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651-291-2848
800-719-4040 (toll-free)
651-299-3928 (TDD)
www.gillettechildrens.org

Contact Us

Urgent Questions or Concerns

Telehealth Nursing
651-229-3890

Other Questions About Your Care

St. Paul Clinic patients:
Nurse Call Line
651-578-5000

Patients at Other Locations:
Contact a member of your
Gillette health care team.

Appointments

651-290-8707

Important to Know

If you have any signs of infection, call Telehealth Nursing (651-229-3890).

Books, DVDs and More

Find materials about disabilities, medical conditions and support for caregivers.

Health Resources and Education

St. Paul campus, near
fourth-floor skyway

651-229-3938

hre@gillettechildrens.com

Breath Stacking (Lung Volume Recruitment)

patient education
DIS090

Breath stacking is a way to fill a person's lungs with more air than the person can usually take in when breathing naturally. Breath stacking helps people who have:

- Diminished lung capacity due to muscle weakness
- Restricted chest movement.

Why Do Breath Stacking?

- Shallow breathing means less air is moving in and out of the lungs. When more air is taken into the lungs, the ability to cough, speak and eat improves.
- Expanding the lungs helps move secretions, and it can lower the risk of illness.
- Breath stacking helps keep the lungs open.
- Lungs that are too stiff make it harder to breath.

What Equipment Do I Use for Breath Stacking?

You do breath stacking with a modified **resuscitator**. Shaped like a bag or balloon, a resuscitator is a simple device that delivers artificial breaths to people who are unable to adequately breathe on their own.

To modify a resuscitator for breath stacking, you attach:

- An extension tube
- Either a mask or a mouthpiece

With the attachments, the device is **no longer suitable for resuscitation**; it can **ONLY** be used for breath stacking.

How Do I Do Breath Stacking?

1. Sit upright if possible. Reclining or lying flat is also acceptable, as long as you're not slouching.
2. It's helpful to put on a nose clip to keep air from escaping through your nose.
3. Place your lips tightly around the mouthpiece, or have your caregiver hold the mask firmly on your face.
4. Have your caregiver squeeze the resuscitator bag. As the bag is squeezed, take a deep breath and hold it. (Don't breathe out.)
5. Repeat step 4 two to four more times (without exhaling between breaths). Inhale more air each time the bag is squeezed. (Try to take in a greater amount of air each time.) This is "stacking" your breaths. Continue until you fill your lungs to a comfortable level. You should feel a stretch across the front of your chest.
6. After your lungs feel full, hold your breath as long as it's comfortable to do so. (Count to five, if possible.) If needed, you can use the air you've taken in to generate a cough.
7. Exhale. That completes one cycle of breath stacking.
8. Complete three to five cycles of breath stacking in a row, if possible.

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How Often Should I Do Breath Stacking?

Complete a series of **three to five** cycles of breath stacking **at least twice per day**. You may do it more often if you like.

When Should I Do Breath Stacking?

It's best to do breath stacking **before meals** and **at bedtime**. The muscles used for breathing have more room to move when the stomach is empty.

Equipment Maintenance

When the resuscitator bag needs cleaning, wipe it down but never submerge it in water. Wash all other equipment pieces daily in warm, soapy water, and let them air dry.

If the bag isn't supplying breaths that are large enough, look for a leak. You might need a new mask, mouthpiece or extension tube.

If any equipment needs to be replaced, contact your home care provider.

Caution

Stop breath stacking and rest for a while if you experience:

- Dizziness
- Chest discomfort
- Chest pain

If you resume breath stacking and any of those symptoms continue, **stop breath stacking** and contact your health care provider.