

Nasojejunal (NJ) Tube Feed

Management at Home for Infants and Children



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Your Infant's or Child's Nasojejunal (NJ) Tube

Date:

Type of tube:
Size of tube:
Length of tube (cm):
Tube measurement at the nose (cm):
Date the tube was last inserted:
Date the tube will be changed:

Date:

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Size of tube:
Length of tube (cm):
Tube measurement at the nose (cm):
Date the tube was last inserted:
Date the tube will be changed:



Note: The NJ tube will be changed once a month. If it falls out within the month, please use the same tube for reinsertion.

☐ Transcribed information reviewed for accuracy and confirmed by healthcare provider

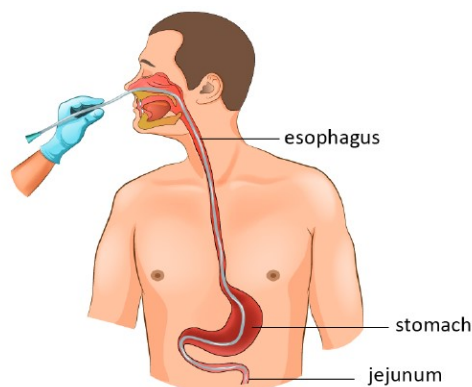


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What is a Nasojejunum Tube (NJ) Tube?

A NJ tube is a small, flexible, plastic tube that is placed through your infant's or child's nostril, down the esophagus, passed through the stomach and into the middle section of the small intestine called the jejunum. The NJ tube can only be placed by a doctor while using x-rays. Parents/Caregivers cannot place a NJ tube.

Reasons Infants or Children May Need a NJ Tube

A NJ tube is often used for a short period of time to give your infant/child medication or food and water when they cannot eat or drink by mouth. Your infant/child may need a NJ because they may not be able to eat or drink enough by mouth or swallowing is difficult or unsafe. This type of tube is used for children who are unable to tolerate feeding into the stomach due to dysfunction of the stomach, impaired gastric motility, severe reflux or vomiting.

What to Feed

Often, jejunal feeds require a special pre-digested formula for better tolerance and nutrient absorption. Your health care team will tell you the amount, rate, and type of feed your infant/child will need.

Formula	Amount	Time	Rate (if using pump)



NOTE:

Your dietitian will meet with you to discuss your infant's or child's individualized feeding plan, including water flushes.


Other Information:

☐ Transcribed information reviewed for accuracy and confirmed by healthcare provider

Water Flushes

The NJ tube must be flushed before and after each feed, each medication and every 4 to 6 hours during continuous feeding.

- Use **sterile** water for infants up to 4 months of age for both water flushes and preparing infant formula.
- For infants older than 4 months and children, flush with room temperature tap water after feeds and purified* water after giving medications.



***Purified Water:**

- **Water that has underwent any of the following:**
 - ⇒ Filtration
 - ⇒ Distillation
 - ⇒ Deionization
 - ⇒ Ion exchange
 - ⇒ Reverse Osmosis
- **Examples are:**
 - ⇒ Sterile water
 - ⇒ Distilled water

Patient/Caregiver Notes on Feeding Plan and Water Flushes

Feeding by Feeding Pump

- A feeding pump controls the flow and rate of the food from the feeding bag and tubing through the NJ tube and into your infant's/child's jejunum.
- Feeds into the jejunum must be given by a continuous infusion using a feeding pump and cannot be given by gravity or as a bolus feed.
 - ⇒ Gravity and bolus feeds are not recommended because unlike the stomach, the diameter of the jejunum is too small and inflexible to expand and accommodate large volumes at fast rates.
- Giving a continuous infusion at a slow rate spread out over several hours helps prevent feeding intolerance.

Feeding by Feeding Pump		
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Step 4	Flush before Feeding	Page 8
Step 5	Start the Feed	Page 9
Step 6	Flush After Feeding	Page 9
Step 7	Clean Up	Page 9

Step 1 - Get Ready

1. Wash your hands well with soap and water.
2. Gather supplies:
 - Feeding bag and tubing
 - Feeding pump and IV pole
 - Appropriate sized syringe for water flushes
 - Enteral formula
 - Water for flushes
3. Prepare enteral formula as instructed by your dietitian.
Check expiration dates.
4. Prepare water for water flushes.
 - Infants up to 4 months old use sterile water.
 - Infants over 4 months old and children use tap water that is room temperature.




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Step 2 - Check the Placement



You must check the placement of the NJ tube to make sure that it is in the jejunum:


- At the time of placement; and
- Before every feeding; and
- Before giving medications;
- If you are worried the NJ tube has come out; and
- At least every 4 hours.

