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*WITHIN THIS BOOKLET, JEJUNAL ALSO INCLUDES DUODENAL DEVICE/FEEDING.
INTRODUCTION

A parent being told that their child requires jejunal enteral feeding can be overwhelming especially if there has previously been no knowledge of this process. However, with sufficient support and training, it is envisaged that any anxieties will be reduced and you as a parent and carer will be able to undertake your child’s feeding confidently and competently.

This parent’s guide to jejunal enteral feeding has been developed to provide essential information and support to parents and carers.

The information in this guide has been identified by parents as a result of a questionnaire and parent focus groups, exploring the information that parents would like to receive.

Comments and feedback from parents and staff have also been provided and used during the development of the booklet.

The Community Children’s Nursing (CCN) Team are Nurses who will provide support to your child and family within your home.
WHY DOES MY CHILD REQUIRE A JEJUNAL ENTERAL DEVICE?

Every child is unique and the reason that they need a jejunal enteral device may differ from another child. Even if the device is required for the same reason a completely different type of enteral device may be used.

Generally a jejunal enteral device is necessary to assist the child in meeting their nutritional, hydration and/or medication needs when there are problems feeding into their stomach or they are at risk of pulmonary aspiration.

Your child’s doctor will discuss and explain the reasons why your child requires a jejunal enteral device.

The Gastrostomy Nurse Specialist will show and demonstrate the care and management of the type of enteral device identified for your child.

WHAT ARE JEJUNAL DEVICES?

A jejunal device is placed in your child’s jejunum/duodenum which is part of the small bowel.

The small bowel –jejunum/duodenum is part of the gastrointestinal tract after the stomach and before the large intestine. This is where digestion and absorption of liquid food takes place.
Feeds given by this method are always continuous feeds over a prolonged period of time.

There are many different types and makes of jejunal devices.

It can be very confusing when professionals talk about the different devices.

Do not worry as you will be trained in the type of jejunal enteral device necessary for your child.
TYPES OF JEJUNAL ENTERAL DEVICES

There are three types of jejunal enteral devices that may be used:

**Nasojejunal/nasoduodenal tube** – a tube inserted via the nose through the stomach and into either jejunum or duodenum.

This type of tube is always inserted and replaced in hospital.

**The marking at the nostril and length of the jejunal tube left outside of the child’s body from the nose must be checked and recorded** check the position of this tube before administering each feed, before giving medicine/flush and at least daily if when not in use. Recheck position following any episodes of vomiting, retching or coughing spasms in case the tip of the tube has moved out of position.

**Gastrojejunal device** – a small opening is made in the stomach wall called a stoma and the device is placed into stomach where the tube extends into the jejunum. It is held in place by a water filled balloon.
This type of device allows for aspiration and venting of stomach and feed/medicine administration into the jejunum.

Medications can be given into either the child’s stomach or jejunum as directed by the doctor.

**This device is only replaced in hospital.**

**Jejunostomy** – A small opening is made into the small intestine (stoma) and device is inserted. This may either be a button type which lies skin level or have a tube with an external plate. It may be held in place by a water filled balloon or internal bumper.

This type of device is used for continuous feeds ONLY. The feeds are administered slowly over a prolonged period of time.

Certain medicines can be administered via this device and must be prescribed by the doctor.
ENTERAL DEVICE ESSENTIALS

Before your child is discharged from hospital you will be given the following information regarding your child’s jejunal device.

- The type and size of enteral device inserted
- The amount of water used in the balloon if the device has a balloon.
- The reason for the enteral device ie feeding/medicines/aspiration/venting

This is the essential information required should your child be admitted to hospital and for your CCN team.

If your child has been discharged within 72 hours after insertion of the enteral device it is very important to seek urgent medical advice if your child experiences

- Pain on feeding
- Prolonged or severe pain
- Fresh bleeding

You will be given the contact numbers of who to contact out of hours, Bank Holidays and at weekends.
TRAiNING

You will be trained and deemed competent in all aspects of your child’s feeding device and feeding regimen.

Your CCN will offer annual update training whilst your child has an enteral device in place.

You will be trained in:

- The importance of handwashing
- Care of stoma site of jejunal enteral device
- Management of jejunal enteral device, fixation plate, clamp, balloon, routine replacement of device
- What to do if your child’s jejunal enteral device accidentally comes out.
- Disposables required for jejunal enteral feeding
- How to store, prepare and administer your child’s feed and medicines.
- How and when to check the position of your child’s jejunal enteral device
- How and when and what to use to flush your child’s jejuna enteral device
- How to recognise and manage complications
DISCHARGE FROM HOSPITAL

A spare enteral device will be provided if necessary – this device MUST always accompany your child.

