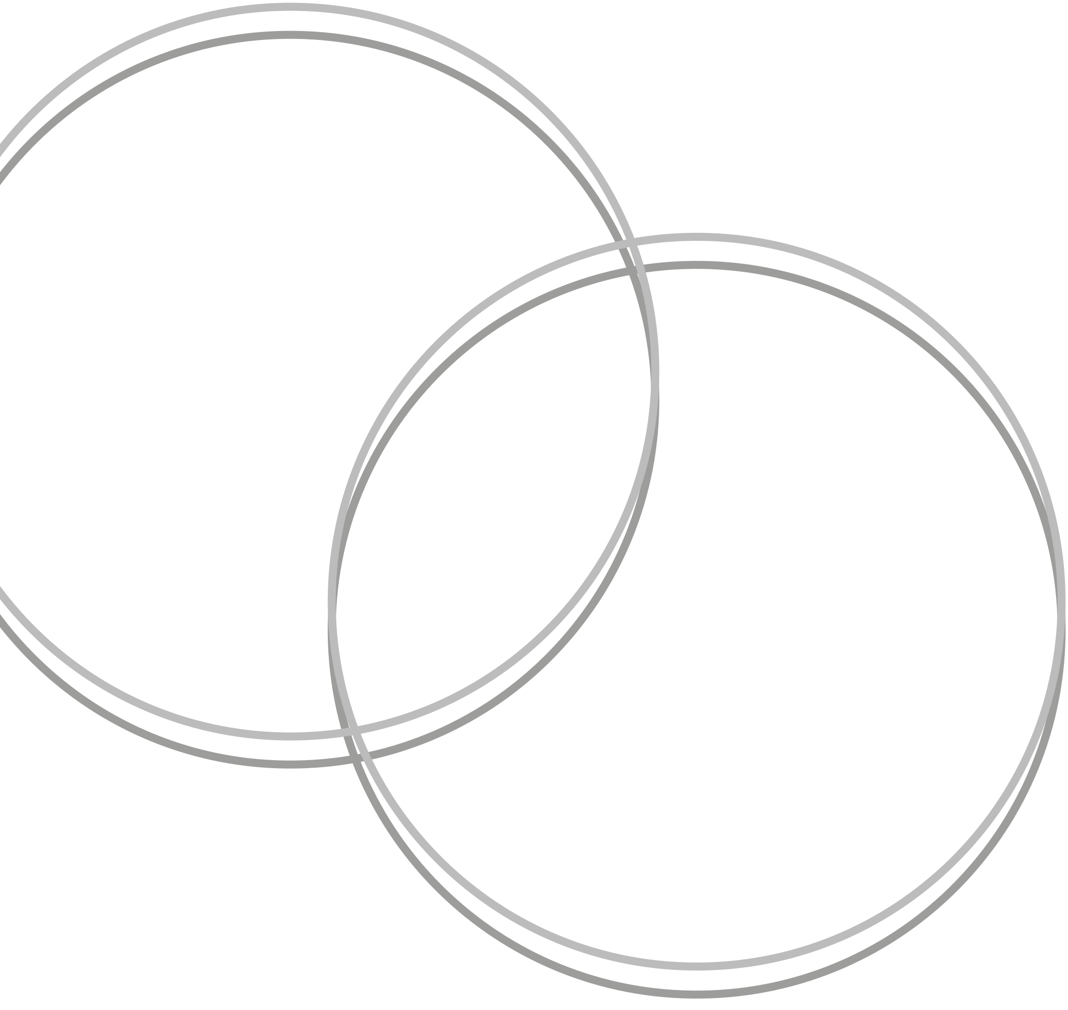
NHS
Oxford University Hospitals
NHS Foundation Trust

Parenteral Nutrition

Information for inpatients



What is Parenteral Nutrition?

Parenteral nutrition (PN) is a safe, effective treatment where the nutrients you need are given directly into the bloodstream, rather than into the gut. We use PN to provide nutrients when a person’s gut cannot be used to provide all the nutrients they need. This may be because the gut cannot be safely accessed for feeding or because the gut is not functioning well enough to digest and absorb nutrients.

