
Administration of Subcutaneous Denosumab

Patient Information



Introduction

This booklet gives you some simple instructions and information about injecting at home.

It is intended for you to keep as a useful reminder.

A nurse will have either shown you how to give yourself a subcutaneous (under the skin) injection or will have talked the process through with you, and offered a phone consultation for when you first administer your own injection; your clinical team will confirm which applies to you.

Please note:

The information in this guide is not intended to replace the advice of your nurse or doctor.

If you have any questions or are unsure about how to inject denosumab, your clinical team will be able to help.

Supply of denosumab for self-administration

Denosumab is supplied as a single small vial per dose to be administered. You will have been advised by your clinical team or pharmacist as to how regularly you need to have a dose of denosumab.

You will either receive your supply of denosumab directly from the day unit or this will be couriered to your home address.

Storage of denosumab at your home

Denosumab is normally stored in the fridge (between 2°C - 8°C). Once removed from the fridge, the vial should be administered within 30 days. The pharmacy label will state the expiry date of your medicine - you should follow the pharmacy label for this information not the pre-printed date on the vial or the box.

Medicines should always be stored safely out of reach of children and pets.

Equipment required

You or your carer will be supplied with all the equipment required for administering denosumab safely at home.

If you require further supplies of equipment, please contact the day treatment unit.

You will be provided with:

- **Vial(s) of 120mg Denosumab for your treatment**

And the following equipment (this may be sent separately):

- **21 gauge needles (green)**
- **25 gauge safety needles (orange with a built in cover)**
- **Syringes for administration**
- **Sterile alcohol wipes**
- **Gauze swabs**
- **Gloves and aprons (for use only if a carer is administering the injection(s) or in case of a spill)**
- **Sharps disposal container**

The bin should not be overfilled, the lid must be closed when the bin is full and you or your carer can either return the full containers to the hospital outpatient unit, or most local councils also offer clinical waste collection. Please check with your local council, see: www.gov.uk/request-clinical-waste-collection

Safety and handling requirements

If your carer is administering the injection and obtains a needle stick injury (where the needle has pierced or scratched the skin), the area should be thoroughly washed with water, and they should contact the day treatment unit for further advice.

Administering your subcutaneous denosumab injection

If you have not received face-to-face training while at the hospital on administering your injection, your clinical team will offer to arrange a telephone consultation with you to support you while you first administer your injection at home.

If you received face-to-face training but are unsure of the process, then please contact your team.

The process for preparing your denosumab is described below and on page 6. There is also a step-by-step guide on page 7 and a short film on administering subcutaneous injections on The Royal Marsden website: www.royalmarsden.nhs.uk/how-to-self-inject

Choose your area

- You should select an area where you will not be distracted
- Choose a comfortable chair that has a table near by
- Ensure the work surface is clean and that there are no food products within reach.
- Only people who are helping you such as your carer should be in the room; this is to avoid distractions and inadvertent exposure.

Prepare your area

Wash and dry your hands thoroughly and clean your preparation area.

Collect all the equipment required and place onto your cleaned area.

Move to your chosen chair where you will sit and administer the injection.

Collect all the equipment required and place onto your cleaned area; you will need:

- One denosumab vial
- One syringe
- One green needle
- One orange needle
- 70% Alcohol swab (in packet)
- Gauze swabs
- Sharps bin
- A pair of gloves and apron if a carer/family member is going to administer the injection.

Preparing the denosumab injection

- Allow the denosumab vial to reach room temperature.
- Wash your hands with soap and water and dry. If you are the carer administering for someone else, put on the gloves and apron provided by the hospital after washing your hands.
- Open the packaging containing the syringe, having checked that the packaging is intact - if the packaging is damaged, discard this syringe and get a new one.
- Remove a green 21g needle from its packaging but leave the plastic needle cover in place, then attach the needle to the syringe.
- Look at the solution in the vial and check it is not cloudy or discoloured (do not use if it is).
- Remove the plastic cover from the rubber bung on the top of the vial.
- Remove the plastic needle cover from the needle, then draw up the contents of the **whole vial of denosumab (Xgeva)** (1.7mls) into the syringe ready for injection.
- Remove the needle used for drawing up the denosumab and place in the sharps bin, then replace with the orange 25g needle, but leave the plastic needle cover in place for now.

Step-by-step instructions for preparing your subcutaneous injection



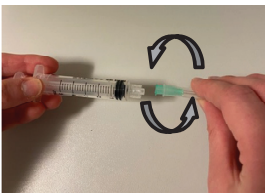
Step 1: Wash your hands thoroughly with soap and water, or clean with alcohol gel .



Step 2: Allow the vial to reach room temperature.



Step 3: After checking the packaging is intact, open the packaging containing the syringe.



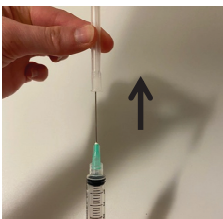
Step 4: Keeping the plastic needle cover in place, attach a green needle to the syringe.