Wash your hands well with soap and water before checking the placement.



You must see these 2 signs to confirm that the NJ tube is in the jejunum:

The centimeter marking	<ul style="list-style-type: none">• The tube was measured and marked at the spot where it should come out of the nose. <div> If the tube is in the right place, the mark is at your child's nose.</div> <ul style="list-style-type: none">• If there are no numbers on the tube, measure the tube from the nostril to the end of the tube on the outside of the body. The health care team will give you this number. <div> If the tube is in the right place, the number will match the number you were given.</div>
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DO NOT use the tube if:

- The mark is not at your child's nose
- The measurement from your child's nostril to the end of the tube outside of the body has changed

★ **You MUST return to your local Emergency Department to have the placement confirmed with an x-ray.**

Step 3 - Positioning

Position your infant or child to prevent aspiration (feed entering the lungs) and/or reflux.

Age	Positioning Suggestions
Infant who <u>can</u> NOT sit up on their own	<ul style="list-style-type: none">• Hold and cuddle your infant during feeding.• Elevate infant's head to 30 degrees during the feed (the head should be higher than the stomach).• If feeds are given in bed, the head of the bed should be raised up to 30 degrees.• Burp infant after feeding and keep infant upright for at least 1 hour after each feed
Infant, toddler or child who can sit up on their own	<ul style="list-style-type: none">• NJ tube feed your infant/child during family mealtimes when possible.• Have infant/child seated in an upright and comfortable position in a high chair, wheelchair, or kitchen chair for the feeding.• Keep upright for at least 1 hour after each feeding.

Step 4 - Flush Before Feeding

1. Wash hands well with soap and water.
2. Draw up the required amount of water into an appropriate sized syringe.
3. Pinch the NG feeding tube, uncap the NG tube and attach it to the syringe.
4. Release the pinch and use a **SLOW** "push-pause" technique to flush water through the NG tube.
5. Pinch the NG tube, remove the syringe, and recap the NG tube.

Step 5 - Start the Feed

1. Gently shake enteral formula.
2. Wipe the top of the enteral formula container with a clean wet cloth.
3. Pour enteral formula into feeding bag.
4. Throw out any enteral formula left in the feeding bag and replace with new formula every 4 to 6 hours or as directed by your dietitian.
5. Hang the feeding bag on the IV pole if needed.
6. Plug in and turn on the feeding pump. Attach feeding bag to the pump as you were taught or refer to the pump's instruction manual.
7. Prime the tubing by letting the formula run to the end of the tube. This lets the air out of the tube so that air does not go into your infant/child's stomach.

Note: When priming ENFit™ tubes, stop formula 1 inch before the end of the tube. This will help keep the connection clean.

8. Pinch the NJ tube, uncap the NJ tube and attach the tip of the feeding bag tubing to the NJ tube.
9. Release the pinch and start the feeding pump as taught by your dietitian and/or refer to the pump's instruction manual.
 - Set the **RATE** and **DOSE** on the pump according to your Feeding and Flushing Schedule on page 4 and 5.
 - Press the **START** button.

Step 6 - Flush After Feeding

1. Draw up the required amount of water into a syringe.
2. Pinch the NJ feeding tube, remove the feeding bag tubing and attach the syringe.
3. Release the pinch and use the “push-pause” technique to flush water through the NJ tube.
4. Pinch the NJ tube, remove the syringe, and recap the NJ tube.

Step 7 - Clean Up

1. After each feed throw out any feed left in the feeding bag.

Note: Once the enteral feed can is open it may be covered and stored in the refrigerator for 24 hours.

2. Rinse the syringes and extension sets with clean warm water.
3. Rinse the feeding bag and tubing with clean warm water and allow it to flow through the tube until the tube runs clear.
4. Use a bottle brush or shake the bag back and forth several times to help remove formula from the bag and tubing.
5. Allow supplies to air dry and store them in a clean dry place.
6. Keep the pump plugged in when not using to keep the battery charged.

Feeding Intolerance and Problem Solving

Sometimes your infant/child may not tolerate their feed. Try these suggestions to help manage the symptoms. If the symptoms persist or if your infant/child is in pain, stop the feed and contact your infant/child's doctor or go to your local Emergency Department.