Adequate amount of supplies will be provided until the CCN is able to organise your own supplies within the community.
HAND WASHING

It is very important to wash your hands before handling your child’s enteral device and preparing and administering their feed. It is one of the most important ways of preventing and controlling the spread of infections.

You will become familiar with the 7 steps of handwashing – all health professionals use this method of washing their hands when working with their clients.

### HAND HYGIENE

1. **Palms**
2. **Backs**
3. **Between fingers**
4. **Thumbs & webs**
5. **Knuckle grip**
6. **Fingertips**
7. **Wrists**

You can do it in...45 SECONDS

- Wet hands under running water and then dispense one dose of liquid soap/antiseptic onto hands.
- Wash vigorously for 15 seconds. Following steps 1-7 without adding more water.
- Ensure hands are well rinsed.
- Dry hands thoroughly with paper towel and turn off taps with elbows or paper towel.
- Dispose of towel in bin. Always use the foot operated pedal and not your hand to open bin.
- Apply hand cream regularly.
CARE OF THE ENTERAL DEVICE SITE

Nasojejunal tube site
Ensure tube is securely taped in position and always replace tape if it appears to be loose. This is to avoid the tube becoming displaced.

Use a soft hypoallergenic dressing on your child’s face for securing tube and check their facial skin daily for any reaction to tape.

Do not tape the tube too tightly to your child’s nasal passage as the tube should be able to move freely when your child swallows to avoid any damage to your child’s nasal passage.

Gastrojejunostomy and jejunostomy site
The enteral device site will be known as the ‘stoma site’. It can take up to 2 weeks for the site to heal and sometimes this can take longer but your CCN will support and guide you in caring for your child’s stoma site.

At the beginning you may be apprehensive to touch your child’s stoma site. This may be because you are frightened you will hurt your child or dislodge the device.

The Nurse will show you how to clean the stoma site and then observe you doing this until you feel confident in doing it yourself.
Clean your child’s stoma device twice daily.

Use gauze/cloth that does not shed fibres as loose fibres can become entangled in your child’s device.

Always ensure you dry the stoma site after cleaning.

If you notice any redness, discharge, swelling and or pain contact your CCN for further advice.

Do not rotate these devices – do not worry if you see them freely moving within the stoma site.

Your child may have a shower following discharge from hospital. It is important that the enteral device is not submerged under water at this stage.

Once you have been advised the stoma site has healed your child may have a bath.

Swimming will be permitted at this stage and it is important to clean your child’s stoma site following swimming and dry thoroughly as the chlorine may aggravate your child’s stoma site.

**Clamp on the enteral device**

If your child has an enteral device with a clamp - you are advised to keep the clamp open when the device is not being used. This will prevent a weakness in the device tubing and prolong the use of the enteral device.
MANAGEMENT OF THE BALLOON JEJUNAL ENTERAL DEVICE

Some enteral devices have a balloon which is inside your child’s jejunum and this balloon holds the device in place.

It is important to look after the balloon which means the water in the balloon needs to be changed on a weekly basis.

You will be trained to do this and the CCN will always be with you until you feel confident in doing this yourself. You will be told how much water to insert into the balloon.

You should change the water in the balloon in the morning so that if you have any concerns you can contact your CCN.

What if my child’s enteral device accidentally comes out?
If your child’s device accidentally comes out you must bring them immediately to your local hospital.

Taking good care of your child’s enteral device will help prevent the device from coming out – very importantly you must ensure that when you are moving and handling
your child that the enteral feeding tubing does not get trapped in your child’s buggy or chair that would pull on the device and cause it to come out.

Also ensure your child is not able to pull on the device accidently.

Bring your child to the nearest hospital remembering to bring your replacement enteral device if one was supplied.

The replacement enteral device should always be with your child at all times e.g. school, respite, sleepovers
ENTERAL SYRINGES

You will be provided with purple enteral syringes. These come in two types

- Single use which means you dispose of them after one use. This type is always used in hospitals.
- Reusable syringes which mean you can wash and reuse the syringe for up to one week. This type is most commonly used within the home and school.

Syringes come in various sizes. It is recommended that you use the largest size of syringe possible as this reduces the amount of pressure delivered when you are using the syringe for example 60ml/20ml. This will prevent damage to the internal part of your child’s enteral device.

