BMJ Best Practice

Patient information from BMJ

Last published: Oct 10, 2022

Monoclonal gammopathy of undetermined significance

Having monoclonal gammopathy of undetermined significance (MGUS for short) means that some of your blood cells don't develop normally.

This often doesn't cause any problems, and MGUS is not cancer. But some people with MGUS go on to develop cancers that affect the blood or bone marrow. So people with MGUS need tests about once a year, to check for any changes.

You can use our information to talk to your doctor about MGUS.

What is monoclonal gammopathy of undetermined significance (MGUS)?

Everyone has several different types of blood cells, which do different jobs in the body. For example:

- **red blood cells** carry oxygen to where it's needed
- **white blood cells** help fight infection, and
- **plasma cells**, which are a type of white blood cell, produce proteins called antibodies. These antibodies allow the body to identify and fight bacteria and viruses.

If you have **MGUS** some of your **plasma cells** don't develop properly. They also produce an abnormal type of protein that can be detected in your blood, called an **M protein**.

This protein doesn't usually cause any symptoms or any problems in the short term.

But some people diagnosed with MGUS worry that it's similar to blood cancers, such as multiple myeloma or leukaemia.

But MGUS is **not cancer**. And, while some people with MGUS go on to develop one of these types of blood cancer, most don't.

Who gets MGUS?

MGUS is most common in middle-aged and older people. About 2 or 3 in every 100 people over the age of 50 have MGUS. Things that make someone more likely to have MGUS include:

- being over 50
- being a man
- having African ancestry
- having a family history of MGUS or of multiple myeloma
- having been exposed to very high levels of radiation, and
- having been exposed to high levels of pesticides.

You might hear your doctor talk about different types of MGUS, and about whether these put you at a lower risk or higher risk of developing blood cancer. But there’s no way of knowing whether an individual person will go on to have problems.

What are the symptoms?

MGUS doesn’t usually cause any symptoms. People usually find out that they have it when they have tests - for example, a blood test - because of something else that’s bothering them.

When MGUS does cause symptoms they usually affect the nerves. For example, some people with MGUS have:

- numbness and tingling (pins and needles) in some parts of the body. This is called **paraesthesia**
- problems with speech and balance, called **ataxia**, or
- an unusual sense of touch, called **dysaesthesia**. This can cause feelings, such as itching, burning, tickling, cold sensations, and sometimes pain.

If you have a test that suggests that you have MGUS, your doctor will probably want to do some tests to make sure that it’s MGUS and not something else.

These will probably be blood and urine tests. But your doctor may also suggest bone marrow or other tests to rule out blood cancer.

What treatments are available?

There is no cure for MGUS, and most people don’t need any treatment because it doesn’t usually cause any symptoms or problems.

The main things that your doctor will suggest to help you will be that you:

- keep an eye out for any symptoms, and
- have regular **follow-up appointments for tests** to make sure that your MGUS is not developing into something else. For example, most people have follow-up tests about once a year.

These regular tests mean that, if you do develop a type of blood cancer, it can be caught early, when it's easier to treat.

If you have any symptoms that affect your nerves, your doctor may be able to prescribe medicines to help relieve these symptoms. And you should always tell your doctor if you notice any new or unusual symptoms.

What to expect in the future

Most people with MGUS don't go on to develop blood cancer or related problems. But some do. So it's important to keep up with your follow-up appointments.

Every year about 1 in every 100 people with MGUS will go on to develop blood cancers or similar problems, such as leukaemia, non-Hodgkin's lymphoma, or multiple myeloma.

People's chances of developing problems depend on various **risk factors**. A risk factor is something that makes something else more likely to happen.

For example, risk factors for MGUS becoming blood cancer include things like being older, being male, and having a higher-risk type of MGUS.

Research suggests that, within 20 years of being diagnosed with MGUS:

- about 5 in 100 people at low risk will go on to develop blood cancer or a similar condition
- about 21 in 100 people at low-to-medium risk will go on to develop problems
- about 37 in 100 people at medium risk will go on to develop problems, and
- about 58 in 100 people at high risk will go on to develop problems.

If these numbers look worrying, it's important to remember that the largest group of people with MGUS are those at **low risk**.

MGUS and other health problems

People with MGUS are slightly more likely than people without it to have health problems, such as heart, liver, and kidney conditions.

But these problems are probably not caused by MGUS. It's more likely that these problems were already there, and that they were what led to the MGUS being detected and diagnosed.

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