

# Parenteral nutrition (PN): information for patients and relatives

## What is PN?

Parenteral nutrition (PN) is the giving of nutrients (nourishment needed for growth and staying alive) into a vein rather than using the mouth or stomach. This may be in addition to eating food by mouth, or it may provide the only source of nutrition - otherwise known as total parenteral nutrition (TPN). In this leaflet, we will refer to PN but if you are having TPN, the same information will apply.

PN may be used for all patients who are unable to eat normally and/or absorb enough nourishment because of illness or disease.

## How is PN given?

PN is delivered through a fine piece of plastic tubing called a central venous catheter (CVC) into a vein. This can be inserted in the Radiology (X-ray) Department or on the ward by specialist nurse from the Vascular Access Team. A CVC is more appropriate than a small cannula (thin tube usually inserted into a small vein to administer medication) as it will feed into your larger veins. The PN is best given through larger veins as the solution used in PN can cause irritation if it is fed into small veins.

There are many types of CVCs that may be used but your doctor and/or nurse will discuss the appropriate device best suited to your needs. Some names of devices you may hear are: a PICC line (peripherally inserted central catheter) or a Hickman line. If you have been to theatre or to the Intensive Care Unit you may already have a CVC in your neck which we can use. The type of CVC you receive may depend on whether you require PN long or short term.

## Will PN provide all the nutrition I need?

Yes, PN will provide all the nutrients needed to maintain good health until you are able to eat normally again. The Nutrition Support Team (NST), a specialist team including consultants, nurses, pharmacists, dietitians and psychologists will ensure you get the right type and amount of nutrition you need.

## What does the PN solution have in it?

PN contains:

1. Glucose for energy
2. Proteins for growth and repair

3. Fat for energy and cell repair
4. Vitamins and minerals to keep your body healthy, and the body's organs working well (although initially these will be given as a separate infusion).

### Will I feel hungry or thirsty?

As PN is not directly given into your mouth and stomach you may experience some hunger and thirst, even though your body will be receiving all the nutrition it needs. Some people may feel hungry at meal times with the smell and sight of food. The contents of the PN bag might be able to be changed to reduce this if the NST recommends it. You may experience a dry mouth. Cleaning your teeth and regular mouthwash (or sucking on boiled sweets/ice cubes if allowed) may help with this.

### How long will the PN be given for?

When you first start PN it will be given over 24 hours. If you require PN for more than 14 days, then the timing can be altered to allow breaks during the day. This can also be altered to suit your needs. The PN will be infused (delivered) via a pump to ensure it is not given too quickly or too slowly.

### Can I eat or drink when I have PN?

This depends on the reason for PN. Sometimes, complete rest of the bowel is needed, or only a small amount of water will be allowed. Your doctor and/or nutrition team will advise you on this.

### Will I be able to move around while on PN?

The PN bag will hang on a mobile stand and the infusion pump will have a battery that will last several hours, so should not restrict your movements. You can wash but please take care not to get the dressing on your CVC wet. If the PN is running for 24 hours a day you may not be able to have a shower or bath; you will need to wash with a bowl and a sponge.

### What happens to the bowels during PN?

Mucous, cells and bacteria in the bowels still produce bowel movement, even though food is not being eaten. PN goes straight into the blood stream and does not cause diarrhoea, abdominal pain or vomiting. If you experience any of these symptoms tell your doctor or nurse as this may be due to your illness/condition.

### How will I know if the PN is working?

While on PN it is important to monitor progress carefully to make sure the body is getting what it needs, is tolerating the glucose and that there is no infection associated with the line through which PN is given. Monitoring during your PN administration will include:

1. Blood tests – to check salt levels, kidney and liver function.
2. Urine samples.
3. Body weight.
4. Blood glucose sample (pin prick test to check your sugar levels, usually four times a day when the PN is first started).
5. Observations i.e. temperature, blood pressure and pulse.
6. Fluid balance chart, i.e. all fluids you are receiving and fluids you are passing out of your body.
7. Members of the NST will visit you Monday to Friday to review and monitor your progress.
8. The ward team will monitor you Saturday and Sunday.

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

As the catheter goes directly into your bloodstream it is important that you are aware of possible signs of infection. If you start to feel unwell or there is redness and swelling around the insertion site of the catheter please tell the nursing staff or doctor straight away. This may mean that you have an infection. You may need antibiotics and possibly the catheter to be removed”.

### When will the PN be stopped?

Your PN will be stopped when nutrition is able to be given by food or supplements by mouth (and/or tube feeding into your stomach if required).

### Who are the Nutrition Support Team (NST)?

Consultant Gastroenterologists – Dr De Silva /Dr K Evans

Dietitians – Jo Middlemiss/Laura Potter

Nutrition Specialist Nurses – Linda Jones/Jo Sheahan

Pharmacists – Imogen Steed/Claire Kohler

Clinical Psychologists – Abigail Wroe/Isabel Foster

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Nutrition Support Team, October 2018

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