause. It controls inflammation, prevents many attacks, and greatly reduces the risk of amyloidosis when taken consistently.

What can trigger an FMF attack?

Possible triggers include stress, infections, strenuous activity, cold exposure, poor sleep, and menstruation. Not everyone has identifiable triggers, and an attack is not your fault.

Can I live a normal life with FMF?

Many people lead active lives with few restrictions when inflammation is controlled. Treatment, monitoring, and a plan for unexpected attacks are usually needed over the long term. Individual experiences are not identical.

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