

UPDATE

Module 1730

This module covers:

- The incidence of surgery in England and its cost to the NHS
- General issues around post-operative care
- Dietary and lifestyle advice during aftercare in four common surgical procedures

December >>

Surgery month

● Post-operative care	December 6
● Transplants	December 13*
● Bariatric surgery	December 20

*Online-only for Update and Update Plus subscribers

Post-operative care

Steve Titmarsh

There is a wide variety of surgical procedures, from wisdom tooth extraction and cataract surgery, through to keyhole surgery for gall bladder removal and major procedures such as hip replacement. Care offered after surgery, and recovery from it, will vary depending on a variety of factors, not least the type of operation, a person's age and any other illness they may have at the same time.

Recovery from a relatively straightforward procedure such as gallbladder removal might take a week or so, whereas someone who has had a hip replacement will probably take a few months to recover.¹

This article briefly covers some general issues around post-operative care and then some specific aspects of four common surgical procedures to help pharmacists understand a little of what is involved. It also includes information and support that pharmacists can offer customers who may have undergone different types of surgery.

The majority of people will undergo some sort of surgical operation during their lifetime. The Royal College of Surgeons estimates that 4.6 million hospital admissions in England involve surgery at a cost of about £4.6 billion or 4.5 per cent of the NHS budget every year.²

Care and recovery programmes are tailored to individual needs. In general terms, people may feel quite tired after an operation and will probably experience some pain. In many cases, patients will be encouraged to move around as soon as possible after an operation (especially a major procedure) to encourage healing and help prevent complications such as thrombosis. A healthy lifestyle is beneficial to everyone, but the period following an operation may be a good opportunity for people to develop new habits such as taking regular exercise or adopting a more healthy diet, and to try to break some of the old ones such as smoking.³

Pain after surgery is to be expected and will subside with time. Symptoms may be relieved by taking regular mild analgesia (paracetamol,



After hip replacement surgery, patients will be offered physiotherapy to exercise and strengthen the joint

ibuprofen, aspirin) for a few days. For pain that does not respond to a mild analgesic, a combination such as paracetamol and codeine or dihydrocodeine might be helpful. But remember that OTC medicines containing codeine or dihydrocodeine should not be taken for more than three days other than under the direction of a doctor.³ Pain that persists after an operation should be investigated by the patient's doctor.

DVT risk

The risk of deep vein thrombosis (DVT) faced by people undergoing surgery will vary from patient to patient and the type of operation. For example, people over 60 years of age, with a BMI (body mass index) of 30 or more or a family history of DVT are at greater risk.

Operations on the hip or abdomen that last more than an hour also carry a higher risk. Similarly, patients who are confined to their bed for at least three days, who are unable to walk without help or spend a large part of the day in a chair or bed have an increased risk of DVT. Some people taking the combined oral contraceptive pill may be advised to stop taking it before their operation and to use an alternative form of contraception. Compression hosiery may be recommended for some patients.⁴

Anticoagulants such as heparin and warfarin are used to reduce the risk of DVT and pulmonary embolism. Dabigatran or rivaroxaban – sometimes referred to as novel oral anticoagulants or NOACs – may be prescribed for people having a total hip or knee replacement. The hospital discharge team will usually advise how long people should continue wearing compression hosiery or taking anticoagulants.^{4,5}

People should see their doctor urgently if they develop any of the following in the days or weeks after surgery:^{4,6}

- Pain, swelling or tenderness in the leg (usually the calf)
- Skin on the leg feels hot or is discoloured (red, purple or blue), other than bruising around the area of an operation
- The veins near the surface of the legs appear larger or more noticeable than usual
- Shortness of breath
- Pain in the chest or upper back
- Coughing up blood.

Scarring

Skin scarring can happen to a varying extent following surgery. Scar tissue consists mainly of collagen that is produced as part of the wound healing process.¹² Collagen continues to form for about three months or more along with increasing blood supply. The result is a raised, lumpy, red area. After that some of the collagen breaks down, blood supply reduces and the scar becomes smoother, softer and paler. Scars will continue to fade over a period of up to two years, but do not usually disappear altogether. The way scars develop and appear varies from

person to person. The main types are:¹³

- flat, pale scars, which are the most common. Initially they may be red or dark and raised after the wound has healed, becoming paler and flatter naturally over time, which can take up to two years
- hypertrophic scars are red, raised scars that form along a wound and can stay that way for several years
- keloid scars result from an excess of scar tissue produced at the wound site, where the scar grows beyond the boundaries of the original wound, even after it has healed
- pitted (atrophic or ice-pick) scars have a sunken appearance
- contracture scars develop when the skin shrinks and tightens, usually after a burn, which can restrict movement.

