

Nutrition and dietetics

Parenteral nutrition: information for patients

What is parenteral nutrition (PN)?

Normally when you eat, food is broken down and digested (absorbed) in your digestive tract (known as bowel or gut). The nutrients are then absorbed through your bowel into your bloodstream. Parenteral nutrition (PN), sometimes called total parenteral nutrition (TPN), is a form of liquid food given directly into your blood stream without the need to go into your digestive tract first.

Why do I need to be fed like this?

You may need PN because your digestive tract is not working properly this may be caused by:

- Surgery, a procedure or a medical condition that requires your bowel to be rested.
- Blockage of the bowel (bowel obstruction).
- A shortened or damaged bowel.
- Large losses from a fistula (an abnormal connection between your bowel and another organ) or a stoma (a bag on the front of your tummy).

How is PN it given?

PN is usually given through a 'central line', either a thin plastic tube that is inserted under your collar bone into a vein (your bloodstream), or a peripherally inserted central catheter (PICC) line that is placed in a vein in your upper arm. Occasionally it may be given into a vein through a peripheral line (cannula) in your arm for a short period of time only, usually until a central line can be inserted. Your medical team will discuss the most suitable type of feeding line for you.

PN comes in a sterile bag which is attached to your feeding line, a pump and stand. It is initially given continuously over 24 hours and can sometimes be reduced once your body adapts to receiving nutrition in this way. Your dietitian will discuss this with you.

Your PN will be given by a ward nurse who is specially trained to administer your PN so it is connected and disconnected safely. The bag must not be disconnected for any reason, if this does happen the bag will need to be thrown away and replaced as it may have been exposed to bacteria.

What does PN contain?

The feed contains nutrients and fluid your body requires for health, healing and growth:

- Glucose for energy.
- Proteins for growth and repair of body tissue (also called Nitrogen).
- Fat for energy and cell repair (also called lipids).



- Vitamins, minerals and trace elements to keep your body healthy and your body's organs working well.
- Electrolytes (body salts) and water to regulate hydration (the amount of water in your body), your nervous system and muscle function.

How will I be monitored?

Your nursing staff, dietitian and medical team will monitor you closely whilst you are receiving PN.

- Blood tests, often daily at first, these will help the team decide which nutrients need to go in your PN.
- Blood glucose levels (usually a finger prick), as one of the main components of PN is glucose (a type of sugar). This will initially be a minimum of four times a day and can tell us how well your body is handling the glucose from the PN.
- Temperature, to monitor for signs of infection.
- Weight, minimum twice a week, to see how the PN is affecting you.
- Fluid balance, this includes all the fluid you take in, including the PN, as well as the fluid you are passing out. This is to make sure your fluid balance is kept at the right level.
- Bowel habit.

What are the risks of PN?

Your medical team, nursing team and dietitian will help to ensure that these problems do not develop, or if they do, that they are treated and corrected properly.

- line infection
- line blockage
- swelling around the cannula in your arm
- raised blood glucose levels
- fluid overload (too much fluid which may cause your legs to swell)
- dehydration
- problems with your blood results.

It is important that your medical, nursing team and dietitian are aware of any allergies you may have as this may affect the PN prescribed for you.

How long will I need to be on PN?

It may be given for a short time until you improve and occasionally, may be needed longer term. Your doctors, dietitian or specialist nurse will speak with you regarding this when you are first started on PN.

Will I be able to move around while receiving PN?

You will be able to move around whilst the feed is running as the drip stand is mobile and the pump has a battery that can last for several hours. You will need to take care when washing to ensure the line site remains dry. While PN is running over 24 hours, you will not be able to take a bath or shower.

When will it be stopped?

Your PN will be stopped when you are able to absorb adequate food and fluid directly into your digestive tract either by mouth or via a feeding tube.

Can I eat and drink while having PN?

This will depend on why you are having PN. Sometimes it is necessary to completely rest your bowel by having nothing to eat or drink. In other situations, you may be allowed some fluid and /or food, or tube feeding. Your medical team and dietitian will be able to advise you as to what you are allowed to have.

Will I feel hungry?

You generally should not feel hungry or thirsty whilst having PN; however, your mouth may feel dry. It is important to brush your teeth and use mouthwashes regularly.

Will PN affect my bowels?

PN goes straight into the blood stream and will not cause diarrhoea, abdominal pain or vomiting. The bowel will still produce mucus, cells and bacteria. Even though food is not being eaten you can still have a bowel movement, although it may be different to when you are normally eating and drinking.

Are there any alternatives?

Unfortunately there is no alternative to provide nutrients into your vein if your bowel is not able to digest food or absorb fluids and nutrients.

Where can I get further information?

Your dietitian, doctor or specialist nurse will be able to help you to get answers any questions you may have.

Useful websites

BAPEN (British Association for Parenteral and Enteral Nutrition).

Visit: www.bapen.org.uk/

PINNT (Patients on intravenous or nasogastric nutrition therapy).

Visit: www.pinnt.com/

If you need information in a different format, such as easy read, large print, BSL, braille, email, SMS text or other communication support, please tell your ward or clinic nurse.

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