CHU Sainte-Justine
Le centre hospitalier universitaire mère-enfant

Université de Montréal

Nasal hygiene

Information brochure for parents

Contents

Why perform nasal hygiene?

The function of the nose is to filter, warm and humidify the air. A stuffy nose makes it harder for a child to breathe properly, and can interfere with sleeping and eating.

Babies and children produce more mucus when they have colds or respiratory allergies. Since they can't blow their noses properly, it's hard for them to deal with these secretions.

Did you know?

In Canada, children have on average 6 to 8 colds a year, mainly between October and May. Many children also suffer from allergic rhinitis, a condition characterized by nasal congestion, clear nasal secretions, dry cough, sneezing and irritation of the nose and throat.

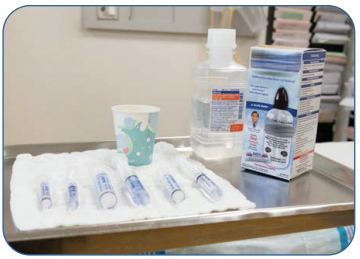
For more information on allergic rhinitis: https://bit.ly/4hnc6yW

What is nasal hygiene?

Nasal hygiene involves slowly flushing your child's nose with a physiological saline solution (salt water) to remove secretions and particles that build up during the day, irritating mucous membranes and interfering with breathing. Nasal hygiene can be performed when your child has a stuffy nose or cold symptoms, or if recommended by your doctor for ear problems.

Possible **benefits** hygiene in children with nasal congestion:

- Better eating and drinking
- Better sleep
- Better protection against ear infections, sinus infections and coughs



It's safe to start nasal hygiene with small amounts of salt water as early as the first few months of your child's life if they're congested or have secretions.

Saline solution recipe

Nasal hygiene must be done with an appropriate saline solution. You can use a homemade recipe or buy the product at the pharmacy or supermarket (e.g., Sinus Rinse®, NetiRinse®). You don't always have to buy new irrigation bottles. You can keep some bottles and only buy premixed solution packets (more economical and environmentally friendly). Replace the bottle if damaged or after 3 months' use.

These products are just examples. Other brands also exist.

Whether you prepare your own solution or use packets, remember to **always** use cooled **boiled water.**

Homemade solution

Ingredients

1 litre (4 cups) tap water

10 mL (2 tsp.) **iodine-free*** salt

2.5 mL (1/2 tsp.) baking soda

- Bring the water to a rolling boil for 10 minutes. Add the ingredients to the cooled boiled water.
- This solution can be stored for 7 days in the refrigerator in a clean glass container with a tight-fitting lid (e.g., Mason® jars)). This solution is suitable for the whole family, so you can double or triple the recipe to suit your needs.

* Table salt contains iodine and other substances that can irritate the nose. If necessary, buy pickling salt that doesn't contain these additives.

- Every evening, shake the solution container to dissolve the salt that settles at the bottom when it's refrigerated, and take the amount you need for the next 24 hours so the saline solution is at room temperature and ready to use the next day.

- To prevent contamination between family members, pour the saline solution into a small, clean container (syringe irrigation technique) or bottle (bottle irrigation technique) for each child, and label the container or bottle with each child's name.

Preparation with premixed packets

- Bring the water to a rolling boil for 10 minutes, let cool, then pour 240 mL into the bottle of Sinus Rince®, NetiRinse®, or other clean container and add the packet (e.g., blue for Sinus Rince® and white for NetiRinse®).
- Shake the bottle or container to mix well. The solution should then be ready to use. This solution can be stored for 7 days in the refrigerator in a clean glass container with a tight-fitting lid.

All you need to know about nasal hygiene

- **Saline solution at body temperature:**

  Whether homemade or purchased, the solution may be too cold when you use it, causing your child discomfort. You can warm it up a bit by putting the jar in a container of hot water (bain-marie technique). Always check the water's temperature on your wrist before use. It should be at body temperature (around 37 °C).

Never flush a child's nose with cold water — the solution must be body temperature.

- **Loosen secretions:**

  Before cleansing your child's nose, it's a good idea to loosen secretions clinging to the outer nostril walls. Have your child take a shower or bath and apply a wet washcloth to the nostril walls. Water and steam can make secretions more liquid and easier to loosen.

- **Syringe and bottle care:**

  They're like toothbrushes: they need to be clean and used only for one child each. It's important to wash them by hand once a day with dishwashing soap and hot water. Don't put them in the dishwasher or they could break. When they become damaged or difficult to wash, recycle and replace them (approx. 3 months).

