

National Ankylosing Spondylitis Society

Anaesthesia and Ankylosing Spondylitis: A patient factsheet

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What is anaesthesia?

Anaesthesia means 'loss of sensation'. Anaesthetics are used for pain relief during tests or surgical operations so that you do not feel pain, touch, pressure and temperature.

How do anaesthetics work?

They work by blocking pain signals that pass along your nerves to your brain. Your nerves are bundles of fibres that use chemical and electrical signals to pass information around your body. If you cut your finger, the pain signal travels from your finger to your brain through your nerves. When the signal reaches your brain, you realise that your finger hurts.

General anaesthetics will send you off to sleep and will prevent your brain from recognising painful messages. On the other hand, local anaesthetics stop the nerve signals reaching your brain, allowing procedures to be carried out without you feeling pain, although some patients may feel pressure or tugging during surgery. When it wears off, the signals will work again and your feelings will come back.

Types of anaesthesia

There are several different types. Most do not make you unconscious, but they stop you feeling pain in a particular area of your body.

- **Local anaesthetic** - used for minor procedures and tests to numb the nerves in the area where the procedure is taking place. You stay conscious but do not feel any pain.
- **Regional anaesthetic** – is used for larger or deeper operations where the nerves are harder to reach. The 2 most common types of regional anaesthesia are **spinal and epidurals**. Both are injected into your back but in different compartments. The choice between spinal and epidural is determined by the type and length of surgery. Local anaesthetic is injected near the nerves in order to numb a larger area, but you remain conscious. A supplemental sedative can be given.
- **General anaesthetic** - used for more extensive operations when you need to be unconscious. It stops your brain recognising any signals from your nerves so that you cannot feel anything.

- **Sedation** - for minor painful or unpleasant procedures. Sedation makes you feel sleepy and relaxes you both physically and mentally.

Anaesthetists

Anaesthetists are medically qualified doctors specialising in looking after you before, during and after your operation. Your anaesthetist will make sure that you are safe throughout the surgery, and that you wake up comfortably. They may also help with any pain relief that you need afterwards.

Before your procedure, they will discuss with you what anaesthetic methods are appropriate, plus any risks or side effects. You should raise any queries that you have with them.

Potential difficulties with anaesthesia in ankylosing spondylitis (AS)

Most people with AS will have no problems with anaesthesia, but there are some for whom difficulties may arise and it is important to be aware of this in advance of any planned surgery.

General anaesthetic

When surgery requires a general anaesthetic, the anaesthetist usually needs to pass a flexible tube down through your windpipe as part of the procedure. This helps with breathing control during anaesthesia and helps protect the lungs from inhaling the stomach contents. It is called endotracheal intubation.

Anaesthetists are trained to use different types of equipment to help overcome any problems. All surgical theatres in the UK have a “difficult intubation trolley” with additional devices to assist with intubation.

The development of a fibre optic laryngoscope now allows anaesthetists to see the upper part of the voice box and pass a flexible tube into the windpipe in people with restricted mouth opening or neck movement. The use of topical anaesthetic and sedatives mean you should experience minimal discomfort. This technique is called “awake intubation” as you are given a general anaesthetic soon after the tube has been inserted.

Epidural / spinal anaesthetic

If you need lower body surgery, it is worth considering either an epidural or spinal anaesthesia. However, the anaesthetist needs to know if you have any weakness or loss of sensation in the lower limbs. Where there are changes to the spine due to new bone formation from AS (known as bamboo spine), epidural or spinal anaesthesia may not be possible due to bony obstruction preventing the needle reaching either the spinal or epidural space.

Importance of having an anaesthetic assessment in advance of surgery

It is vitally important that your anaesthetist is made aware that you have AS in advance of surgery in order to allow them perform an assessment and formulate a plan for anaesthesia. This may involve pre-arranging that specific equipment, for example a fibre optic laryngoscope, will be available in the operating theatre.

Seeing your anaesthetist in advance will also provide an opportunity to establish a relationship between you and your anaesthetist. This can help reduce any anxiety you may feel and will allow your anaesthetist to:

- Determine the severity of your AS
- Assess your airway involvement
- Request specific investigations in advance
- Discuss potential risks with you
- Discuss different anaesthetic options with you
- Answer any questions you may have
- Formulate an anaesthetic and postoperative care plan

How soon should I speak to my anaesthetist about AS before my operation?