Your CCN will explain to you the type and size of syringe identified for your child. You may be required to use a smaller size of syringe depending on the amount of flush required for your child and also your child’s medication doses.
How to care for reusable syringes

• Once you have used the enteral syringe – take the syringe apart and wash in warm soapy water and rinse.
• Leave the parts to dry
• Once dry store in a clean dry lidded container until they need to be used again.
• Dispose of your enteral syringes on a weekly basis

Do not use the enteral syringe if

• The markings on the syringe are no longer visible
• The syringe is damaged in any way
• There is stiffness when using the syringe
• If you are unable to ensure thorough cleaning between uses.

Feeding sets
Your CCN will explain to you what type of feeding set you will use for your child. A new feeding set will be used for each feed.

Extension sets
These are attached to the gastrojejunostomy and jejunostomy device when you are feeding/flushing/administering medicines.

They can be washed in soapy warm water and rinsed and left to air dry. Once dry place them in an air tight
container to ensure that they are kept clean when not in use.

Extension sets can be used up to two weeks at a time and then disposed of in household waste.

**Disposal of enteral feeding equipment**

When you are finished with your equipment – feeding syringes and sets – you are advised to place in a bag and put into your household bin.

Unfortunately enteral syringes cannot be recycled and must be placed in the black bin.

You can check with your local council re a second black bin if you are finding you are accumulating a lot of waste.
WHAT IS VENTING?

Venting is letting the air (wind) out of the small intestine by using only the barrel of a 60ml enteral syringe – remove the plunger i.e. the purple inside of enteral syringe.

HOW DO I CHECK THE POSITION OF MY CHILD’S JEJUNOSTOMY DEVICE?

• This is done by withdrawing a small amount of jejunal contents with an enteral syringe. This is called the aspirate.
• Place 2-3 drops of the aspirate onto the pH strip.
• Let any excess aspirate on the strip run off onto a paper towel.
• Within 10 – 60 seconds check the colour of the strips
against the colour chart on the pH strip container. After 60 seconds the strip is not to be used as a check as the reading will be false.

• The reading between 6-8 indicates that the tip of the enteral device is in your child’s jejunal. **DO NOT USE ENTERAL DEVICE if pH value is below 6.**

• Only use each test strip once.

• You will be shown and supervised to do this check.

**Storage of pH indicator strips**

• Keep the pH indicator strips in a cool dry place.
• Keep the container sealed by always replacing the correct lid after every time you remove a strip.
• Check the expiry date on the container and use within the expiry date.

**What does decompression of my child’s stomach mean?**

If your child is at risk of aspiration of stomach contents, it is important to remove any stomach contents to keep them at a minimal amount.

You can only do this if your child has a gastrojejunostomy inserted.
Your child may have a drainage bag attached and this is called ‘free drainage’ which ensures there is a constant removal of stomach contents.

Another method of removing the stomach contents is by attaching a large syringe and slowly withdrawing the plunger which will remove any contents in the stomach. You will be advised how often this may need to be done.
FLUSHING JEJUNAL ENTERAL DEVICES

A flush is administering water into the feeding tube, usually with a syringe to clear feed/medication in order to keep it from blocking.

You will be trained and supervised how to flush your child’s device

- Before and after each medication administration
- Before and after feeding
- Daily if enteral device is not being currently used
- During continuous feeds the enteral device will be flushed every 4-6 hours.

What do I use to flush my child’s enteral device?
Sterile water is used with all jejunal devices within the hospital setting.

Freshly cooled boiled water is used to flush your child’s jejunal enteral device within the home and community settings.

How much flush do I use?
Your child’s Dietitan/CCN will advise you on the volume required to flush your child’s jejunal enteral device.

How do I flush my child’s enteral device?
Flush is always administered very slowly.
You will be shown how to flush using a pulsatile action. That is a push/pause technique. This technique promotes a turbulence effect within the tubing and ensures adequate flushing and helps prevent any blockages occurring.

**Hint** If you say the words “push pause” during time of flush you will remember to do this technique.
ENTERAL FEEDS

Your child’s Dietitian will prescribe the most suitable type of feed that your child requires and they will always ensure, with the support of your CCN, that you are aware of all aspects of preparation and administration of your child’s feed.

There are two types of feed

1. Ready to use feed which has been specially prepared and prepacked.
2. Reconstituted feeds which come in powdered form which you prepare yourself.

**Ready to use feed**
- Store ready to use feed in a cool, dry place out of direct sunlight. Avoid storing feeds in gardens sheds/garages and next to radiators.
- Use within expiry date
- Depending on the amount of feed your child has been prescribed there may be left over feed – this can be labelled with date and time it was opened, refrigerate and disposed of after 24 hours if not used.

**Reconstituted feed**
- To prepare powdered feeds boil the kettle and leave it to cool for no longer than 30 minutes.
- Powdered feeds must be used within 4 hours – otherwise prepare a new feed.
Method of administration of enteral feeds
All feeds administered into the jejunum are given as slow continuous feed. The Jejunum does not tolerate large volumes of feed as it does not expand like your stomach.

