CONDITION

Familial multiple polyposis

Familial multiple polyposis is an inherited condition that causes many bowel polyps and greatly increases colorectal cancer risk.

WHAT IT IS
Inherited condition causing numerous bowel polyps

BODY SYSTEM
Digestive system

MAIN SYMPTOMS
Often none, rectal bleeding, diarrhoea, abdominal pain

WHAT CAUSES IT
Inherited gene change

HOW IT IS DIAGNOSED
Colonoscopy, polyp testing, and genetic testing

MAIN TREATMENT
Regular surveillance and risk-reducing bowel surgery

CAN IT BE CURED?
No, inherited risk remains after surgery

IS IT AN EMERGENCY?
Sometimes, with heavy bleeding or severe abdominal pain

LONG-TERM OUTLOOK
Usually manageable with lifelong surveillance and timely surgery

Overview

Familial multiple polyposis is an inherited condition in which many growths called polyps develop in the large bowel. The term is most often used for familial adenomatous polyposis , or FAP.

Most polyps are adenomas . They are not cancer, but some can become cancer over time. Classic FAP may cause hundreds or thousands of colorectal polyps, often beginning during the teenage years. Attenuated FAP usually causes fewer polyps and develops later.

Without effective monitoring and treatment, colorectal cancer risk becomes very high. People with FAP therefore need regular examinations and often have surgery before cancer develops.

FAP can also affect other areas. Polyps may form in the stomach and duodenum, the first part

of the small bowel. Some people develop desmoid tumours, which arise from connective tissue. They do not spread like cancer but may grow into or press on nearby structures.

Bowel surgery greatly reduces colorectal cancer risk but does not remove the inherited gene change. Lifelong follow-up remains essential.

Symptoms

Many people have no symptoms when polyps first appear. FAP may be found through screening because a relative has the condition.

Possible symptoms include:

These symptoms have many possible causes, but they should be assessed if they persist or keep returning.

Features outside the bowel may include harmless bony growths, dental changes, skin cysts, changes at the back of the eye, thyroid nodules, or desmoid tumours in the abdomen or abdominal wall.

A person can carry the gene change without feeling unwell. Symptoms cannot reliably show whether polyps are present or changing.

- Blood or mucus in the stool
- Diarrhoea, constipation, or another lasting change in bowel habits
- Abdominal discomfort or cramping
- Unexplained tiredness from iron-deficiency anaemia
- Unplanned weight loss

Causes and risk factors

FAP is usually caused by a harmful change in the APC gene , which normally helps control cell growth. When it does not work properly, adenomatous polyps can form.

The condition has an autosomal dominant inheritance pattern. A person with an APC gene change has a 1 in 2 chance of passing it to each child. The chance is the same in every pregnancy.

Sometimes the gene change begins in a person for the first time, so there may be no family history. That person can still pass it to their children.

The type and position of the APC change can influence whether someone develops classic or

attenuated FAP, but genetic results cannot predict the individual course with certainty.

Other inherited conditions can cause multiple adenomas. For example, MUTYH-associated polyposis involves a different gene and inheritance pattern. Genetic assessment helps distinguish them.

Lifestyle does not cause FAP. Healthy habits support general health but cannot remove the inherited tendency to develop polyps.

Diagnosis

Diagnosis usually involves colonoscopy. A flexible camera is passed through the rectum to examine the colon. Clinicians can assess the number and appearance of polyps and remove samples for laboratory testing.

The samples are examined under a microscope. Confirming that they are adenomas helps separate FAP from conditions causing other types of polyps.

Genetic testing can identify a harmful APC change. A positive result can confirm the cause and allow relatives to have targeted testing. Genetic counselling explains what results may mean for you and your family.

A negative genetic test does not always rule out inherited polyposis. Further testing may be considered if the number and pattern of polyps strongly suggest it.

Assessment may include upper endoscopy, in which a camera is passed through the mouth to examine the stomach and duodenum. Imaging may be needed if a desmoid tumour or another complication is suspected.

When a family-specific gene change is known, relatives who did not inherit it usually do not need FAP-specific surveillance. They may still need routine bowel screening offered to the general population.

Treatment and management

Treatment aims to prevent cancer, manage polyps, and monitor other affected areas. Care is usually coordinated by genetics, digestive health, and colorectal surgery specialists.

Regular colonoscopy or lower-bowel examination allows clinicians to track polyps and remove some during the procedure. In classic FAP, there may eventually be too many to manage safely one by one.

Risk-reducing surgery removes the colon, sometimes with the rectum. Timing depends on

polyp number and features, symptoms, genetic findings, family history, and whether endoscopic surveillance remains manageable.

Common operations include:

An ileostomy brings the small bowel through an opening in the abdomen so waste empties into a bag. Surgical options differ in their effects on bowel frequency, continence, fertility, and future surveillance. Planning considers cancer risk and personal priorities.

Surveillance continues after surgery. Polyps can still develop in the remaining rectum, an internal pouch, stomach, or duodenum. Follow-up endoscopy depends on which areas remain and previous findings.

