



Image: The Yorkshire Heart Centre Jubilee Building, Leeds General Infirmary.

Infective Endocarditis



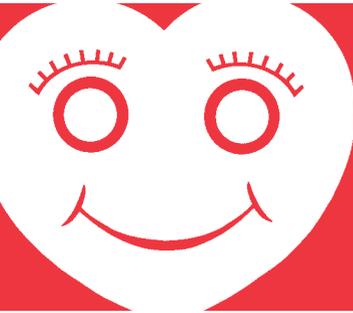
YORKSHIRE
HEART CENTRE

Information Booklet for
Patients and their Families

The Leeds Teaching Hospitals
NHS Trust



Please read about Take Heart at rear of this booklet



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INFECTIVE ENDOCARDITIS

WHAT IS INFECTIVE ENDOCARDITIS?

Endocarditis is caused by an infection, which may affect one or more of the heart valves and the lining of the heart muscle known as the “endocardium”. It is uncommon, but not rare, affecting 5 out of every 100,000 people and is often very serious.

It occurs when a large number of bacteria in the bloodstream are attracted to the heart valve and begin to multiply. The bacteria stick together to form a clump which is known as a “vegetation” which becomes attached to the heart valve, damaging it and causing it to malfunction. Vegetation can also form on artificial materials located within the heart such as artificial heart valves, pacemaker leads, dialysis lines and Hickman lines.

This infection of the heart valve can spread through the bloodstream to other parts of the body. When part of a vegetation becomes detached it may spread to the brain, lungs, kidneys, spine or elsewhere.

WHAT CAUSES IT?

There are numerous ways that the bacteria can enter our bloodstream. They can enter our bloodstream from a variety of sources, including from the bowel, having a dental procedure, poor dental hygiene, minor cuts or surgical incisions or invasion of the blood vessels by needles.

Endocarditis usually results from a build up of the bacteria which the body’s immune system fails to destroy appropriately.

Usually the body's defence mechanism will destroy bacteria. However, if there are sufficient numbers they can collect and accumulate on the heart valves. Infection rarely occurs on normal valves. Valves that have been damaged in some way or are not working correctly due to rheumatic fever, congenital heart disease or previous endocarditis are more prone to developing infections. Additionally artificial valves and valve surgery can increase the risk.

Injection drug abuse is a common risk factor for developing the condition. However, for many patients there is no clear explanation for how the bacteria have entered the bloodstream.

WHAT ARE THE SIGNS AND SYMPTOMS?

- Endocarditis usually develops symptoms slowly over weeks, but occasionally it causes a sudden acute illness.
- A raised body temperature is usual, but a wide variety of symptoms can occur such as fatigue, weight loss, muscle aches, night sweats and increasing breathlessness.
- These non-specific symptoms can often make it difficult for the doctor to recognise endocarditis.
- As the condition progresses, tiny dark lines called splinter haemorrhages can appear under the fingernails. There may be red painful nodes (called Osler's nodes) in the pads of the fingers and toes.

- Where the heart valve is becoming damaged a previously known heart “murmur” may change, or a new murmur become apparent.
- If the valve becomes faulty, signs and symptoms such as of shortness of breath and ankle swelling may result.
- Vegetation debris known as emboli can travel to the brain, lungs, kidneys or other organs causing damage.

WHAT INVESTIGATIONS CAN I EXPECT TO HAVE?

- Physical examination may reveal a heart murmur. This occurs when there is abnormal, turbulent blood flow in relation to one of the heart valves. The development of a “leaky” valve due to infection can cause new murmurs to appear.
- Close observation of your temperature, heart rate, breathing and blood pressure.
- Blood tests to detect anaemia, increased numbers of white cells and inflammatory responses, which can be signs of infection. Very importantly, repeated blood cultures are taken. These are samples of blood added to a special solution, which are incubated for 48 - 72 hours to see if any bacteria grow and what type of antibiotics these bacteria are sensitive to.

- Once treatment is started, some antibiotics require regular blood tests to measure their levels in the bloodstream to ensure their effectiveness.
- Chest X-ray.
- Regular assessment of the heart's rhythm is performed by recording electrocardiograms (ECG).
- Echocardiogram (cardiac ultrasound scan) where a non-invasive device called a transducer emits and receives ultrasonic waves that travel through the chest wall and are reflected back and recorded. A computer produces pictures of the valves of the heart from the reflected sound waves and can usually detect vegetations on the valves.
- A “negative” echocardiogram does not always exclude infection if the vegetations are too small to be seen. Further pictures may be required if endocarditis is still suspected. This would be done using a trans-oesophageal echocardiogram (T.O.E.).
- With trans-oesophageal echocardiogram (T.O.E.) a microphone-like device is passed through the mouth to the gullet, which runs immediately behind the heart. Its close proximity to the heart allows the doctor to obtain more accurate images of the heart and its valves. TOE is usually required with patients who have artificial valves and/or pacemaker leads. You will usually be given a sedative during this procedure.

