## Why perform nasal hygiene?

The nose filters, moistens and warms the air. A congested nose prevents the child from breathing freely and can interfere with sleep and diet. Babies and children produce more secretions if they have a cold or respiratory allergies. Since they cannot blow their noses effectively, it is difficult to manage their secretions.

### What is nasal hygiene?

Nasal hygiene is the practice of slowly irrigating your child's nose with a saline solution (salt water) to remove secretions and particles accumulated during the day that irritate mucous membranes and block breathing. Nasal hygiene can be performed when your child is congested, has cold symptoms or as recommended by your doctor.

# Possible benefits of nasal hygiene in congested children:

- ✓ Better nutrition or drinking.
- ✓ Better sleep.
- ✓ Better prevention against ear infections, sinusitis and coughs.

It is safe to start nasal hygiene with small amounts of salt water in your child's first few months of life if your child is congested or has secretions.

### Saline solution recipe1

Nasal hygiene must be performed with an appropriate saline solution. It can be made at home or bought in a store. You do not always have to buy new irrigation bottles. You can keep your bottles and only buy packages of prepared solutions (less expensive and more environmentally friendly). Replace the bottle when damaged or after 3 months of use.

Whether you are preparing your own solution or using the prepared packets, you must always use cooled boiled water.

## Homemade saline water

1 litre (4 cups) tap water 10 ml (2 tsp) iodine-free salt\* 2.5 ml (1/2 tsp) baking soda

- 1. Bring the water to a rolling boil for 10 minutes.
- 2. Add the ingredients to the cooled boiled water.
- 3. This solution will keep for 7 days in the refrigerator if it is placed in a clean glass container with a tight lid (for example, Mason jars).
- 4. Every night, shake the container with the solution to dissolve the salt that settles to the bottom when refrigerated and take out the amount necessary for 24 hours so that the saline solution is at room temperature and ready to use for the next day.

Source: Doré, Nicole; Le Hénaff, Danielle. A practical guide for parents from pregnancy to age two. Québec, Institut national de santé publique du Québec, 2024. 808 pages.

#### What you should know for proper nasal hygiene

### Saline solution at body temperature:

Whether you use a homemade or commercial solution, the preparation might be too cold and make your child uncomfortable. You can warm it up a little by putting your jar in a container of hot water (double boiler technique). Always check the water temperature on your wrist before using it. It should be at body temperature, approximately 37°C.

#### Soften secretions:

Before cleaning the inside of your child's nose, it is sometimes helpful to soften the secretions that are attached to the walls of the outer nostrils. Have your child take a shower or bath and apply a water-soaked washcloth to the nostril walls. Water or steam can help make the secretions more liquid and easier to remove.

### Caring for syringes and bottles:

Like toothbrushes, they must be clean, used only for the nose and you should have separate ones for each child. It is important to hand wash them once a day with dish soap and hot water. We do not recommend putting them in the dishwasher because they can break. When they become damaged or difficult to wash, put them in the recycling bin and replace them (approximately three months).

#### Quantities to be used

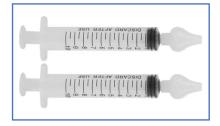
For your child's nasal hygiene, small amounts of fluid should be used. When too much saline solution is injected with too much force, fluid and secretions with bacteria can become lodged in the middle ear, causing hearing problems and possibly causing ear infections.

If your child has a cold, to avoid using too much saline solution, you might need to use a nasal aspirator before performing nasal hygiene. Nasal aspirators that work with mouth suction are often quite effective for infants.

The following are examples of commercially available nasal aspirators and syringe nasal irrigators. Other models and brands may be used.



Nasal aspirator



Syringe nasal irrigator

### Nasal hygiene technique

You can watch a demonstration of the various nasal hygiene methods at the following link:

https://bitly.ws/34sfr



Suggested amounts of saline solution depending on the age of your child	
*If your doctor mentioned a different amount, follow their advice	
Premature	1 ml per nostril
< 2 years	1 to 3 ml per nostril
2 to 5 years	3 ml per nostril
> 5 years	3 to 5 ml per nostril
Irrigation bottle	When the child is old enough to control irrigation pressure.

Lying position technique (for children under 6 months of age)



- 1. Always wash your hands BEFORE and AFTER performing nasal hygiene.
- 2. Remove heavy secretions using a nasal aspirator if necessary.
- Fill a syringe with saline water solution at body temperature (as per the table above).
- 4. Place your child on their back or side (swaddle if necessary), and place a washcloth under their nose. Irrigate the upper nostril when positioned on the side by emptying the syringe contents gently, about 1 ml per second. Secretions can come out through both nostrils, but also through the mouth or they might be swallowed. The water does not have to come out through the other nostril.
- 5. Keep your child on their back or turn your child to the other side, and repeat the same technique for the other nostril.
- 6. If your child is unable to blow their nose, use a nasal aspirator. If necessary, repeat steps 2 to 5 if secretions remain.

One-person sitting technique (for children over 6 months of age)

- 1. Always wash your hands BEFORE and AFTER performing nasal hygiene.
- 2. Remove heavy secretions using a nasal aspirator if necessary.
- 3. Fill a syringe with the saline solution at body temperature (see table).
- 4. Your child should be sitting on your lap with their head straight (leaning neither backward nor forward). To do this, it might be easier to wrap your child in a large towel. You can also place a towel on your child to prevent them from getting wet.
- 5. Hold the syringe with the other hand. Insert the tip into a nostril and aim for the inner corner of the eye on the same side. Lean forward slightly.

- 6. Empty the syringe contents gently, about 1 ml per second in the nostril. Secretions can come out through both nostrils, but also through the mouth. The water does not have to come out through the other nostril.
- 7. Use the same technique for the other nostril. If necessary, repeat steps 2 to 7 if secretions remain.

Two-person sitting technique (for children over 6 months of age)

- 1. Always wash your hands BEFORE and AFTER performing nasal hygiene.
- 2. Remove heavy secretions using a nasal aspirator if necessary.
- 3. Fill a syringe with the saline solution at body temperature (see the table for the quantity).
- 4. It might be easier to wrap your child in a large towel. Your child should be sitting on the lap of the person who is helping you, with their head straight, with their back firmly on the other person's belly. They can hold your child's legs between their legs. One hand is used to hold the child's arms. The other hand rests on the child's forehead to prevent the child's head from moving.
- 5. Insert the tip of the syringe into a nostril and aim for the inside corner of the eye on the same side. Ask the person helping you to lean forward slightly.
- 6. Empty the contents of the syringe gently, about 1 ml per second, into the nostril. Secretions can come out through both nostrils, but also through the mouth. The water does not have to come out through the other nostril.
- 7. Use the same technique for the other nostril. If necessary, repeat steps 2 to 6 if secretions remain.

What signs indicate that I should change how I perform nasal hygiene for my child?

- If the child has a cold or is very congested and it is difficult to push the water in.
- If your child has had a tube placed in their ears and the nasal hygiene solution comes out through their ears.
- If nasal hygiene hurts their ears.
- If they bleed from the nose after nasal hygiene.

### **Suggested changes**

- Decrease the frequency of performing nasal hygiene.
- Decrease the flow of saline solution into the nostril to 1 ml per second.
- Reduce the amount of saline solution administered to only 3 ml or less.
- Stop completely if necessary