- **Medicated drops and sprays:**

  If your child can't tolerate nasal irrigation, or if it's too uncomfortable, you can use small pods or sprays to humidify the nasal passages, allowing mucus to drain more easily.

- **Quantities to use :**

  Don't use a lot of liquid when flushing your child's nose. When too much saline solution is injected with too much force, fluid and secretions containing microbes can become lodged in the middle ear, impairing hearing and causing ear infections.

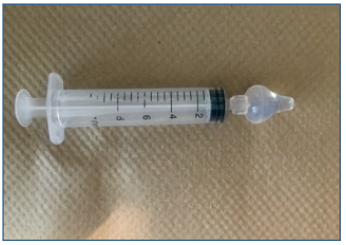
  If your child has a cold, don't use too much saline solution. It may be best to use a baby nasal aspirator before nasal hygiene.

  Oral suction aspirators can be quite effective for newborns.

  As the child grows, more powerful aspiration may be required to clear secretions. If so, many types of electric baby nasal aspirators are available, including a system that connects to a household vacuum cleaner.

Here are examples of baby nasal aspirators and aspirator syringes available on the market. Other brands and models may be used.

Nasal aspirator



Nasal aspirator syringe

Nasal hygiene technique

See below for a demonstration of the various nasal hygiene methods (in French only):
https://bit.ly/3BCEJb8

ALWAYS wash your hands before performing nasal hygiene.

For children < 2 years of age or older children who have difficulty protecting their airways

Suggested frequency for your child		
Summer As needed	Winter (Oct. to May) Once or twice a day as needed	Cold or congestion 3 to 6 times a day as needed

Adjust nasal hygiene frequency as needed based on the amount of secretions being produced, the time of year and how well your child tolerates irrigation.

Suggested saline solution quantities based on child's age *If your doctor has indicated a different quantity, follow their advice.	
Premature	1 mL per nostril
< 2 years	1–3 mL per nostril
2–5 years	3 mL per nostril
> 5 years	3–5 mL per nostril
Irrigation bottle	When the child is old enough to control the irrigation pressure.

Some children may have difficulty getting used to nasal irrigation. If your child can't tolerate it, start with small quantities.

Repeat irrigation with the volumes suggested above until the nose is clean.

Syringe irrigation techniques

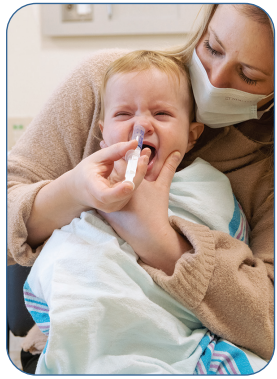
Prone technique (for children under 6 months of age or older children who have difficulty protecting their airways [encephalopathy, feeding problems with gastrostomy tube, etc.]).

1. Always wash your hands BEFORE and AFTER performing nasal hygiene.
2. Use a nasal aspirator to suck out heavy discharge if necessary.
3. Fill a syringe with body-temperature saline solution (see table above for quantity).
4. Lay your child on their side or back, swaddling if necessary, and place a washcloth under their nose. Flush the upper nostril when positioned on the side, **gently** emptying the contents of the syringe at around 1 mL/second. Secretions can come out of both nostrils, the mouth or they can be swallowed. There's no need for the water to come out of the other nostril.

5. Turn your child onto the other side or keep them on their back, and repeat the same technique for the other nostril.
6. If your child is unable to blow their nose, blot their nose with a tissue or use a baby nasal aspirator. Repeat steps 2 to 5 if any secretions remain.

One person seated technique (for children > 6 months old)

1. Always wash your hands BEFORE and AFTER performing nasal hygiene.
2. Use a nasal aspirator to suck out heavy discharge if necessary.
3. Fill a syringe with body-temperature salt water solution (see table on previous page for quantity).
4. Your child should be sitting on your lap, head straight (not tilted backward or forward). It may be easier if you swaddle your child in a large towel. You can also put a towel on your child to prevent them from getting wet.
5. With one hand, hold your child's jaw to keep them steady, and press your cheek against theirs to prevent your child from moving during the process.



6. With the other hand, hold the syringe. Insert the tip into a nostril and aim at the inner corner of the eye on the same side. Lean forward slightly. .

7. **Slowly** empty the contents of the syringe into the nostril at around 1 mL/second. Secretions can come out of both nostrils or the mouth. There's no need for the water to come out of the other nostril.
8. Use the same technique for the other nostril.
9. If your child is unable to blow their nose, blot their nose with a tissue. Repeat steps 2 to 7 if any secretions remain.