Step 5: Check that the vial is not cloudy or discoloured.



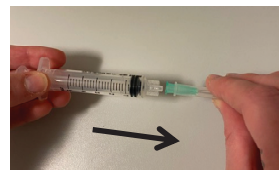
Step 6: Remove the plastic cover from the rubber bung on the top of the vial.



Step 7: Holding the syringe by the barrel, remove the needle cover, pulling away from your body.



Step 8: Draw up the contents of the whole vial of denosumab (Xgeva) (1.7mls) into the syringe. Holding the syringe 'needle up' **carefully expel any air bubbles from the syringe.**



Step 9: Cap the first needle and remove it from the syringe and place in the sharps container. Add the orange needle to the syringe leaving the clear needle cover in place.

Administering the denosumab injection

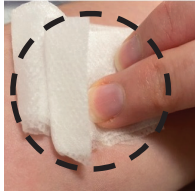
The process for administering denosumab is described below and there is a step-by-step guide (pages 9 – 10). There is also a short film on administering subcutaneous injections on The Royal Marsden website: www.royalmarsden.nhs.uk/how-to-self-inject

- Wash your hands or use alcohol gel if you have it.
- Open the packet of gauze swabs and remove the appropriate clothing to expose the area you will be using for the injection such as your tummy or thigh (see page 10).
- Open the alcohol swab packet and take out the swab. Use the alcohol swab to clean the skin where you are going to inject yourself.
- Take the plastic cover off the needle and move the safety cap out of the way of the needle.
- Hold the syringe between the thumb and forefinger of your dominant hand as if holding a dart.
- Gently pinch the skin of the area chosen for injection up into a fold with your non-dominant hand. Check how much skin you can pinch - for some people this will be about an inch (2.5 cm), for others it will be about 2 inches (5cm).
- Insert the needle into the skin at an angle of 90 degrees if you can grasp 2 inches (5cm) of skin, or 45 degrees if you can only grasp 1 inch (2.5cm) and then release the pinched skin.
- Slowly inject the drug by pushing on the end of the syringe plunger.
- Withdraw the needle and apply gentle pressure on the injection site. Use a gauze swab to clear away any leakage. Do not massage the area.
- Put the used needle and syringe into the sharps container.

Step-by-step instructions for administering denosumab



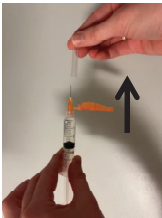
Step 1: Wash your hands or clean with alcohol gel. Open the gauze swabs and uncover the injection site chosen.



Step 2: Using a fresh sterile alcohol swab, clean the injection site. Allow the site to air dry.



Step 3: Pick up the syringe. Pull the safety cover on the needle out of the way to prepare for injecting.



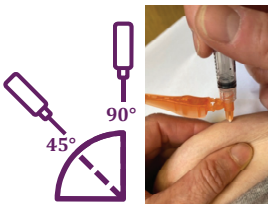
Step 4: Remove the clear needle cover from the needle, pulling away from your body.



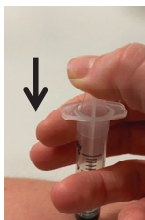
Step 5: Hold the syringe between your thumb and forefinger of your dominant hand, as if holding a dart.



Step 6: With your free hand, pinch the skin where you are going to inject - check how much skin you can pinch - is it nearer 1" (2.5cm) or 2" (5cm)?



Step 7: Insert the needle into the skin at 45° angle for 1", or 90° for 2", then release the pinched skin.



Step 8: If needed, use one hand to support the syringe and the other hand to push the plunger down slowly until all the drug has gone in.



Step 9: Hold it there for at least 10 seconds to ensure all the drug has been administered.

There is also a short film demonstration on: www.royalmarsden.nhs.uk/how-to-self-inject

Step-by-step instructions for administering denosumab continued



Step 10: Once you have waited at least 10 seconds and the syringe is empty, withdraw the needle from your skin and apply gentle pressure on the injection site.
***Please note for demonstration purposes only, the needle is not shown.**



Step 11: Use a gauze swab to clean away any leakage. Do not massage the area.



Step 12 : On a hard surface, push the needle into the safety cover.



Step 13: Place the used syringe and needle into the special sharps container.



Step 14: Dispose of any remaining empty packets into the sharps container, but keep unused gauze swabs for future use.



Step 15: Wash your hands thoroughly with soap and water.

Rotating your injection site

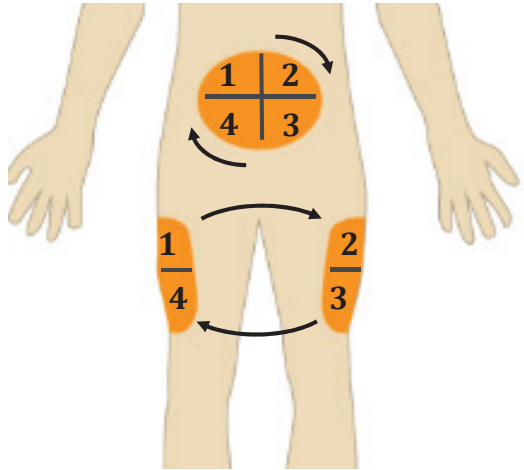
Injecting into the same area too many times can cause fatty lumps to appear on the surface of your skin; making injections more difficult and painful. This is known as lipohypertrophy.

