

Understanding desmopressin: A guide for families



What is desmopressin?

Desmopressin is a medication that is used to help treat bedwetting. Bedwetting in children over five years old is sometimes called enuresis or nocturnal enuresis. It is a medical condition, where the bladder empties during sleep, so the bed gets wet. Bedwetting is most common in younger children but can affect anyone of any age.

How does desmopressin work?

Vasopressin is a hormone that tells the kidneys to make less urine (wee). The body usually makes more vasopressin at night than it does during the day. Therefore, the kidneys make less urine during the night, so that the bladder can hold all the urine made during sleep. That is why many children can go all night without needing to go to the toilet.

Some children do not produce enough vasopressin while they are asleep. These children make almost as much urine during the night as they do during the day. Because of this their bladders become full before the morning. To stay dry the child needs to be able to wake up and go to the toilet. If they are not able to wake up to the full bladder signals, as is the case for many children, their full bladders let go and their bed gets wet. They stay asleep when this happens.

Making a large amount of urine at night is sometimes called nocturnal polyuria.

Desmopressin behaves like vasopressin. It tells the kidneys to make less urine during the night. For children who respond well to desmopressin, the night-time urine production reduces to normal levels. Therefore, the child's bladder can hold all the urine made until the morning, so that the child can stay dry while they sleep.

Desmopressin is available as a tablet, or a melt (DesmоМelt®), or a liquid (Demovo®)

How are the various types of desmopressin different?

The tablet version of desmopressin is similar to any other tablet. It needs to be swallowed with water. DesmoMelt® looks a bit like a tablet, but when it is put under the tongue, it dissolves quickly. The desmopressin is then absorbed through the linings of the mouth and goes straight to the kidneys to start work. This means that more of the active part of the medicine is absorbed (known as enhanced bioavailability). Therefore, DesmoMelt® can be given in a lower dose than the tablet.

Demovo® is a concentrated liquid that many children find easier to swallow than a tablet. Only a small amount is needed (the dose is usually 0.5ml or 1ml), so it is easy for most children to take. Like the melt, it is flavourless and a lower dose is needed than with the tablet.

Is desmopressin suitable for everyone?

Desmopressin is suitable for children over 5 years of age and for adults who are less than 65 years old. Desmopressin should not be used for children who have cardiovascular (heart) disease or who take diuretics (medications that help the kidneys produce more urine). It should not be used in children who have high blood pressure, low levels of sodium in their

blood, syndrome of inappropriate antidiuretic hormone secretion, or von Willebrand's disease type IIB.

It also should not be used with children who are not able to stop drinking for an hour before they take it and for eight hours afterwards.

The tablet form of desmopressin is likely to be unsuitable for children who need large quantities of water to swallow them.

Should any special care be taken when using desmopressin?

Special care should be taken when using desmopressin with children who have problems with their kidneys or who have cystic fibrosis, or epilepsy. If your child has one of these conditions, make sure you ask their paediatrician (consultant) or GP if it is alright for them to have desmopressin before giving it.

It is very important that children who have any form of desmopressin for bedwetting do not drink for one hour before taking desmopressin and for eight hours afterwards. Therefore, desmopressin should not be given on nights where your child has drunk a large amount of fluid, including during swimming, or is likely to drink alcohol (for example teenagers) before going to bed.

Desmopressin should not be taken if your child is unwell with any illness, including diarrhoea and /or vomiting, or if your child has a raised temperature.

Are there any side effects associated with desmopressin?

Desmopressin works by reducing the amount of urine produced. If your child has a lot to drink in the hour before going to bed and then takes desmopressin, the extra fluid will not be able to be passed out of the body. It will collect in the body causing fluid retention. This is sometimes called hyponatremia. Symptoms of hyponatremia include headache, feeling sick and vomiting. Hyponatremia can be a mild or a serious medical condition. It can be avoided by making sure your child does not have anything to drink for an hour before and eight hours after taking desmopressin, as advised.