Two-person seated technique (for children> 6 months old)

1. Always wash your hands BEFORE and AFTER performing nasal hygiene.
2. Use a nasal aspirator to suck out heavy discharge if necessary.
3. Fill a syringe with body-temperature salt water solution (see table on previous page for quantity).
4. It may be easier if you swaddle your child in a large towel. Your child should be sitting on the lap of whoever is assisting you, with their head straight (not tilted backward or forward) and their back pressed against the assistant's belly. Your assistant can hold your child's legs between theirs. One hand is used to restrain the child's arms. The other hand is placed on the child's forehead to prevent the head from moving.
5. With one hand, put a washcloth under your child's nose. With the other hand, hold the syringe. Insert the tip into a nostril and aim at the inner corner of the eye on the same side. Have your assistant lean forward slightly.
6. **Slowly** empty the contents of the syringe into the nostril at around 1 mL/second. Secretions can come out of both nostrils or the mouth. There's no need for the water to come out of the other nostril.
7. Use the same technique for the other nostril.
8. If your child is unable to blow their nose, blot their nose with a tissue. Repeat steps 2 to 6 if any secretions remain.

For children ≥ 2 years of age

SUGGESTED frequency for your child		
Summer	Winter (Oct. to May)	Cold or congestion
As needed	Once or twice a day as needed	3 to 4 times a day as needed

Adjust these recommendations as needed based on the amount of secretions being produced, the time of year and how well your child tolerates cleansing.

Bottle irrigation technique

Nasal irrigation with a bottle can be performed when your child can control the water flow (around age 3). See below for a video explaining the nasal irrigation technique: chusj.org – ENT Department.
https://bitly.ws/34sfr (in French only)

For children, 4 oz (120 mL) is enough. Teenagers can use an 8-ounce (240 mL) bottle.

1. Have your child wash their hands BEFORE and AFTER nasal hygiene.
2. Have your child blow their nose to clear out secretions.
3. Fill the nasal irrigation bottle with the saline solution recipe.
4. Have your child face the sink, head tilted forward with mouth open. Use a footstool if necessary.
5. Put the tip of the bottle tightly into either nostril.
6. Have your child squeeze the bottle **gently** until the solution flows out the opposite nostril or mouth.
7. Have your child blow their nose, one nostril at a time.
8. Repeat steps 4, 5 and 6 for the other nostril.

Nasal irrigation should never cause ear pain. If this happens, try applying less pressure on the bottle and reducing the flow of water. If pain persists, switch to a syringe (see technique on page 9), limiting the flow to 1 mL per second, or use a spray bottle and have your child blow their nose.

Bottle maintenance

- Wash all equipment thoroughly after use. Fill the bottle with soapy water. Insert central tube and cap. Shake while closing the opening with your finger. Rinse with clean water to remove any soap residue. Leave to dry on a clean cloth for next use.
- We recommend changing the nasal irrigation bottle every 3 months or when the plastic becomes discoloured. Check the manufacturer's recommendations for details.

Spray technique

A spray can be used for children who can't tolerate syringes or who have ear pain during irrigation.

1. Always wash your hands BEFORE and AFTER nasal hygiene.
2. Use a nasal aspirator to suck out heavy discharge or have your child blow their nose.
3. Sit with your child facing you, head straight (not tilted backward or forward).
4. Put about half the nozzle in the middle of the nostril. Spray each nostril as instructed by the manufacturer or as prescribed. Repeat for the other nostril. Your child can keep breathing through their mouth while you spray.
5. Have your child close their mouth and blow their nose one nostril at a time.
6. Repeat steps 3 and 4 if necessary.

Spray maintenance

- Clean the spray nozzle with hot water at least once a day.

When to change how you perform nasal hygiene on your child

- If your child has a cold or is very congested and it's difficult to get the water in.
- If your child has had ear tubes inserted and nasal irrigation fluid is coming out of their ears.

- If nasal irrigation is causing ear pain.
- If your child gets nosebleeds after nasal irrigation.

Suggested changes

- Reduce the frequency of nasal irrigation.
- Reduce saline spray speed to 1 mL/second.
- Reduce the saline administered to 3 mL or less.
- Stop completely if necessary.

Teaching your ≥ 3-year-old child how to blow their nose

- Put a very small piece of cotton ball or tissue paper on the table and ask your child to move it forward only by blowing with their nose. They have to keep their mouth shut.
- Once the child can blow with their nose, have them try to move the piece of absorbent cotton one nostril at a time. Your child must keep their mouth closed, press down on one nostril and blow out the other.

Notes

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