PN can provide all the major nutrients a person needs, like proteins, fats, and carbohydrates, as well as the vitamins and minerals we all need. It can be used to supplement or completely replace feeding into the gut (which may be through eating or via a feeding tube).

Please inform us of any allergies or dietary restrictions you have and we will provide PN that is appropriate for you.

How is it given?

This complex mixture of nutrients is put into your blood stream through either a cannula or a hollow tube called a central catheter will be placed either in a vein in your arm, neck or at the top of your chest. The ends of the catheter will stay on the outside of your body and the tip of the catheter will sit in one of the bigger blood vessels close to your heart. It can stay there for however long you need it. You may have more than one catheter if we need to give you different types of fluid.

If you have been to theatre, you may already have a central catheter in your neck which we may be able to use. If you have not been to theatre a different type of catheter may be used. This can be inserted either in the X-ray department or on the ward by nurses from the Vascular Access Team. If required, a chest X-ray will be taken to make sure the catheter is in the right place before we start to use it.

You will start off by receiving the PN over 24 hours. This may be reduced to a shorter time once your body adapts to receiving nutrition in this way.

Your PN usually arrives on the ward in the evening and will be set up by one of the ward nurses. Nurses are specially trained to administer your PN so that it is connected and disconnected correctly and safely. This technique reduces the risk of catheter infection.

The PN comes in a large bag and will be either a clear yellow or white solution, depending on whether it contains fat. It is given through the venous catheter into your vein using a pump. If you need to get up and move around the pump should be unplugged and taken with you.

The bag must not be disconnected for any reason. If this does happen the bag will have to be thrown away and replaced with a new one as it will have been exposed to bacteria in the air. If it was reconnected it could very quickly cause you to develop an infection.

What does the Nutrition Support Team do?

The team is made up of a doctor, pharmacist, dietitian and a nurse practitioner. Members of the team will usually visit daily, from Monday to Friday. They will work with your medical team and nursing staff during your treatment

The Nutrition Support Team (NST) will work out your nutritional requirements after reviewing your full medical health and the results of your blood tests.

As your need for PN decreases so will your contact with the NST, however the dietitian will continue to review your nutritional needs. You will likely be seen by both the dietitian on your ward and the NST dietitian. The two will work closely with one another. They will also be able to advise you on the best diet for you to follow as you return to eating food again.

Monitoring

While you are being given PN, you will have the following regular checks to make sure you are receiving the right levels of nutrients and fluids:

Blood tests

Usually you will have these every day at first. As you recover, this may change and you should have them less often. These blood tests help the NST to decide which nutrients need to go into your PN.

Blood glucose

One of the contents of PN is glucose. The level of glucose in your blood will be measured by your ward nurse regularly when you first start receiving PN. This is done using a small needle called a ‘finger prick’ to get a small drop of your blood to test. This can tell us how well your body is handling the glucose from the PN. If your blood glucose control is not at the right level, we can make changes to help to balance it.

Weight

When you start PN we will need an up to date to measurement of your weight. This helps the NST to work out your nutritional needs. Your weight will continue to be checked by the ward as requested by the NST, to see how the PN is affecting you.

Fluid balance

A daily record will be kept of the fluids that you take in, including the PN, as well as the fluid you are passing out. You may be asked to keep a record of what you are drinking to help with this. Please make sure that you are passing urine and stool into a bottle or bed pan for the nursing staff to measure.

The volume of the PN can then be adjusted by the NST to make sure that your fluid balance is kept at the right level.

Will I be able to eat while I'm having PN?

Your doctor and dietitian will advise you whether you can eat or drink while on PN. Some people find they can eat small amounts and others find they can eat nothing without experiencing discomfort or side effects. The majority of people being given PN begin eating normally with no side effects. You may or may not feel hungry whilst on PN. Please let the NST know if you feel hungry or thirsty.

If eating and drinking is not possible you should still remember to clean your teeth at least once a day and to use regular mouthwashes. This will help to keep your mouth clean.