A number of different health professionals will be involved before your surgery. You will have a surgical consultation and then once a date for your surgery has been agreed, either your surgeon or preoperative nurse will contact your anaesthetist to arrange an anaesthetic assessment.

If your surgeon does not suggest arranging an anaesthetic consultation for you then it would be perfectly reasonable for you to request one.

Further information:

- *The Royal College of Anaesthetists* www.rcoa.ac.uk
- www.nhs.co.uk/Conditions/Anaesthesia

Patient experience

I have recently had to undergo major surgery and for someone with ankylosing spondylitis (AS) with very limited head movement and restricted mouth opening, having to be given a general anaesthetic is a major concern.

When being given the news by the surgeon that I needed an operation, I expressed my concerns to her regarding the anaesthetic procedure, and made it quite clear I needed a consultation with the anaesthetist several days prior to my operation. Initially the surgeon said that a prior consultation would not be necessary, and that I would see the anaesthetist just before my operation. However, I insisted that I saw him well in advance and this was duly arranged.

I needed to be confident that the anaesthetist would be able to cope with my problems as I was aware specialist equipment would be required and that would require a consultant anaesthetist to be in charge. The anaesthetist came to see me and we discussed my problems and my concerns. I immediately felt very confident with him.

Normally when having a general anaesthetic patients are put to sleep and then a flexible tube is put down the windpipe. However in my case, because of the restriction with my neck and mouth opening, this was not possible so it was planned that a fibre optic laryngoscope would be used. This piece of equipment is very fine with a light and camera. It is inserted up the nose and then down the throat, with the light and camera enabling the anaesthetist to see what they are doing on a screen. This procedure has to be carried out while the patient is awake because of the time it can sometimes take to get everything in the right place. By comparison, a normal intubation must be carried out within a few seconds of the patient being put to sleep.

On the morning of my operation I again met the consultant anaesthetist who reassured me that all the necessary equipment was in place and he again went through everything that he needed to do to get me successfully intubated. I made both the anaesthetist and surgeon aware of my acute stiffness as I did not want to be man-handled unnecessarily during my surgery because this could give me problems at a later stage.

I was given a pre med about two hours before the surgery which made me feel quite relaxed and then was given another sedative via a cannula in the back of my hand. A nebuliser was then placed over my face and something was administered to help numb my mouth and throat. This was a strange feeling but not too unpleasant. When the nebuliser was removed, my nose and mouth were sprayed with what tasted like a banana flavoured solution to for additional numbing.

The next part of the procedure was the most unpleasant as the fibre optic laryngoscope was inserted up my nose and then down my throat. The most uncomfortable part was when it entered the back of my throat when I briefly thought I was going to choke. I then heard the anaesthetist say, 'We have it' and I was quickly put to sleep.

My advice to anyone with AS, particularly with severe neck involvement, who is told they need surgery, is to get an early consultation with the anaesthetist to ensure they are capable of coping with your particular problems, get them to explain fully how the procedure is to be carried out and be sure you are happy and confident in what is going to be done. After all it is your life in their hands! I know I am classed as an anaesthetic hazard, but I have now undergone two major operations both of which have been very successful, with no aggravation to my AS.

REVIEW ARTICLE

Ankylosing spondylitis: recent developments and anaesthetic implications

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Summary

Ankylosing spondylitis can present significant challenges to the anaesthetist as a consequence of the potential difficult airway, cardiovascular and respiratory complications, and the medications used to reduce pain and control the disease. There is also an increased risk of neurological complications in the peri-operative period. Awake fiberoptic intubation is the safest option in those patients with a potentially difficult airway as it allows continuous neurological monitoring while achieving a definitive airway. Neurophysiological monitoring (somatosensory and motor evoked potentials) should be considered in patients undergoing surgery for cervical spine deformity. The medical management of the disease has improved with the use of anti-tumour necrosis factor- α agents. There is potential for increased wound infection in patients taking these drugs. This article reviews the anaesthetic issues in patients with ankylosing spondylitis. The challenge to the anaesthetist is in the understanding of these issues so that appropriate management can be planned and undertaken.