- check whether they are hot. If they have a temperature, call a doctor.
- be registered with a doctor in Leicester and be familiar with the out of hours arrangements of their doctor (how to contact a doctor at night or at the weekend). Students are free to register with any doctor but most choose to register with the Freemen's Common Health Centre
- be familiar with the University Sick Bay services. During term time, nurses are there throughout the night to offer advice over the telephone and to call an emergency doctor where appropriate.

The most important steps in controlling meningitis are listed above. Remember that two thirds of meningitis is caused by 'group B' organisms. There is no vaccine against 'group B' organisms.

Q ***What happens when a person gets meningitis?***

A First of all the medical staff will find out which infective agent is involved (bacteria or virus). If it is meningococcus then they will need to take action. These investigations take time. If the person has meningococcal meningitis / septicaemia then close and prolonged contacts are offered antibiotics.

Q ***Why don't you give antibiotics to everyone, killing the germs in the back of their throats and preventing the disease?***

A Doctors managing a case of meningococcal meningitis / septicaemia assume that the germ has come from within the circle of close contacts of the patient. The object of giving antibiotics to close and prolonged contacts is to eliminate any meningococcal bacteria that might be present in their throats, thus stopping them from passing on the meningococcus to other people.

Antibiotics are not given to everyone because:

- the bacteria are fragile and only spread through close personal contact
- if antibiotics kill the natural bacteria in a person's throat, this renders them more vulnerable to catching harmful bacteria / viruses
- if too many people are given the antibiotic there is a risk of the meningococcus becoming resistant to it. There are very few antibiotics effective against the meningococcus, so it is important that resistant strains do not develop in the community.

Q ***What about immunisation?***

A A vaccine, called Men C conjugate vaccine, can protect against Group C meningitis and septicaemia. The vaccine is now offered to the majority of under 18 year olds in the UK. Scientists agree that Men C is highly effective and since the year 2000 it has reduced disease rates by over 75% in the age groups targeted for vaccination.

In recent years Group C has accounted for 30-50% of cases of meningococcal meningitis and septicaemia in the UK and Ireland, and Group B has caused most of the rest. There is, as yet, no vaccine against Group B disease, nor against many other equally deadly forms of meningitis and septicaemia. For this reason, it is still very important to be aware of the signs and symptoms of meningitis and septicaemia.

Q ***How safe is the new vaccine?***

A In addition to the safety and efficacy studies manufacturers are required to carry out for licensure, there have been a number of other additional studies conducted in the UK and abroad. In this country, studies specifically designed to monitor the performance of Men C conjugate vaccine in UK children have been carried out by the Public Health Laboratory Services (PHLS) in infants, toddlers, and school children. These studies have shown the vaccines to be safe and effective in all age groups.

The vaccine is not 'live' and cannot cause even a mild form of meningitis or septicaemia. There are no new ingredients in the vaccine. All ingredients of the Men C vaccine have already been given to millions of children over many years as components of other vaccines, without causing any harm.

Q ***I have not been immunised, how do I obtain the vaccination?***

A We recognise that many international students and a small number of UK students will not have had the opportunity to be vaccinated. They are being offered the opportunity of immunisation after arrival in Leicester.

Students are invited to enquire about vaccination at Freemen's Common Health Centre,
161 Welford Road, Leicester. 0116 255 4776

Although vaccination is important it is crucial that students:

- Read and assimilate awareness raising information
- Keep a watchful eye on ill friends
- Report any illness to a Sub-Warden or ask a friend to monitor you. Remember that you can use Sick Bay if you feel ill
- If a case is suspected, seek medical help so that treatment can start early

Q ***Where can I obtain more information?***

A

- Freemen's Common Health Centre
  www.le.ac.uk/healthcentre/
- Welfare Service in the Students' Union
  www.le.ac.uk/welfare
- Students' Union Welfare and International Officer
- Wardens and Sub-Wardens
- Meningitis Trust is at
  www.meningitis-trust.org
  e.mail: info@meningitis-trust.org
- Meningitis Research Foundation is at
  www.meningitis.org.uk
- If a case of meningitis occurs at the University of Leicester, briefings will be issued on a regular basis on the Welfare Service homepage:
  www.le.ac.uk/ssds/welfare

Helpline numbers:

- Meningitis Trust (24 hours) 0845 6000 800
  Minicom 01453 768003
- Meningitis Research Foundation (24 hours)
  0808 800 3344
- Freeman's Common Health Centre 0116 255 4776
- Hugh Binnie Sick Bay – 0116 223 1268
- University Emergency Number 0116 252 2888
- Welfare Service 0116 223 1185

Acknowledgements:

- The National Meningitis Trust Website
- Meningitis Research Foundation
- Department of Health publication 'Immunisation against infectious diseases'
- Health Protection Agency

The University of Leicester Welfare Service has worked closely with Leicestershire Health, Freemen's Common Health Centre and the Students' Union to compile this leaflet which endeavours to answer the most frequently asked questions.

– 2007/08 –

Health Promotion

ABOUT MENINGITIS

This leaflet contains essential information and advice about meningitis. Please read it now.

Remember, in particular:

- **meningitis can kill**
- **be vigilant – don't ignore early signs and symptoms**
- **seek immediate medical help**
- **keep a watchful eye on friends who might be ill**

University of Leicester

STUDENT SUPPORT

Q ***Why should I read this leaflet?***

A All students should be familiar with the signs and symptoms of meningococcal meningitis and septicaemia. These are frightening diseases which can strike rapidly with little warning. Many students will have been vaccinated against Group C strain meningococcal meningitis, however they remain vulnerable to Group B strain which accounts for about two thirds of all cases in the UK.