WHAT TREATMENT WILL I HAVE?

Early treatment of endocarditis with appropriate antibiotics usually results in a good outcome. The antibiotics aim to get rid of the bacteria causing the infection and a combination of antibiotics may be used to increase the chance of successfully treating the infection. This treatment will be for at least 4 - 6 weeks and will need to be given to you through a tube called a cannula inserted into a vein (intravenously). These cannulas are changed at least every 48 - 72 hours to reduce the risk of further infection and are observed closely by staff. Some patients may require an intravenous line which is more long term (up to six weeks). These are usually inserted in the upper arm (PICC line) or under the collar bone (Hickman line).

Occasionally, the infection does not respond well to antibiotics and valves may become more severely damaged causing heart failure and surgery may be required to replace the affected valve. If pacemaker leads are infected then unfortunately they usually require removal.

WHAT CAN I DO TO PREVENT THIS FROM RECURRING?

- Endocarditis is commonly caused by mouth bacteria (Streptococcus viridans group), which enter our bloodstream when there is chronic infection of the teeth or gums, or during some forms of dental treatment.

- Be vigilant about dental hygiene and have regular dental check-ups, at least every 6 months. You should tell your dentist if you have had endocarditis previously.
- Avoid other potential causes of endocarditis such as body piercing or tattoos.
- Always attend your follow-up hospital appointments.
- Seek medical advice early if you experience any recurrence of previous symptoms.

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With grateful acknowledgements to:

Ann Fox, Staff Nurse, Ward 18

Dr Baig, Consultant Cardiologist

and Colin Pullan, Chairman, Take Heart

Membership Application

Membership of Take Heart is open to anyone for a once only fee of £1.50. In return you will receive a regular newsletter and the opportunity to participate in the club's activities.

Title:Surnames(s):

First Names: Member 1:

Member 2:

Address:

..... Postcode:

Telephone:

An attractive club badge is available at £1.00. Please indicate the quantity required in the box shown and add the cost to the Membership fee.

No of Badges required:

I enclose a cheque/postal order for £..... payable to TAKE HEART

Donation Form

Donations should be sent to: The Secretary, Take Heart, The Yorkshire Heart Centre, 'F' Floor, Jubilee Wing, The General Infirmary at Leeds, Leeds LS1 3EX.

I would like to make a donation of £..... to TAKE HEART

Name:

Address:

..... Postcode:

If you are a UK taxpayer, the Charity can benefit further from your donation.

If you would like further details, please tick this box:

PLEASE MAKE ALL CHEQUES PAYABLE TO TAKE HEART

**Donations are always welcome and will be
acknowledged, and published in our newsletter**

*Please send completed Membership/Donation Forms to:
The Secretary, Take Heart, The Yorkshire Heart Centre, 'F' Floor, Jubilee Wing,
The General Infirmary at Leeds, LS1 3EX. Tel: 0113 392 2888. Fax: 0113 392 5222.*

Registered Charity No. 1002063



We Are Take Heart

Take Heart is a small, but professional charity, run on a completely voluntary basis, raising funds exclusively for the Yorkshire Heart Centre at Leeds General Infirmary, St James's hospital and its units within The Leeds Teaching Hospitals NHS Trust. We were founded in 1989 by a small number of heart patients wishing to return something for the excellent care received.

From a small beginning, we have raised over three million pounds and this has been used to provide comfort and enhance the surroundings for the many thousands who visit the centre every year. We have also made significant progress in supporting staff in their work and improve their working environment.

Some of the major achievements of the charity are the provision of a suite of relatives rooms available free of charge when required, a roof garden providing a peaceful area for patients and relatives, and an internal garden. We provide free bedside television, free telephone calls and free internet for all patients on the heart wards and we have recently provided changing rooms for an additional MRI scanner. Take Heart have refurbished most waiting areas and made sure that patients enjoy comfort of the highest standard. We also fund information booklets (such as the one you are now reading) which are available in all the Heart Centre wards.

Look around and you will see that all the bedside furniture in the heart wards was provided by Take Heart. We also provide equipment to help bring the latest technology into the centre which, in some cases, helps to reduce waiting times. Our latest major projects include two new portable echo machines and an Intracoronary Optical Coherence Tomography Scanner, (catheter-based invasive imaging systems using light rather than ultrasound for detailed examination of stents), costing in excess of £165,000 and complete refurbishment of the Roof Garden and spent some £60,000 on a major refurbishment of Ward L16.

Take Heart funds are raised in many ways - through donations - events - sponsorship, and bequests, mainly through its thousands of members and supporters.

We would love you to become a member of Take Heart. As a member, you will receive our newsletter about five times a year and if you wish to take part in anything, this is absolutely at your choice. Please note that you will never be bombarded with follow-up mail. You can join by going to our web site www.takeheart.net or picking up a form from any ward reception area.

Use your SmartPhone to visit our website > > >



Colin Pullan, MBE
Chairman, Take Heart.

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