

Malignant Hyperthermia (malignant hyperpyrexia) (MH)

MH is a rare condition that runs in some families. In people who are affected, some anaesthetic drugs can cause a rapid and dangerous rise in body temperature.

How common is it: 1 in 30,000–200,000 general anaesthetics.

Symptoms: the MH reaction starts with increased heart rate and carbon dioxide levels in the body. As the reaction continues the body temperature rises very quickly, muscle cells are damaged and the heart rate can become irregular. MH can be fatal if not treated quickly.

Treatment of a reaction: if an MH reaction is recognised early during surgery, treatment is usually successful. This involves stopping the anaesthetic drugs that caused the reaction, cooling the patient and giving an antidote called Dantrolene. Dantrolene is kept in all hospitals where anaesthetics are given.

From the earliest stages of their training, anaesthetists are taught how to recognise and treat MH.

Testing: MH is hereditary; therefore it can be passed from parents to children. It affects both males and females. An affected parent has a 50/50 chance of passing it on to their children. Anaesthetics do not necessarily cause an MH reaction every time, so it is not possible to rule out the condition if someone has had one or two anaesthetics without problems.

Anyone who knows or suspects they have MH should let their family know as others may also be affected. They in turn should be tested for the condition. Until they have been tested, any relatives should be treated as if they have the condition and avoid certain anaesthetic drugs and gases. However, if they are found not to have the condition, they can have the standard anaesthetic drugs instead.

A special test on a sample of muscle is the only reliable test for MH. In the UK this can only be done at St James's Hospital in Leeds. If you have a relative who has the condition confirmed with a muscle test, you may be able to be diagnosed with just a blood test.

Anaesthetic management: there is no cure for MH. If you are at risk of MH, you will need to have an anaesthetic without any of the drugs and gases that can trigger it. The anaesthetist will prepare the anaesthetic machine so that there are no traces of anaesthetic gases known to cause MH. Other drugs will also need to be avoided.

It is extremely important that you tell your anaesthetist if you or anybody in your family has MH, or has had a severe unexplained reaction to an anaesthetic.

We advise that you keep an MH warning card in your wallet or purse and wear a warning disc or bracelet in case you are brought into hospital unconscious after an accident or through illness.

Further information: please see the MH Registry website www.ukmhr.ac.uk



Royal College of Anaesthetists



Tell us what you think

We welcome suggestions to improve this leaflet. If you have any comments that you would like to make, please email them to patientinformation@rcoa.ac.uk

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