Continuous feed
• This method of feeding is always administered by a feeding pump.
• The enteral device is flushed before and after feed and 4-6 hourly during the feed.
• Where possible your child will be prescribed a feed which can be attached for the period of time it is required. If this is not possible, add new feed every four hours to feeding system.

Important factors if your child requires overnight continuous feeds
• Sleep in the same room as your child
• Your child should be fed at an angle of at least 30 degrees.
• Never leave your child unattended if they are awake.
• Position the feeding pump at the side of your child’s bed/cot ensuring the administration set is threaded through the bars rather than over the top of cot.
• The feed tubing should be threaded through the inside of your child’s night clothes
PREPARING TO FEED YOUR CHILD

- Collect everything you need
- Feed
- Enteral syringes
- Feeding set
- Feeding pump
- Water for flushing
- Medicines if required at that time
- Wipe clean your tray with antibacterial wipe/spray.
- Set in order of use the equipment required for feeding and prepare.

ORAL HYGIENE

- For children under 2 years of age – mouth care is recommended.
- Tooth brushing should be performed twice daily.
- If your child is not allowed oral fluids – additional oral hygiene maybe required to keep the mouth moist to prevent gum disease and stimulate saliva and gastric secretions.
- Your child should be registered with a Dentist
- If your child is unable to use toothpaste – speak to your Dentist about obtaining an alternative product to toothpaste.
GLOSSARY

**Administration Set**
Plastic tubing used to connect the container to the feeding device

**Aseptic Non-Touch Technique (ANTT)**
A unique and contemporary practice to reduce Health Care Associated Infections using an aseptic technique

**Aspiration**
A procedure used to determine the position of the end of the tube. Aspiration also refers to the accidental sucking in of food particles or fluids into the lungs

**Balloon**
A water filled balloon holds some gastrostomy devices securely in the stomach

**Bolus/Intermittent Feeding**
A prescribed volume of feed given slowly via a syringe at a specific time.

**Buried Bumper Syndrome**
A rare complication which occurs when the internal plate has become buried in stomach wall.

**Carer (caregiver)**
Someone other than a health professional who is involved in caring for a person with a medical condition.

**Continuous feeding**
Continuous feeds are the administration of a feed at a slower rate over a prolonged period.
Decanting
Pouring feed from the original container into the administration set container

**Enteral nutrition**
The provision of safe and effective nutritional support through the use of an enteral feeding device.

**External Fixator**
A device that holds the enteral tube in place against the skin.

**Flush**
Administering a small volume of water through the tube to clean it after you have used it to deliver your feed or medications.

**Gastro-oesophageal reflux disease (GORD)**
A common condition where acid from the stomach leaks out of the stomach and up into the oesophagus.

**Gastrostomy Tube**
Feeding devices which allow liquid feed, fluids and/or medicines to be delivered directly into the stomach

**Gastrojejunostomy tube**
Enteral tube inserted through the abdominal wall which passes through the stomach into the jejunum for the purpose of nutrition support.

**Hypoallergenic**
Reduces the possibility of an allergic reaction

**Immuno-compromised**
Vulnerable to infection due to having an immune system that has been impaired by disease or a medical treatment
**Jejunostomy Tube**
A tube inserted directly into the jejunum (part of the small intestine)

**Naso-jejunal tube/Naso-duodenal tube**
A polyurethane tube which is inserted via nose through the stomach and into either the duodenum or jejunum

**Over granulation**
Granulation tissue (natural healing process) beyond the amount required to replace the tissue loss as a result of skin injury or wound

**PH Indicator Strips**
Used to confirm the feeding device is in the correct position by measuring the amount of acid in the stomach contents.

**Push/Pause technique**
A pulsatile flushing action to promote a turbulence effect within the tube.

**Single Use**
Use only once and then discard

**Single child use**
Can be used more than once on one specific child only.

**Stoma**
A surgical created opening into the body from outside the body.

**Venting**
Venting is letting the air (wind) out of the stomach.
This booklet has been developed by Patricia Meehan & Gillian McCorkell WHSCT in conjunction with parents, carers and staff within Northern Ireland in conjunction with the Development of Gain Guidelines for caring for an infant, child, or young person who requires enteral feeding.

A special thanks is extended to all the children and their parents who consented to photographs which are used. Further support and useful links can be found at PINNT/Half PINNT at http://pinnt.com/home.aspx
Further copies of this guideline can be obtained by either contacting the GAIN Office or by logging on to the GAIN Website.

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