Sign or Symptom	How to Manage the Sign/Symptom
Problems breathing	<ul style="list-style-type: none"> • Immediately stop the feed. • Do a NJ tube placement check. • If placement not confirmed, DO NOT use the tube and you MUST return to your local Emergency Department to have the placement confirmed with an x-ray. • CALL 911 and remove the NJ tube if infant/child is in distress.
Irritability or Cramping	<ul style="list-style-type: none"> • Provide formula at room temperature. • Give feeding over a longer period of time. • Contact your infant/child's health care team.
Throwing-up or gagging	<ul style="list-style-type: none"> • Give feedings over a longer period of time. • Keep your infant/child's head higher than their body. • Keep your infant/child in an upright position for 60 minutes after feeding.
Diarrhea	<ul style="list-style-type: none"> • The most common cause of diarrhea is a virus. • A new formula may cause a change in the normal shape, colour, and amount of your infant/child's stools. • Your dietitian may be able to provide you with other options. • Contact your infant/child's health care team.
Constipation	<ul style="list-style-type: none"> • Water flushes may need to be reviewed. • For formula fed infants, ask your dietitian about adjusting the calorie concentration of the infant formula. • For children, ask your dietitian about formula containing fibre. • Constipation may be related to your child's medical condition. Ask the doctor, nurse, or dietitian to discuss this with you.

Medications and NJ Tubes

Tips for Giving Medication

- Some medications can be more likely to clog the NJ tube. Talk to your healthcare team before giving new medications to make sure they will not clog the NJ tube.
- Use the liquid form of a medication if possible.
 - ⇒ **For capsules:** open capsule and place contents in a cup and dissolve in a small amount of purified warm water as directed by your pharmacist.
 - ⇒ **For tablets or pills:** place pill or tablet between 2 spoons and crush or use a pill crusher. Place contents in a cup and dissolve in a small amount of purified warm water as directed by your pharmacist.



- **Do not** mix medications together.
 - ⇒ If your infant/child is on multiple medications, flush purified water between each medication as directed by your healthcare team.
- Medications must be given by a **SLOW** “push-pause” technique. The jejunum cannot tolerate fast administration.

Giving Medication to your Infant/Child with NJ Tube		
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Step 5	Flush After Medication	Page 12

Step 1 - Get Ready

1. Wash your hands well with soap and water.
2. Gather supplies:
 - Syringe
 - Purified water for flushing
 - Medication
3. Prepare the medication.
4. Prepare purified water for water flushes.



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Note: Use purified water for water flushes after giving medications to infants and children through an NJ tube. See page 5 for information on purified water.

Step 2 - Check the Placement

You must check the placement of the NJ tube to make sure that it is in the jejunum:

- At the time of placement; and
- Before every feeding; and
- Before giving medications;
- If you are worried the NJ tube has come out; and
- At least every 4 hours.

Wash your hands well with soap and water before checking the placement.

 You must see these 2 signs to confirm that the NJ tube is in the jejunum:	
The centimeter marking	<ul style="list-style-type: none">• The tube was measured and marked at the spot where it should come out of the nose.  If the tube is in the right place, the mark is at your child's nose. <ul style="list-style-type: none">• If there are no numbers on the tube, measure the tube from the nostril to the end of the tube on the outside of the body. The health care team will give you this number.  If the tube is in the right place, the number will match the number you were given.
	DO NOT use the tube if: <ul style="list-style-type: none">• The mark is not at your child's nose• The measurement from your child's nostril to the end of the tube outside of the body has changed ★ You MUST return to your local Emergency Department to have the placement confirmed with an x-ray.

Step 3 - Flush NJ Tube Before Giving Medication

1. Wash hands well with soap and water.
2. Draw up the required amount of purified* water into an appropriate sized syringe.
3. Pinch the NJ feeding tube, uncap the NJ tube and attach it to the syringe.
4. Release the pinch and use the “push-pause” technique to flush purified water through the NJ tube.
5. Pinch the NJ tube, remove the syringe, and recap the NJ tube.

**Purified water is water that has underwent filtration, distillation, deionization, ion exchange, or reverse osmosis. Examples of purified water include sterile and distilled water.*

Step 4 - Give the Medication

1. Pinch the NJ tube, uncap the NJ tube and attach to the medication syringe.
2. Release the pinch and use the “push-pause” technique to push the medication into the NJ tube.
3. Pinch the NJ tube, remove the medication syringe and recap the NJ tube.

Step 5 - Flush NJ Tube After Giving Medication

1. Draw up the required amount of purified water into a syringe.
2. Pinch the NJ feeding tube, uncap the NJ tube and attach it to the syringe.
3. Release the pinch and use a **SLOW** “push-pause” technique to flush purified water through the NJ tube.
4. Pinch the NJ tube, remove the syringe, and recap the NJ tube.

What to do When the NJ is Accidentally Pulled Out

Because the NJ tube must be placed by a doctor while using x-rays, it is **IMPORTANT** to prevent the NJ tube from being accidentally pulled out. Depending on the age of your infant/child, different techniques on how to best secure the tube will be discussed with you by your healthcare team.



