Patient Information

University Hospitals Coventry and Warwickshire NHS Trust

Nutrition team

Parenteral nutrition - a guide for patients

What is parenteral nutrition?

Parenteral nutrition (PN), or total parenteral nutrition (TPN), is a way of delivering nutrition directly into your bloodstream.

PN or TPN is provided to patients who are not able to eat and drink and cannot receive liquid nutrition through a tube directly into their digestive tract. This may be for several different reasons such as:

- a blockage in the digestive tract.
- the gut not being able to move food through the gut properly.
- the gut not being able to absorb nutrients properly.
- having a leak in the gut.

PN contains all the nutrients that your body needs – calories (from sugars and fats), proteins, vitamins, minerals, and fluid. Your nutrition team dietitian will calculate how much PN you will require.

How is PN given?

PN must be given via a dedicated line which will sit in a large vein near your heart. You will be referred to the vascular access team and they will arrange for you to have a line inserted.

PN must be connected to the line under aseptic (sterile) conditions to reduce the risk of bacteria entering the bloodstream. Only nurses who have had the necessary training will be able to assess the line. You may need to be transferred to a different ward so that appropriately trained nurses can look after the line.

Will PN cause any digestive side effects?

Because PN bypasses the digestive system, it does not affect gut function. PN does not cause side effects such as pain, diarrhoea, bloating or nausea.

Some patients find that they need to pass urine more frequently when they are on PN.

Will PN run all day?

When starting on PN, it will initially run for 24 hours a day. Once you are stable on the PN, which is usually after about one week, it may be possible to gradually reduce the time the PN runs to 12 hours overnight.

How long will I be on PN for?

Your nutrition team will discuss this with you. PN will be needed until you are able to eat and drink well, or in some cases, when a feeding tube can be used to feed directly into your digestive tract. For some people this may be within a few days or weeks. For others this may take several weeks or months. Some patients may require lifelong PN.

How will my progress be monitored?

When you start on PN, you will have blood tests daily to monitor your hydration status and the levels of different salts in your blood. These tests may become less frequent over time.

We will regularly check your weight. We may also take some measurements from your arm and check your grip strength. This is to monitor whether you are losing or gaining muscle.

You will be reviewed by a consultant gastroenterologist twice a week.

The nutrition team will also review you regularly to address any issues and answer any questions relating to your PN. We may need to change your PN prescription from time to time.

Can I go home on PN?

You will need to remain in hospital until your PN can be stopped. It is possible to arrange to have home parenteral nutrition (HPN) if you require longer periods of PN. Your nutrition team will discuss whether this is a suitable option for you.

Can I eat and drink whilst on PN?

Your nutrition team dietitian will be able to provide advice on suitable foods and fluids for you to have. This will depend on why you require PN.

Are there any risks of being on PN?

As with any medical procedure, there are some risks associated with having PN. These risks can be managed with careful management and regular monitoring.

Some of the potential risks include:

- Infection – PN can be a good source of food for bacteria because it contains nutrients. To reduce the risk of bacterial contamination of your line, the nurses looking after you will use strict, sterile processes when connecting/disconnecting PN. You will regularly have your bloods and temperature checked for any sign of infection. You must not attempt to handle the line or attempt to connect/disconnect your PN.
- Refeeding syndrome – if you have had a long time without eating, starting PN too quickly can cause some of the salt levels in your body to drop. This may result in several problems in your body. To reduce the risk of this happening, the PN will be started slowly and will be gradually increased over a few days so your body can adjust. You will also be prescribed additional vitamins. You will have your bloods checked regularly so any problems can be corrected.

- Blood clots – inserting a line into a blood vessel for feeding can cause irritation. This can increase the risk of blood clots forming.

  Please alert a member of our team if you experience pain or swelling of the arm which has the line in.

  You will be given medication to break it up if a clot does form.

If you have any further questions relating to PN please speak to your nutrition team:

Consultants – Dr Burch / Dr McFarlane / Dr Ismail / Dr O'Flynn

Nurses – Teri Kilbane / Sakina Lyall / Manuel Maniu / Barbara Ayarkwa

Dietitians – Dr Nicky Wyer / Laura Helm / Laura Woodend / Holly Richardson / Eleanor Rose

Pharmacists – Ruth Bates / Amir Ghajar / Sakera Shaikh / Andrew Vokes

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