Scars that are unsightly, uncomfortable or restrictive can be treated to reduce visibility and improve their appearance to some extent. Options include silicone gel sheets, pressure dressings, corticosteroid injections, cosmetic camouflage and surgery.

Cholecystectomy

The gallbladder is usually removed using keyhole surgery – laparoscopic cholecystectomy. The procedure involves one incision of 2cm to 3cm (usually by the belly button) and two or three others of 1cm or less (usually on the right side of the abdomen). Recovery time is usually quicker than open surgery, with many patients being able to leave hospital the same day as the operation and get back to their normal routine within a couple of weeks. A newer form of the operation is single-incision laparoscopic cholecystectomy. The procedure is not universally available and may be offered only under private treatment. The other option for the 60,000 gallbladder removals done every year in the NHS is open cholecystectomy; recovery can take up to six weeks.^{7,8}

After cholecystectomy patients may feel sick, which can be a result of the anaesthetic or analgesia given during the operation. The feeling usually subsides fairly quickly after the procedure. Gas is used to inflate the abdomen during surgery and this can leave patients feeling pain in their abdomen and shoulders after the procedure. The pain should wear off in a couple of days; in the meantime, patients can take analgesics to ease symptoms. Diarrhoea can result from bile irritating the gastrointestinal system. Eating high fibre foods such as brown rice and wholemeal bread will help and a stool firming agent or colestyramine can also be helpful in some cases.⁹

People who have had their gallbladder removed should not need to avoid food and drink that triggered symptoms before their operation. However, they should see their GP if eating or drinking triggers existing symptoms or causes new symptoms after they have recovered from gallbladder removal.¹⁰ ▶

Patients aged over 60 years or who have a BMI of over 30 are at increased risk of DVT after having surgery



True or false?

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Hip replacement

After major surgery, such as hip replacement, patients will probably be using crutches to get around for about four to six weeks, but it will be around three months or so before they are able to return to their normal levels of activity. Patients who have redness, fluid or an increase in pain in their new joint should see their GP.

Patients will be offered physiotherapy to show them how to exercise to strengthen the joint and avoid damaging the new hip. They are advised to avoid:¹¹

- bending the hip more than 90 degrees during any activity
- twisting the hip
- swivelling on the ball of the foot
- taking large steps when turning around
- applying pressure to the wound in the early stages (eg avoid lying on one side)
- crossing the legs
- forcing the hip or doing anything that makes the hip feel uncomfortable
- sitting on low chairs and toilet seats (raised toilet seats are available).

Cataract removal

There is not usually any visible scarring after cataract surgery, but there may be some redness in the white (sclera) of the eye and possibly some bruising around the eye. It is important to protect the eye following surgery and patients usually go home with a shield covering the eye, with or without an eye pad. The pad can be taken off an hour after the operation, although some patients like to keep it on until the next day. The shield is usually worn at night for a week after the operation.

A course of antibiotics and steroid eye drops are usually prescribed to take following surgery. Any feelings of grittiness in the eye, discomfort or mild headache will rapidly improve a day or so after the surgery. Vision may be a little blurred for a day or two after cataract surgery. People who find pain or discomfort does not improve or their vision deteriorates should contact their hospital urgently.^{14,15}

Wisdom tooth removal

A dentist may advise removal of wisdom teeth that are decayed or affected by an abscess or cyst or where there are other problems in the mouth. This can happen where wisdom teeth have become impacted or have not fully emerged from the gum. They then may cause dental problems through food being trapped around them or because they are difficult to clean, leading to tooth decay, gum disease and infection.¹⁶ Nice recommends that impacted wisdom teeth that are healthy should not be operated on because there is no evidence of benefit and patients are exposed to the risks of surgery.¹⁷

For up to a couple of weeks after extraction people may experience pain, inflammation of the mouth, jaw soreness or stiffness, unpleasant



A course of antibiotics and steroid eye drops are usually prescribed following cataract surgery

taste and occasionally tingling or numbness of the face, lips or tongue.¹⁸ Paracetamol or ibuprofen can be taken for pain relief.

For the first 24 hours after extraction, patients should not rinse their mouth, spit or have hot drinks. This will help avoid dislodging any blood clots that form to help healing.

For a few days after that they should regularly rinse their mouth with warm salt water or a mouthwash. Eating soft food and avoiding alcohol, strenuous exercise and smoking will all help recovery.¹⁸

People should contact their dentist or GP urgently if they experience:¹⁹

- bleeding that does not stop after applying pressure or that lasts for more than an hour
- difficulty in breathing or swallowing because of a severe infection
- severe pain that does not improve or becomes worse
- a high temperature
- swelling that does not begin to improve after about two days.