What will happen to my bowels?

Although you may not be able to eat, your bowels will continue to work but usually not as frequently as before. You may find that you will pass a stool (poo) which is quite liquid and has some mucus in it. This is because the wall of your bowel produces this all the time, even when you are not eating.

Because the PN goes directly in to the bloodstream it does not affect gut function. It does not cause gut side effects such as constipation, diarrhea, bloating or nausea and vomiting.

What about bathing/showering?

If you are showering or bathing please ask a nurse to help you. If your catheter is in your arm please make sure that you use the bathguard provided to prevent the dressing and catheter becoming wet. If your catheter is in your neck or chest avoid letting the end of the catheter go under the water.

If either the end of the catheter or the dressing do become wet, tell your nurse immediately so that the dressing can be changed. This is important to prevent any infection or damage to the area around your catheter.

Are there any problems or risks I need to know about?

There are some risks associated with PN however your ward team and the NST will monitor closely for any risks and will treat them as appropriate,

Catheter Infection

The catheters used for administration of PN go directly into your bloodstream; it is therefore important you are aware of the risk of catheter associated infection. Because of the nutritional content in the PN, this would provide a source of food for bacteria to grow. The team looking after you will therefore take careful steps to prevent bacterial contamination of your PN and venous catheter.

If you start to feel unwell or there is redness or swelling around the insertion site of the catheter please tell the nursing staff or doctor straight away. This could be a sign of infection.

If you did get an infection in your venous catheter, you may need antibiotics to treat this. The venous catheter may also need to be removed.

Electrolyte derangement

The electrolytes or salts in your body may become too high or too low. We would monitor your bloods to check for this and make adjustments as necessary to your PN. The risk of this of this may be greater if you have not eaten for a long period of time, this is called Refeeding Syndrome.

Abnormal Liver Function.

For some patients, the nutrition going directly into the bloodstream can affect the liver. Longer term, this can cause some abnormalities in liver function. We would monitor your blood tests to check for this and make changes to your PN as necessary. It is however important to note, there are many reasons your liver function could be abnormal in hospital. Some medications and some illnesses can cause this, it may not necessarily be due to PN.

Fluid overload.

Sometimes the fluid from PN can contribution to some fluid build up on your arms, legs or feet. In some cases, fluid build up causes shortness of breath. If this is the case we can look to reduce the amount of fluid we are giving you in your PN.

Extravasation

This is when there is accidental leakage of the PN from the vein into the surrounding tissue. Nursing Staff will moitor for any pain, redness or swelling at the venous catheter site. At any other time, if you notice any pain or swelling around the venous catheter or cannula please inform nursing staff.

The risks above are things to be aware of. We will do our best to prevent risk where we can and will monitor for any signs or symptoms of the above throughout your time on PN.

Catheter removal

When you no longer need PN the catheter may be removed. This will either be done by the ward nurses, the vascular access team or interventional radiology, depending on the type of catheter you have. This procedure will be explained to you before it is carried out.

A few patients may need PN in the longer term, even after they are discharged home. If this is the case your medical team and the NST will come to talk to you about this in more detail. This may mean that the catheter is not removed before you go home, or it may need to be replaced for something different.

How to contact us

Ask your ward team to contact us and we will come and review you.

Nutrition Support Team Office

Tel: **01865 851 170** or
01865 740 378

Further information

PINNT

(Patients on Intravenous and Nasogastric Nutrition Therapy)

This is a national patient support group who can offer advice and information to patients and their families/carers.

Website **www.pinnt.com**

E-mail: **comms@pinnt.com**

Tel: **0203 004 6193**

Address: PINNT, PO Box 3126, Christchurch, Dorset, BH23 2XS

Further information

If you would like an interpreter, please speak to the department where you are being seen.

Please also tell them if you would like this information in another format, such as:

- Easy Read
- large print
- braille
- audio
- electronic
- another language.

We have tried to make the information in this leaflet meet your needs. If it does not meet your individual needs or situation, please speak to your healthcare team. They are happy to help.

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