To avoid this from developing, make sure you pick a different area of skin to put each injection into.

You can administer your denosumab injection into your abdomen (tummy) and your outer thigh.

Ideally you should aim to keep each new injection spot at least an inch away from your previous injection sites.

To the right is a diagram showing how to rotate your injection sites between the different areas of your body.



Adverse effects of denosumab

The medical and nursing team looking after you will have provided you with information about your treatment. Please read this carefully as this will explain the common side effects and their management.

Below are two side effects which are important for you to be aware of; if you develop any symptoms below, it is important you let the hospital team know straight away.

Denosumab can cause a drop in the levels of calcium in your blood.

If you develop any of the following symptoms, please contact either the day unit team or The Royal Marsden Macmillan Hotline immediately:

- Muscle spasms, twitching or cramps
- Tingling around your mouth (lips or tongue), or in your fingers and toes
- Feeling drowsy or confused.

Denosumab can also cause jaw problems (osteonecrosis)

Osteonecrosis of the jaw is when healthy bone tissue becomes damaged and dies. Symptoms of this include:

- Pain
- Swelling
- Redness of the gums
- Loose teeth.

If you develop any of these symptoms, please contact either the day unit team or The Royal Marsden Macmillan Hotline immediately.

Do's and Do not's

Do's:

Do alternate the location in which you inject

Do make sure you put your used syringes in the sharps bin each time you inject – never leave them lying around

Do administer the injection at the same time each day

Do contact The Royal Marsden (see page 15) if you are unsure on how to inject or would like more information.

Do not's:

Do not put the syringe down anywhere or touch the needle with anything before injecting

Do not inject into bruised or scarred/damaged skin

Do not rub the skin after you have injected

Do not share or let anyone else use your syringes

Do not overfill the sharps bin - the lid must be closed when the bin is full and you or your carer must either return the container to the hospital at your next visit, or contact your local council to arrange collection.

Trouble shooting

Scenario	Action required
What if you realise that your medication has been left out of the fridge?	<i>Denosumab may be stored at room temperature (up to 25°C) for up to 30 days in the original container. Once removed from the refrigerator, XGEVA must be used within this 30 day period.</i>
What if the container for the drug is damaged such as a broken vial?	<i>Contact your nursing team</i>
What if you need a new sharps bin?	<i>Contact your nursing team who will arrange for a new sharps bin to be provided.</i>
What if you experience side effects to the treatment?	<i>If you have any concerns not addressed in this leaflet, please contact The Royal Marsden Macmillan Hotline: 020 8915 6899 (available 24 hours a day, 7 days a week)</i>
What if you lose/break a medication vial, or the contents is cloudy?	<i>Please use another one if you have been provided with more than one dose, and then contact the nursing team within opening hours. If you do not have another dose, please also contact the team as above.</i>
How do you manage a spill of denosumab?	<ul style="list-style-type: none"> • Put on a pair of gloves • Put any broken glass or other sharps in the sharps bin • Use paper towel to mop up any fluid, then use wet paper towel to clean the area • Place the paper towel and gloves in a plastic bag and place in a normal rubbish bin • Wash your hands • Let the nursing team know within opening hours if you need a replacement vial.

Contact details

For general enquiries about self-administration or equipment issues, please contact one of the units below:

Medical Day Unit Sutton

Tel: 0208 661 3174
(Monday to Friday, 9am - 5pm)

Bud Flanagan Ambulatory Care Unit

Tel: 020 8915 6121 or 020 8915 6120
(Monday to Friday, 8am – 6pm)

Medical Day Unit Chelsea:

Tel: 020 7808 2320 or 020 7808 2325
(Monday to Friday, 8am – 6pm)

Private Patient Medical Day Unit

Sutton: 020 8915 6670
Chelsea: 020 7811 8092
(Monday to Friday, 8.30am to 7pm)

Alternatively, please call:

The Royal Marsden Macmillan Hotline: 020 8915 6899

You can ring the hotline 24 hours a day, 7 days a week.

Call us straight away if you are feeling unwell or are worried about the side effects of cancer treatments.

This service provides specialist advice and support to all Royal Marsden patients, as well as to their carers, and both hospital and community-based doctors and nurses caring for Royal Marsden patients.

References

This booklet is evidence based wherever the appropriate evidence is available, and represents an accumulation of expert opinion and professional interpretation.

Details of the references used in writing this booklet are available on request from:

The Royal Marsden Help Centre

Freephone: 0800 783 7176

Email: patientcentre@rmh.nhs.uk

No conflicts of interest were declared in the production of this booklet.

Should you require information in an alternative format, please contact The Royal Marsden Help Centre.



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