Resources

There are a number of useful websites that patients undergoing an operation may find helpful including:

- NHS Choices: [nhs.uk/Conditions/surgery/Pages/getting-back-to-normal.aspx](https://www.nhs.uk/Conditions/surgery/Pages/getting-back-to-normal.aspx)
- The Royal College of Surgeons: [rcseng.ac.uk/patients/recovering-from-surgery](https://www.rcseng.ac.uk/patients/recovering-from-surgery)
- Bupa:
 - [bupa.co.uk/health-information/directory/c/cataractsurgery](https://www.bupa.co.uk/health-information/directory/c/cataractsurgery)
 - [bupa.co.uk/health-information/directory/h/hip-replacement](https://www.bupa.co.uk/health-information/directory/h/hip-replacement)
 - [bupa.co.uk/health-information/directory/w/wisdom-teeth-removal](https://www.bupa.co.uk/health-information/directory/w/wisdom-teeth-removal)

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2. The Royal College of Surgeons: [rcseng.ac.uk/](https://www.rcseng.ac.uk/)

[media/media-background-briefings-and-statistics/surgery-and-the-nhs-in-numbers](https://www.rcseng.ac.uk/media/media-background-briefings-and-statistics/surgery-and-the-nhs-in-numbers) (accessed November 2014).

3. MHRA: [mhra.gov.uk/Safetyinformation/DrugSafetyUpdate/CON087912](https://www.mhra.gov.uk/Safetyinformation/DrugSafetyUpdate/CON087912) (accessed November 2014).
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EXPERT Q&A

Want to know more? Our surgery expert is on hand to answer any further questions you may have on this month's topic. Email your queries to: asktheexpert@updateplus.co.uk

Looking for tips to get the most out of your MURs? Try C+D's popular MUR Zone

» chemistanddruggist.co.uk/mur-zone

5 minute test

■ Sign up to take the 5 Minute Test and get your answers marked online: chemistanddruggist.co.uk/update

Take the 5 Minute Test

1. Patients aged over 60 years or who have a BMI of over 30 are at increased risk of DVT after having surgery.

True or false?

2. After a cholecystectomy patients may experience diarrhoea caused by bile irritating the gastrointestinal system.

True or false?

3. People who have had their gallbladder removed still need to avoid food and drink that triggered symptoms before their operation.

True or false?

4. After a hip replacement patients can expect to use crutches for about three to four months.

True or false?

5. Patients with a replaced hip should avoid swivelling on the ball of the foot, twisting the hip and crossing their legs.

True or false?

6. For the first 24 hours after wisdom tooth

extraction people should not rinse their mouth, spit or have hot drinks.

True or false?

7. After cataract surgery an eye shield is usually worn at night for four weeks.

True or false?

8. Vision may be a little blurred for a day or two after cataract surgery.

True or false?

9. Scar tissue consists mainly of collagen that is produced as part of the wound healing process.

True or false?

10. Hypertrophic scars result from an excess of scar tissue produced at the wound site.

True or false?

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Tips for your CPD entry on post-operative care

Reflect Which patient groups are at a higher risk of DVT after surgery? How long might it take to return to normal levels of activity after a hip replacement? What is the difference between hypertrophic and keloid scars?

Plan This article covers some general issues around post-operative care and discusses some more specific aspects of cholecystectomy, hip replacement, cataract removal, wisdom teeth removal, DVT and scarring. It also includes information and support that pharmacists can offer to patients who may have undergone different types of surgery.

Act Read the Update article and the suggested reading (below), then take the 5 Minute Test (above). Update and Update Plus subscribers can then access answers and a pre-filled CPD logsheet at chemistanddruggist.co.uk/mycpd.

Find out more about [cholecystectomy](#)

and [hip replacement on the NHS Choices website](#)

<http://tinyurl.com/surgicalh>
tinyurl.com/surgicalz

Read the advice for patients about cataract surgery on the [Royal College of Surgeons \(RCS\) website](#)

tinyurl.com/surgical3

Read the advice for patients about wisdom teeth extraction on the [RCS website](#)

tinyurl.com/surgical4

Find out more about scars and how they can be treated from the [NHS Choices website](#)

tinyurl.com/surgical5

Evaluate Are you now confident in your knowledge of common surgical procedures? Could you give advice to patients about care needed, pain relief and complications that may occur after surgery?

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