

Miniature Insertable Cardiac Monitor (ICM) system

This information sheet is designed to provide information to patients who have been experiencing unexplained blackouts, palpitations or shortness of breath that may be related to a heart rhythm problem.

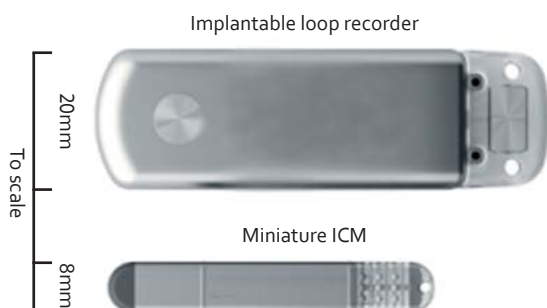
If a doctor is unable to diagnose the cause of your symptoms with simple recording methods such as an EKG or a 24 hour monitor, they may consider an implantable cardiac monitor (ICM).

Traditionally doctors would have implanted an insertable loop recorder (ILR) (which is the size of a USB stick) under the skin on the left side of a patient's chest in order to capture a recording of the heart rate and rhythm at the time of an episode.

The device records on a continuous loop for up to three years and can be used to document any episodes, which would then be assessed by a heart rhythm specialist.

The miniature insertable cardiac monitor (ICM) system

The ICM is a diagnostic tool that will monitor the heart's electrical activity and help a heart rhythm specialist identify the cause of your symptoms. This newer device offers the same benefits as a traditional implantable loop recorder (ILR) but is a tenth of the size. Virtually invisible to the naked eye, it is more comfortable and much less noticeable under the skin.



How is the ICM fitted?

As this miniature monitor is so much smaller and easier to implant, it is intended that the procedure could be performed in a treatment room as an outpatient, rather than a theater setting. Implantation of the device requires an incision of less than 1cm which can then be closed very simply with medical adhesive, steri strips or one suture. The procedure will only take about ten minutes and is done under local anesthetic (risks associated with this include bleeding, bruising, and infection).

Hopefully this will reduce the waiting lists for this diagnostic device to be fitted and in some cases the procedure could be undertaken when you first attend the clinic, saving delay in reaching a diagnosis and the inconvenience of repeat visits.

How is an episode captured?

Although the device is supplied with a separate 'activator' similar to the older, larger device to record an episode, this is not essential as the ICM is remotely monitored, wirelessly, through a receiver in your house. Some devices can be monitored via a smartphone. Any unusual heart activity will be transmitted via a 4G signal to a secure system which will alert the heart rhythm specialist. You would then be contacted if necessary. Inevitably this will provide more peace of mind for a patient.

Removal of the ICM

Once a heart rhythm disturbance has been captured and the cause determined through this monitor, the device can be removed with another quick, simple procedure. Further investigations and treatments can then be undertaken.

Acknowledgments: Arrhythmia Alliance would like to thank all those who helped in the development and review of this publication. In particular, thanks are given to Prof. Nick Linker and Dr Charlotte D'Souza.

President: Prof. A John Camm **Board of Directors:** Trudie Lobban MBE, Jim Quance, Joseph Reynolds, Nigel Breakwell, Daniel Beach, John Thompson

© Arrhythmia Alliance Non-profit organization 501(c)(3)
Published March 2014, Reviewed April 2017