Q ***What does meningitis mean?***

A Meningitis means 'inflammation of the lining of the brain'.

Q ***What is septicaemia and what causes it?***

A Septicaemia is the medical name for blood poisoning. Again, several types of bacteria can cause septicaemia. However, we are mostly concerned about meningococcus.

When meningococcal bacteria get into the bloodstream they release chemicals (toxins) which damage the blood vessel lining allowing blood to leak into the surrounding tissue. When blood leaks in this way a bruising rash can be seen, and damage to body organs, including the heart and kidneys, can quickly occur.

Q ***Why do some people get septicaemia and others get meningitis?***

A If meningococcus invades the body, it enters from the throat, gets into the bloodstream and travels via the blood to the meninges (brain lining).

- The bacteria can multiply uncontrollably in the bloodstream resulting in **septicaemia** before the bacteria can infect the meninges.
- Infection in the bloodstream and the meninges can develop at the same time; these patients get **both septicaemia and meningitis.**
- Occasionally the body stops the bacteria multiplying in the bloodstream but not in the meninges, resulting in the development of **meningitis** only.

SIGNS AND SYMPTOMS

What are the signs and symptoms of meningitis and septicaemia?

The two illnesses have different signs and symptoms.

Individuals react very differently to the bacteria and so a person affected by the disease may have **all** or **just some** of the following symptoms:

*Someone who has **meningitis** may experience:*

- a high temperature
- headaches
- neck stiffness
- vomiting
- aversion to bright lights
- severe drowsiness / impaired consciousness.

*If they develop **meningococcal septicaemia** they may also have:*

- a high temperature
- cold hands and feet whilst the rest of the body is hot. Press a finger on the outside edge of the foot then release. If it takes more than 5 seconds for colour to return to the pressed area a potentially serious illness is indicated.
- aching muscles and joints
- abdominal pain, diarrhoea
- rapid breathing
- a bruising rash which does not disappear when pressed with a glass tumbler – the rash starts as a cluster of pin prick blood spots. If untreated, the rash gradually enlarges to become multiple areas of obvious bleeding under the skin surface, like fresh bruises. They then join together to form large areas of purple skin damage and discoloration.

Q ***What causes meningitis?***

A Meningitis is caused by both viruses and bacteria.

● **Viral meningitis**
This is the commonest form of meningitis. It is rarely life-threatening, but can make people very weak. This type can be caused by many different viruses. Viruses can spread through coughing or sneezing, poor hygiene or polluted water. Viral meningitis cannot be treated by antibiotics.

● **Bacterial meningitis**
Bacterial meningitis is rare but can be extremely serious. It can be fatal or leave the survivor with a severe disability such as deafness or brain injury.

The type of bacterial meningitis which affects students is usually caused by meningococcal bacteria. There is a small chance of these bacteria passing from one person to another. However, **only 2%** of meningitis infections are due to direct contact with a patient known to have meningococcal disease.

Q ***How are meningococcal bacteria carried and passed from one person to another?***

A The bacteria which cause meningococcal meningitis are very common and live naturally in the back of the nose and throat, or in the upper respiratory tract.

These germs can be carried for days, weeks or months without causing a person to become ill. In fact, being a 'carrier' helps boost natural immunity to the disease. At any one time, between 10 and 25 per cent of the population are carriers. Only rarely do the bacteria overcome the body's defences and cause meningitis.

Recent research has found that in university students this 'carrier rate' can rise to around 30 per cent. This is thought to be because students live communally and are exposed to new bacteria against which they have not yet developed immunity.

Q ***I've heard about different strains of meningococcal bacteria. What does this mean?***

A There are many different strains of meningococci. The commonest disease causing strains in the United Kingdom are type B and type C.

Type B accounts for about two thirds of all cases and type C for about one third. (Type A accounts for about 2% of all cases in the UK.)

Q ***How are meningoccocal bacteria passed from one person to another?***

A Meningococcal bacteria are fragile and do not survive outside the body for very long. They are spread through kissing, coughing and sneezing. They cannot be picked up from water supplies, swimming pools or buildings. They do not pass easily from one person to another but if they do so it is usually through prolonged close personal contact.

Q ***What is meant by 'prolonged close personal contact'?***

A Doctors regard close contacts as:

- those sharing the same household in the 7 days preceding onset of the illness in the person diagnosed as having meningitis or septicaemia
- mouth kissing contacts.

Students who share a kitchen or corridor might be deemed to be in 'prolonged contact'. However, sitting in a lecture theatre with someone who later became ill should present no additional risk. Whenever someone is ill with this disease doctors take time to explore individual concerns about contact.

Q ***I've heard about students dying from meningitis. Is the disease always fatal?***

A Regardless of how good treatment is, some people unfortunately die of meningitis.

- Overall mortality from meningococcal infections is 7 – 8%.
- Meningitis mortality rate is 3 – 5%.
- Septicaemia mortality rate is 15 – 20%.

Q ***How do we make sure that anyone with the signs and symptoms outlined has the best possible chance of recovery?***

A Early treatment is essential. Early treatment can only occur when a doctor is involved, as appropriate drugs need to be administered quickly.

If you think something is wrong with you or a friend, ensure medical help is summoned and tell a responsible person without delay. If you live in University accommodation this may be a Sub-Warden who will have received general first aid training and specific training relating to meningitis.

Remember in particular:

- be familiar with the signs and symptoms
- make sure that you check regularly on the condition of fellow students who are unwell. Students with meningitis can die in their rooms because they are too ill to get to a telephone or tell their friends. Do not assume that a semi-conscious student is drunk.