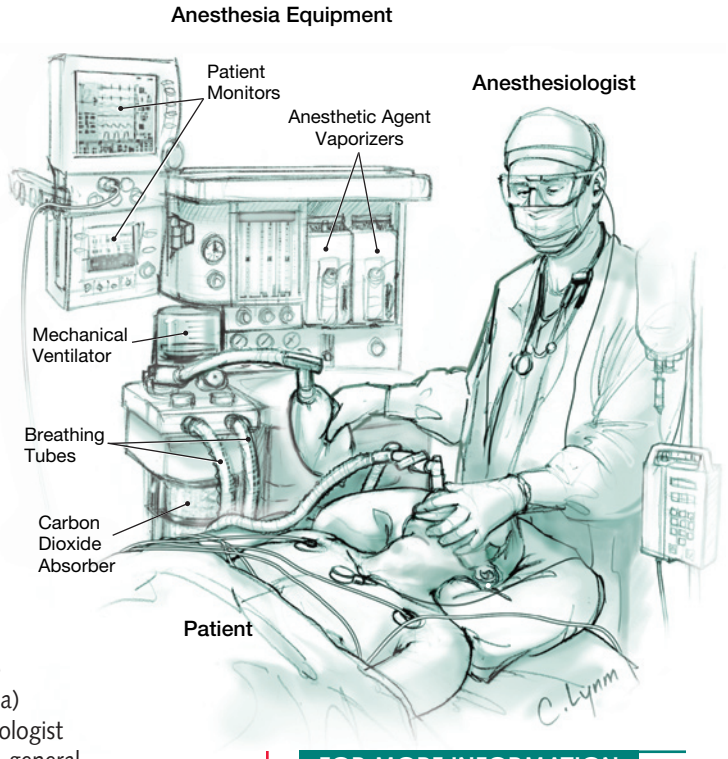
# Malignant Hyperthermia

**Malignant hyperthermia** (**MH**) is severe, potentially fatal increased body energy consumption after exposure to certain anesthetic drugs. Malignant hyperthermia occurs in persons who have a **genetic** (inherited) susceptibility to this medical problem. Family history of death during **general anesthesia** (being put to sleep for surgery) or having a high body temperature during or after general anesthesia are the most likely indicators that a person may be susceptible to MH. The June 15, 2005, issue of *JAMA* includes an article about **genetic testing** (DNA testing from a sample of blood or other tissue) that can detect the presence of susceptibility for MH in persons with a family history of the disorder.




## ANESTHESIA FOR PERSONS WITH MH

It is crucial for persons who are known to have MH or who have family members with MH to inform their doctors about it, particularly if they are having any type of anesthesia or surgery. Wearing a medical alert bracelet is a helpful way to communicate this in case of an emergency, especially for children. **Anesthesiologists** (doctors with special training in pain control and other medical care during surgery) can prevent the triggering of MH if they know in advance of an individual's susceptibility to MH. Anesthesiologists avoid certain commonly used medications for persons with MH. These include **succinylcholine** (a muscle relaxant used during general anesthesia) and the **volatile** (inhaled) anesthetic agents. When the anesthesiologist knows in advance about a person's own or family history of MH, general or **regional** (such as spinal, epidural, or nerve block) anesthesia can be safely administered. For patients or professionals who have questions about MH, the Malignant Hyperthermia Association of the United States provides a 24-hour hotline: 800/644-9737.

## TREATMENT

If an MH crisis is suspected in the operating room, all triggering anesthetic agents are stopped. **Dantrolene**, a medication to treat MH, is given intravenously with close monitoring of breathing, heart function, and body temperature. Oxygen is provided with an increased breathing rate using a mechanical ventilator to remove excess carbon dioxide from the individual's system. Cooling techniques including cooling blankets and ice packs may be required if the patient's temperature becomes markedly elevated. Medications to control blood pressure or treat abnormal heart rhythms may also be needed.

*Sources: American Society of Anesthesiologists, Malignant Hyperthermia Association of the United States*

## FOR MORE INFORMATION

- American Society of Anesthesiologists
  847/825-5586
  www.asahq.org
- Malignant Hyperthermia Association of the United States
  24-hour hotline: 800/644-9737
  www.mhaus.org

## INFORM YOURSELF

To find this and previous JAMA Patient Pages, go to the Patient Page link on *JAMA*'s Web site at www.jama.com. Many are available in English and Spanish.

Janet M. Torpy, MD, Writer
Cassio Lynm, MA, Illustrator
Richard M. Glass, MD, Editor