Other possible side effects of desmopressin include headache, stomach pain and feeling sick. Rarely, allergic reactions and emotional disorders including aggression have been reported.

If you think your child may be experiencing any side effects, stop giving the desmopressin and talk to their doctor, pharmacist or nurse. This includes for any possible side effects not listed on the package leaflet.

Can desmopressin be taken with other medicines?

If your child is taking any other medicines, make sure you tell their doctor or nurse before they take desmopressin.

Medicines to be particularly careful about include:

- Tricyclic antidepressants
- Chlorpromazine
- Carbamazepine
- Loperamide (Imodium) and other medicines that slow bowel (gut) transit

- Non-steroidal anti-inflammatory drugs such as ibuprofen

All of these may increase the effect that desmopressin has. This means that they may reduce urine production more than with desmopressin on its own. This increases the risk of water retention and / or hyponatraemia.

What dose of desmopressin should my child have?

Your child's doctor or nurse will discuss which formulation of desmopressin (tablet, melt or liquid) may be best for your child. They will also tell you how much desmopressin your child should have. Always follow their advice and check with them if you are not sure.

The usual starting dose for the melts, DesmoMelt®, is 120mcg. The melt should be placed under your child's tongue and it will dissolve quickly. If children continue to have some bedwetting a week after starting DesmoMelt®, they may be advised to increase the dose to 240mcg. This is the maximum dose for the melts.

DesmoMelt® comes in two strengths, 120mcg and 240mcg. Children should never have more than a total of 240mcg per night.

The usual starting dose for the liquid, Demovo®, is 180mcg, which is 0.5mls. If children still have some wetting a week after starting Demovo® they may be advised to increase the dose to 360mcg, which is 1ml (maximum dose). Demovo® comes with a special syringe in the packet with the bottle to help you measure out the correct amount.

Desmopressin tablets come in 200mcg strength. The usual starting dose is 200mcg (one tablet). If children are still having some wetting at night a week after starting desmopressin tablets, they may be advised to increase the dose to two tablets (400mcg). This is the maximum dose.

When should my child take desmopressin?

Desmopressin should be given at bedtime or, if possible, up to an hour before your child goes to bed. It is important that your child does not drink for an hour before they take desmopressin and for eight hours afterwards. If you forget to give your child the desmopressin, do not give it later and do not give it during the day. Wait until the next dose the following night.

The tablet and liquid form of desmopressin may work less well if given with or shortly after food. If possible, children should stop eating an hour before they take it.

How long can my child take desmopressin for?

After 12 weeks of taking desmopressin, your child should have a week without it. This is to see if your child still needs it or can stay dry without it. If your child is wet for two or more nights in the week without desmopressin it can be restarted for a further 12 weeks. These 12 weekly cycles can continue for as long as necessary.

If your child is dry in the week without the desmopressin, they do not need to start taking it again as their body has learned to keep them dry without it. Most children need to take desmopressin for 6 – 12 months (with a week-long break after every 12 weeks), but they can stay on it for years if necessary.

If desmopressin does not work, you should talk to your child's healthcare professional, who will discuss other options with you and your child. Some children need other treatment instead of, or at the same time as desmopressin. Some children respond better to different formulations of desmopressin.

Where can I get more information about desmopressin?

There will be an information sheet in the box with the desmopressin. As with all medication, it is important that you always read the information sheet and that you contact your health care professional if you have any questions or concerns.

Your child's pharmacist, doctor, nurse or other healthcare professional will also be able to give you more information and advice.

Further advice

Always follow advice given to you by your child's doctor or nurse. Talk to them if you have any questions or concerns.

You may also contact the [Bladder & Bowel UK confidential helpline](#) via the web form.

Related information

All the Bladder & Bowel UK information leaflets about children's bladder and bowel issues are available in the [Children's Information Library](#).

For further information about Bladder & Bowel UK services and resources visit our [website](#).

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