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INDEPENDENT, OBJECTIVE AND EVIDENCE-BASED

## Fact sheet: What you can do about anxiety before surgery



Operations can restore your health and even save your life, but it is normal to feel a bit anxious about “going under the knife”, especially the day or two beforehand, which are often spent in the hospital preparing for the operation. Today, more operations are done as day surgery. That means that people go to the hospital or practice, have the procedure and are then back home the same day.

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## **Is it normal to feel very anxious?**

It is natural to feel scared before surgery, especially if it is your first surgical procedure. Family and friends often worry too, particularly if the operation is a serious one, or when it is a child having the surgery.

Severe anxiety causes unpleasant symptoms. It can be hard to stop thinking about the operation, the possible adverse effects or the anesthetic. Anxiety may cause physical symptoms such as a pounding or racing heart, an irregular pulse, nausea and sleeplessness. These symptoms can sometimes end up causing more anxiety, because they may be wrongly interpreted as a sign that the illness is getting worse.

Anxiety becomes a problem if it makes it harder to understand and remember important things you are told about the operation, such as advice about how to prepare for it or about recovering afterwards. This problem particularly affects older people.

## **What can help relieve anxiety before surgery?**

There is no one cure-all for anxiety before surgery. So far there has only been very little scientific research on coping with anxiety before an operation. There are a number of trials on the effect of music and sedative medications, as well as the effect of explanations and information about the operation. However, there is still too little research to be able to draw reliable conclusions about how helpful these interventions really are.

Research may still be in the early stages, but many people have developed their own strategies for coping with anxiety. In the following section we describe several ideas and possible approaches that you can try out to see if they help relieve anxiety.

### *Information*

Many people want to be informed about their upcoming operation, find out what will happen and know how to

handle these experiences. It is the surgeon’s responsibility to inform you about the procedure and associated risks before the operation. But some of your questions may remain unanswered. Information can play an important role in reducing anxiety. It is human nature to be afraid of things that we are not familiar with, so a lack of knowledge often leads to uncertainty and fear. Information might come from individual counseling, group talks, brochures or books, educational packages, films, or from the Internet.

Although there are also people whose anxiety grows if they hear a lot about the details, surveys have shown that most patients feel that they do not get as much information as they want. None of the scientific trials found that information generally increased patient anxiety.

### *Relaxation techniques*

Various relaxation techniques can be used to try to reduce anxiety or nervousness before an operation. So-called progressive muscle relaxation, also known as Jacobson’s progressive muscle relaxation or deep muscle relaxation, is one widespread technique that can be learned in a course or with the help of audiovisual media. But so far no studies have tested a relaxation technique especially for people who were afraid of having surgery.

It is not clear whether other relaxation techniques or things like massages, acupuncture, homeopathy, aromatherapy or hypnosis help reduce fear before an operation.

### *Smoking*

Many people who smoke tend to smoke even more when they are feeling anxious. But smoking is associated with a higher risk of complications after surgery, particularly problems with wound healing. Starting nicotine replacement therapy one to two months before surgery could halve the risk of complications. You can read more about that in the [research summary “Complications after surgery: Can quitting smoking before surgery reduce the risks?”](http://www.informedhealthonline.org/index.541.en.html) (URL: <http://www.informedhealthonline.org/index.541.en.html>).

Even if you only stop smoking shortly before surgery, it could increase the amount of oxygen in your cells: the blood levels of nicotine and the carbon monoxide that is produced when you smoke already start to sink after not smoking for 24 hours. Your lung function starts improving

after about two smoke-free months.

## *Music*

Music helps many people relax and feel calmer, and can trigger happy memories. Several trials have indicated that music could possibly reduce anxiety before surgery. Children could benefit from music too.

## *Medicines*

If you are very anxious about an operation, there are also sedatives and medicines to help you sleep the night before. But these could have adverse effects like drowsiness, sleepiness or nausea. A review of scientific studies has shown that these medicines do not affect recovery after surgery if they are taken in low doses, so there is no major reason to avoid anti-anxiety medicines, even before day surgery.

## **What helps children, and what can parents do?**

Surgery can be particularly frightening for children, so they may sometimes be very reluctant to have the operation. The time just before they are given the anesthetic is often very distressing. But there are a number of things that can be done to reduce their anxiety. Most of these have not been studied properly. There is some evidence that the following things can help: cartoons, video games and hospital clowns who perform magic tricks to entertain children, for example.

