

OVER-CONSUMPTION

Penicillin and subsequently many other types of antibiotics are the miracle drugs that have saved the most people in the world. Now they are severely weakened. We have simply used too much of them too often.

When antibiotics stop working:

Rye can be the solution

Antibiotic-resistant bacteria are an increasing problem. But now there are promising results in the war against bacteria from a natural remedy.

Text: Ann Iren Gunnheim
ann-iren.gunnheim@allers.no
Photo: Scanpix, Øyvind Kjølberg

In 1991, researchers from Melbourne observed strange behaviour in animals in the Australian wilderness. After mating fights, the male animals sought out areas with a lot of tall grass.

These animals were predatory meat eaters, not herbivores. But they still ate grass and rolled around in it while licking their wounds. After a short recuperation period of two to three days the animals left the area in good form. The tall grass was rye.

The researchers discovered to their amazement that the saliva left behind in the grass by the animals was free of bacteria. They realised that they had discovered an immunomodulator (booster for the immune system) that arises from the rye's own immune system.

Resistant bacteria

Penicillin and antibiotics have been the miracle drugs for bacterial diseases.

ANTIBIOTICA USE should be kept to a minimum. It has for a long time been common to treat inflammation of the middle ear in children with antibiotics. Today most doctors believe that is unnecessary.

But now we might see that diseases that have been exterminated can flare up again. The bacteria are increasingly resistant to antibiotics.

"In Norway we have in the last few years had a five-fold increase in infections of resistant staphylococcus aureus. The consequences of antibiotic-resistant bacteria are serious. We can expect an increase in incidents, increased mortality and higher costs to society," says researcher Lars Klette at the research park. He has participated in a research project that has looked at a new natural remedy made from rye sprouts. The product is showing promising results in the fight against aggressive bacteria

Natural remedy

Lars Klette has for many years been collaborating with Pharmacy College in Melbourne, Australia. In the 1990s they developed a natural remedy against asthma in children and young people "Instead of developing a product that works directly on asthma, we developed a natural plant chemical that increases the production of lymphocytes in the blood, a type of white blood cells that specialises in making the body immune to infections.

The product was tested on some 13.000 people in the 1990s. The purpose was to find out how quickly the immune system discovered an intruder. Because the strength of the defence is in the reaction time.

It turned out that antibiotics worked better in combination with this natural product, which goes by the name of Oralmat. Many prefer to swap antibiotics for Oralmat," Lars Klette explains.

Oralmat is made up of plant-based chemicals from rye. The natural remedy is claimed to increase the production of killer cells that discover, track down and exterminate antibiotic-resistant bacteria before they get the upper hand and make themselves at home in your body.

From the outback

By concentrating the substances, the therapeutic properties of rye is enhanced by cultivation, extraction, stabilisation and treatment. In the immunomodulator rye, researchers have developed a solution that maintains a healthy bacterial balance.

You can read more about Oralmat on www.oralmat.com The product is sold on the internet and in some health food shops.

RESEARCHER Lars Klette has helped develop the natural product Oralmat.

SMART BACTERIA

Bacteria have existed on earth for three billion years.

"Our body has 10 times as many bacteria as cells, and in our mouths there are billions of streptococci. Most are harmless and some are vital to our lives," says Lars Klette. But they are smart. Bacteria mutate and change genetic material so they can resist attack from antibiotics.

The world's first antibiotic, penicillin, was discovered by the microbiologist Sir Alexander Fleming in 1929. He discovered that a mould fungus, *Penicillium notatum*, secreted a bactericide. In 1910 the discovery of penicillin was developed to meet the demand which the Second World War created. In 1946 penicillin seemed like the ultimate solution to treatment of bacterial infections, mainly from staphylococci and streptococci. In the beginning antibiotics were an effective treatment against all types of infections caused by these bacteria. Countless lives were saved.

"But soon after the penicillin came into use, researchers discovered that staphylococcus aureus bacteria were resistant to penicillin. There should have been some alarm bells ringing even at that time," says Lars Klette.

Instead the industry increased the development of new antibiotics. Now we have to continue to invent new types of antibiotics that can cure old diseases, but also new types of antibiotics that can cure new diseases, such as Legionnaire's Disease.

(Sources: Aftenposten.no, Kenneth Todar, University of Wisconsin Department of Bacteriology)

Avoid antibiotics if you can

- For a swollen finger or infection of the middle ear the solution is often antibiotics. At least it was until recently. But now many doctors are putting their foot down against the unexamined use of antibiotics.
- If the infection is caused by bacteria, will it go away on its own or will antibiotics be absolutely necessary to avoid complications? Be critical!
- If you have to have antibiotics you can ask to get the least damaging product, which in most cases is old fashioned penicillin.
- Some researchers claim that garlic can kill resistant bacteria. One of the best known substances in garlic is allicin. Laboratory tests have shown that allicin is very effective against for example thick-skinned hospital bacteria, such as some yellow staphylococci.

(Kilde: Overlege Dag Berild)

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STAPHYLOCOCCUS AUREUS is not very dangerous to healthy people, but are among the bacterial species that most often cause infections in patients in hospitals and nursing homes. Therefore it is common that some varieties are resistant to several types of antibiotics.