If the NJ tube accidentally comes out you must go to your local Emergency Department to have the tube reinserted. Replacement NJ tubes may not be available as some tubes are specially ordered, so it is **VERY IMPORTANT** to bring your infant/child's tube with you.



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NJ Tube Care

- NJ tube care is dependent on the type of NJ tube used.
- If your infant/child has an ENFit™ feeding tube follow the cleaning procedure below.
- If your infant/child does not have an ENFit™ feeding tube, your health care team will give you cleaning instructions specific to your infant's/child's tube.
- Most long term tubes are changed once a month. Your health care team will determine this on an individual basis.

NJ Tube Care (ENFit™)

1. Gather supplies:
 - Sterile water for infants 0 to 4 months or clean tap water for infants older than 4 months and children
 - Gauze
 - Brush (clean toothbrush or ENFit™ specific cleaning tool)
2. Wash your hands well with soap and water.
3. Rinse brush with tap water.
4. Fill syringe with water.
5. Plug center hole of feeding tube port with brush bristles.
6. Forcefully flush moat with water.
7. Rotate brush in bottom of moat.
8. Rinse cap with clean tap water.
9. Insert bristles into feeding tube cap and rotate brush in cap to clean.
10. Wipe feeding tube port and cap with gauze.
11. Clean supplies and allow to air dry.

**Cleaning ENFit™ Feeding
Ports [Cardinal Health]**



Preventing the NJ Tube from Clogging

- Flush the NJ tube with water before and after feeding.
- Flush the NJ tube with water before and after giving medication.
- Flush the NJ tube with water every 4 to 6 hours with continuous feeds.
- If the feeding tube becomes clogged do not insert any objects into the tube. This could result in puncturing the tube.
- If the NJ tube clogs often, you may not be flushing the tube frequently enough. Ask the dietitian to review your child's flushing schedule.
- Some medications can clog the tube. Talk to your pharmacist before giving a new medication to ensure it will not clog the NJ tube.

If the NJ Tube Clogs

- Attach an empty syringe to the NJ tube and gently pull back on the plunger.
- If you are unable to unclog the NJ tube, you **MUST** return to your local Emergency Department.

Skin Care Around the NJ Tube

- Keep the skin around the nose and cheek clean and dry.
- Tape NJ tube flat against cheek as it leaves nostril.
- The NJ tube must not be pulled up against tip of nostril or nasal mucosa where it can cause irritation and tissue breakdown.
- Check the skin your infant/child's nose and taped areas.
- If the skin is red or broken down, move the tape or the NJ tube may need to be changed to the other nostril.

Mouth Care with NJ Tube

- Good mouth care must be maintained at all times, even if your child does not eat by mouth.
- For infants, use a wet wash cloth to wipe gums, lips, and tongue 2 times each day.
- For children, brush teeth 2 times each day.
- If you are unable to brush your child's teeth, rinse their mouth 2 times a day. Use 1 teaspoon of baking soda in 2 cups of warm water to rinse. Swish and spit out.



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Finding and Buying NJ Feeding Supplies

Your dietitian will help arrange access and coverage for NJ feeding supplies.

Infants/children with treaty status

- With valid treaty status most NG feeding supplies are covered through Non-Insured Health Benefits (NIHB).
- A parent’s treaty status can be used until one year of age. After 1 year of age your child will need to have their own number.

Infants/children without treaty status

- Children without treaty status have some of their NJ feeding supplies covered through the Saskatchewan Aids to Independent Living (SAIL) program.
- For information on when and where to get more supplies, refer to the Supplies Checklist on page 17.

Buying Enteral Nutrition Feeding Formulas

- Pharmacy of your choice:
 - ⇒ Contact your pharmacist to determine if you can purchase formula and supplies from your local pharmacy. Remember that they may need to special order formula and supplies and will need advance notice of your needs.
- Other locations close to you:

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Supply Checklist

N/A = Not applicable

✓	Supplies	When to Change	Who to Contact	Where to Buy
	Syringes (one each) for water flushes and medication	Once a week		N/A
	Pharmacy Cap for each medication bottle	As needed		N/A
	EnFIT™ Straw for drawing up medication	As needed		N/A
	Hypafix® Tape	N/A		Medical Supply Store
	Comfeel® Dressing	N/A		Medical Supply Store
	Feeding Bags	Once a day		
	Feeding Pump	One on loan		
	Backpack	One on loan		
	IV Pole	One on loan		

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Healthy People, Healthy Saskatchewan

The Saskatchewan Health Authority works in the spirit of truth and reconciliation, acknowledging Saskatchewan as the traditional territory of First Nations and Métis People.

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