Children are often not admitted to the hospital until the actual day of the surgery. Parents are usually then able to stay with their child until he or she has the anesthetic and are also there when the child wakes up. Several studies have investigated whether this has any advantages or disadvantages for parents or children. They found it had neither a positive nor a negative effect. The question of whether a parent should be there when the child is given the anesthetic is something that is best discussed individually between the doctor, parent and child.

Another aspect that can make things more difficult when a child has surgery is that they have to have an empty stomach before the operation. Different hospitals have different rules about how long before the operation children should stop eating and drinking. But they are often allowed to drink water or apple juice up to two hours beforehand. This helps them to feel better and calmer. You can read more about that in our research summary

“Pre-surgery: How long do children need to fast before an operation?”

(URL: <http://www.informedhealthonline.org/index.92.en.html>) . Of course, the recommended fasting time before surgery will depend on the type of surgery.

Parents can also try to help relieve their child’s anxiety before they go to the hospital. Children might be helped by being read to, told stories or drawing pictures of what will happen to them in the hospital, the machines they will see there, or certain aspects of the operation. Plays and puppet shows might help too.

You will find more information about what parents can do to reduce their child’s fears and what can generally help against anxiety before surgery in our article (URL: <http://www.informedhealthonline.org/index.165.en.html>) .

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## Glossary

### evidence

Evidence is what we call scientific proof from well-conducted, good-quality scientific trials that have been carefully designed to answer specific questions. Depending on the types of questions, different scientific research methods (types of study) are most appropriate to find reliable answers to these questions. Randomized controlled trials (RCTs), for example, are the best way to get reliable evidence on the effectiveness of medical treatments (interventions). This type of study, however, is not the best form of evidence for all possible questions, and does not provide the best answers to all kinds of questions, either. Epidemiological studies, for example, are very suitable for establishing well-founded proof for the spreading of a disease in the population.

### acupuncture

Acupuncture is a complementary form of therapy used in traditional Chinese medicine. A doctor inserts thin needles at precisely defined points on the body. This is supposed to loosen what are thought to be blockages in the body or to stimulate or calm different organs.

### progressive muscle relaxation

Progressive muscle relaxation is a commonly used method for introducing a state of relaxation step by step. This technique is practiced by first lying or sitting in a comfortable position and focusing on individual muscle groups in a set order: each group is flexed for a short time and then released again completely. Muscles throughout the entire body can be relaxed in this way. Progressive muscle relaxation is used for dealing with physical symptoms such as hypertension, headache, sleeping disorders and stress, but may also accompany behavioral therapy or be part of treatment for anxiety disorders.

### Jacobson's progressive muscle relaxation

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### deep muscle relaxation

Deep muscle relaxation is a commonly used method for introducing a state of relaxation step by step. This technique is practiced by first lying or sitting in a comfortable position and focusing on individual muscle groups in a set order: each group is flexed for a short time and then released again completely. Muscles throughout the entire body can be relaxed in this way. This progressive muscle relaxation is used for dealing with physical symptoms such as hypertension, headache, sleeping disorders and stress, but may also accompany behavioral therapy or be part of treatment for anxiety disorders.

## **Sources**

Institute for Quality and Efficiency in Health Care (IQWiG): *Article: What you can do about anxiety before surgery*. Cologne: IQWiG. October 2009. [Full text (URL: <http://www.informedhealthonline.org/index.165.en.html>) ]

## **The German Institute for Quality and Efficiency in Health Care (IQWiG)**

The German Institute for Quality and Efficiency in Health Care (IQWiG) was established by legislation to provide evaluations of the effectiveness, quality and efficiency of healthcare services. This includes the assessment of medicines as well as the publication of health information for consumers and patients.

## **Evidence basis of our health information**

Our information is based primarily on systematic reviews of the effects of health care. Systematic reviews are necessary to gain an objective picture of health care. In order to do this, a clear question is formulated. Researchers then find all the relevant studies that could answer this question. They then evaluate those studies.

You can find a list of the evidence and other scientific literature on which this information is based at **[www.informedhealthonline.org](http://www.informedhealthonline.org)**

## **Disclaimer**

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