Information on resistant bacteria

What are resistant bacteria? Resistant bacteria are bacteria that have become resistant to a number of antibiotics. Infections caused by bacteria are treated with various antibiotics. Antibiotics are drugs that kill bacteria or inhibit their growth. It is possible that bacteria become insensitive (resistant) to some antibiotics. This means that the standard antibiotics do not help an infection caused by this bacterium.

Do resistant bacteria make you ill?
You do not necessarily get sick from bacteria, not even from resistant bacteria.
If a resistant bacterium causes an infection, you do not, in principle, become sicker than from an infection caused by a good 'sensitive' bacterium. The infection may, however, be more difficult to fight because there are fewer active antibiotics available.

How do you get a resistant bacteria?
You can 'be a carrier' of a resistant bacterium in several ways:

- If you have often taken (various types) of antibiotics in the past
- If you have been hospitalized in a foreign hospital (where resistant bacteria are more common)
- Through a cause which is (still) unclear.
  If there is no question of an infection, it is not necessary to fight the bacteria. It is possible for the bacteria to go away by itself.

How can spreading in the hospital be avoided?
Bacteria are spread mostly by direct contact and/or via objects. They usually do not move through the air. To avoid the spread of bacteria to other patients, general rules of hygiene are observed. In particular, good (hand) hygiene is important. Sometimes, however, additional measures are needed to prevent the spread of certain resistant bacteria, such as the bacteria that produce ESBL. Hospital staff then wear protective clothing (apron and gloves) when caring for the patient. Sometimes the patient is nursed in a single room.

What is ESBL?
ESBL stands for Extended Spectrum Beta-Lactamase, an enzyme that breaks down certain types of antibiotics (penicillins and cephalosporins). Fighting an infection (such as a urinary tract infection or bloodstream infection) caused by ESBL-producing bacteria is difficult because of the resistance to many different types of antibiotics.

What causes the increase in resistance?
The increase in multi-resistance is related to the frequent use of antibiotics both within an individual and at the population level. This is the reason why a patient from a hospital abroad is more often inclined to carry multi-resistant bacteria.
The increase of ESBL in the Netherlands seems to be related to the overuse of antibiotics in intensive farming, especially in chickens. Nearly 88 percent of the chicken sold in the store contains ESBL. Beef and pork are also infected, but to a lesser extent. There is no reason to think that ESBL-producing bacteria may also be present inside an egg. The bacteria are also found in the environment (such as on the surface water of rivers). There is evidence that, through irrigation, vegetables are also contaminated.

How can an infection with resistant bacteria be prevented?
An infection with resistant bacteria is not always preventable because it can be caused by a number of different sources. Infection can also be spread from human to human. When the current kitchen hygiene rules are adhered to, meat and eggs can be eaten safely. Heat the meat well. Through heating, all of the bacteria will be killed, also the ESBL-producing bacteria. It is especially important to avoid contact between raw (chicken) meat and other foods. Meat must be kept refrigerated. This reduces the growth of bacteria.

Are there any restrictions on visiting a patient with resistant bacteria?
There are no restrictions on visiting a patient with resistant bacteria. Visitors, including pregnant women and small children, may enter the patient's room without restrictive measures. Normal hand hygiene is sufficient.

Are additional measures needed at home?
No special measures need to be taken at home. If use is made of home care, physiotherapy or other types of care, that is no problem. The basic hygiene health workers always have to apply is sufficient to avoid spreading the bacteria to other patients. Family members do not need to take additional measures.

Are there any further questions?
For further questions or information, please contact the Infection Prevention Unit of the VUmc. Telephone: (020) 444 4444, ask for tracer *986293 or send an email to infectiepreventie.info@VUmc.nl

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