Some medicines may reduce colorectal polyp number or size, but they do not reliably remove cancer risk or replace recommended endoscopy or surgery. Benefits and side effects require specialist review.

- Removing the colon and joining the small bowel to the rectum
- Removing the colon and rectum and creating an internal pouch
- Removing the colon and rectum and creating a permanent ileostomy

Complications

The main complication is colorectal cancer. Risk increases as adenomas become more numerous or larger, or develop abnormal cell changes called dysplasia.

Duodenal polyps can also become cancerous, although this is less common. Stomach polyps are frequent, but their significance depends on their type and appearance.

Other complications include:

Young children in affected families have a small increased risk of hepatoblastoma, a rare liver cancer. Families should ask specialists whether childhood monitoring is appropriate.

Not everyone develops every complication. Surveillance aims to find changes before they cause symptoms.

- Bleeding from polyps and anaemia
- Bowel blockage from a tumour or desmoid growth
- Desmoid tumours pressing on the bowel, blood vessels, or urinary system
- Thyroid cancer and some other uncommon tumours
- Bowel or nutritional changes after surgery

Prevention

The inherited APC gene change cannot currently be prevented through lifestyle choices, and affected people have not caused the condition.

Serious effects can often be prevented or made less likely through regular bowel examinations, removal of concerning polyps, upper digestive tract surveillance, and timely surgery.

Genetic testing can identify relatives who need surveillance and spare those who did not inherit the family gene change from unnecessary FAP-specific testing.

If you are considering children, genetic counselling can explain options such as natural conception with testing during pregnancy, IVF with embryo testing, donor eggs or sperm, adoption, or choosing not to have children. These are personal choices, and counselling should be non-directive.

Healthy eating, physical activity, avoiding smoking, and limiting alcohol support general health but do not replace FAP surveillance or treatment.

Living with it and what to expect

FAP is lifelong. Polyps usually increase over time, although their age of onset and rate of change vary. Attenuated FAP often develops later and is less extensive than classic FAP, but still requires structured follow-up.

During childhood or adolescence, care may focus on genetic assessment and beginning bowel surveillance at a time suited to the family's gene change and history. As polyps increase, surgery may be discussed. Planning can consider education, work, family life, fertility, emotional readiness, and medical risk.

Recovery and bowel function vary by operation. Many people return to school, work, exercise, travel, relationships, and family life. Some experience frequent bowel movements, urgency, skin irritation, or changes in diet and hydration needs. People with an ileostomy may need support while learning stoma care.

Follow-up continues for life, including checks of the remaining rectum or pouch, duodenum, stomach, thyroid, and any desmoid disease.

Living with an inherited condition may cause worry about cancer, surgery, tests, or passing the gene change to children. Genetics teams, specialist nurses, psychological services, and patient organisations can provide practical and emotional support.

When to get medical help

Arrange a routine medical assessment for persistent rectal bleeding, an ongoing change in bowel habits, unexplained weight loss, abdominal discomfort, or unusual tiredness. These symptoms often have other causes but should not be ignored.

Seek genetic or specialist advice if a close relative has FAP, an APC gene change, or an unusually large number of adenomatous polyps. Do not wait for symptoms.

If you have FAP, contact your care team between appointments about new bleeding, worsening bowel symptoms, a growing abdominal lump, unexplained weight loss, or persistent vomiting. After surgery, report major changes in pouch or ileostomy output, ongoing leakage, or signs of dehydration.

Get urgent medical help for:

These symptoms may indicate significant bleeding, bowel blockage, or another complication requiring prompt assessment.

- Heavy or continuing rectal bleeding
- Black, tar-like stools with weakness or light-headedness
- Severe or rapidly worsening abdominal pain
- Repeated vomiting with abdominal swelling
- Inability to pass stool or gas
- Fainting, confusion, or signs of severe dehydration

Common questions

Is familial multiple polyposis the same as cancer?

No. The polyps are usually benign, but adenomatous polyps can become cancer over time. Surveillance and surgery aim to prevent this progression.

Will I definitely need my colon removed?

Many people with classic FAP eventually need risk-reducing surgery because there are too many polyps for safe endoscopic removal. Some people with attenuated FAP can be managed with colonoscopy for longer. Decisions depend on polyp findings and individual circumstances.

Can polyps come back after bowel surgery?

Polyps cannot return in removed bowel, but new polyps may develop in remaining tissue such as the rectum, internal pouch, stomach, or duodenum. Follow-up endoscopy must continue.

Can FAP skip a generation?

Someone who does not inherit the family's APC gene change cannot pass it to their children. FAP may appear to skip a generation if relatives were not tested or had an unrecognised milder form.

Can I have children if I have FAP?

Yes. An affected parent has a 1 in 2 chance of passing the APC gene change to each child. Some bowel operations can affect fertility, so consider discussing reproductive plans before surgery.

Does diet stop the polyps from growing?

No diet controls FAP well enough to replace surveillance or surgery. A balanced diet can support bowel function, recovery, and general health.

Sources

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