

# Access routes

## Objectives

- To describe the most commonly used feeding methods in artificial nutrition support
- To outline considerations when selecting access routes

## Introduction

Enteral and parenteral feeding should only be started with consideration of all the ethical related issues and must be in the best interest of the patient. The access route for enteral and parenteral nutrition should be decided on an individual basis according to the clinical indications, treatment plan and nutritional status of the patient, taking into account any contraindications for route of access. Where the patient has capacity, informed consent must be obtained prior to any intervention and the possible risks and benefits explained to the individual to facilitate making of an informed decision (HIS, 2015; BAPEN, 2017).

## Enteral access routes

The list of feeding tubes in the following tables is not exhaustive but provides a general overview. The insertion and care for enteral feeding must be undertaken by competent staff, following locally agreed protocols (HIS, 2015; NICE, 2006; NICE, 2012).

Instructions for placement, removal and length of time that a feeding tube is to remain in situ may depend upon tube integrity and the purpose/time they are licenced to be used. It is necessary to check manufacturer's instructions and use these in conjunction with local policy and clinical judgement to make decisions for each individual case.


All enteral feeding tubes, devices and associated equipment are now required to be ENFit compatible (GEDSA, 2017). ENFit is a global connector for all enteral plastic devices that had a phased implementation and was initially introduced in the UK in 2014.

ENFit means that an enteral plastics device will not connect to other medical devices, therefore avoiding the risk of misconnections.

A list of enteral feeding routes is shown in **Tables 5.1 - 5.18**.



**PULLOUT SECTIONS  
TABLES 5.1 - 5.18  
(pg 5.3a - 5.20b)**

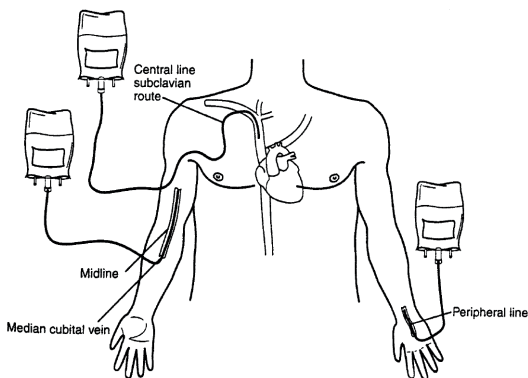


**PULLOUT SECTIONS  
TABLES 5.1 - 5.18  
(pg 5.3a - 5.20b)**

## Parenteral access routes

When deciding on the most appropriate access routes in parenteral nutrition (PN) the patient's medical condition, length of proposed treatment, nutritional, fluid, electrolyte requirements and the need for other concurrent venous access should all be considered. See **Table 5.19**. Guidelines for the insertion and subsequent care of venous catheters for PN administration should be strictly adhered to in order to reduce the risk of mechanical and infectious complications (O'Grady *et al.* 2011).


It is recommended that all hospitals have dedicated vascular access services (NCEPOD, 2010). A catheter should be selected with the minimum numbers of ports or lumens essential for the management of the patient (Loveday *et al.* 2014). Ideally a single lumen catheter should be used, dedicated for PN only. The insertion site can influence the subsequent risk of catheter related blood stream infections due to the variation in skin flora and the risk of thrombophlebitis. Central venous catheters (CVC) are generally inserted into the subclavian, jugular or femoral veins, or peripheral inserted into the superior vena cava using the cephalic and basilic veins in the upper arm (Pittiruti *et al.* 2009). To reduce the risk of thrombosis the catheter tip should be in the lower third of the superior vena cava, at the atrio-caval junction, or in the upper portion of the right atrium (Pittiruti *et al.* 2009). Peripheral catheters are usually placed in the hand / forearm **Figure 5**.



**Figure 5.** Access routes for parenteral nutrition Reprinted with kind permission (Nightingale, 2001).



**PULLOUT SECTIONS  
TABLE 5.19  
(pg 5.23a - 5.23b)**



PULLOUT SECTIONS  
TABLE 5.19  
(pg 5.23a - 5.24b)



## Key points

- Enteral and parenteral feeding should only be started with consideration of all the ethical related issues and must be in the best interest of the patient.
- The access route for enteral and parenteral nutrition should be decided on an individual basis according to the clinical indications, treatment plan and nutritional status of the patient, taking into account any contraindications for route of access.

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