Vagal maneuvers are methods used to stimulate baroreceptors located in the internal carotid arteries and the aortic arch. Stimulation of these receptors results in reflex stimulation of the vagus nerve and release of acetylcholine. Acetylcholine slows conduction through the AV node, resulting in slowing of the heart rate.

Vagal maneuvers may be tried in the stable but symptomatic child in SVT or during preparation for cardioversion or drug therapy for this dysrhythmia. Success rates with vagal maneuvers vary and depend on the patient’s age, level of cooperation, and the presence of underlying conditions.

Vagal maneuvers that may be used in the pediatric patient include the following:

- Application of a cold stimulus to the face (e.g., a washcloth soaked in iced water, cold pack, or crushed ice mixed with water in a plastic bag or glove) for up to 10 seconds. This technique is often effective in infants and young children. When using this method, do not obstruct the patient’s mouth or nose or apply pressure to the eyes.
- Valsalva maneuver. Instruct the child to blow through a straw or take a deep breath and bear down as if having a bowel movement for 10 seconds. This strains the abdominal muscles and increases intra-thoracic pressure. In the younger child, abdominal palpation may be used to create the same effect. Abdominal palpation causes the child to bear down in an attempt to resist the pressure.
- Gagging. Use a tongue depressor or culturette swab to briefly touch the posterior oropharynx.

When using vagal maneuvers, keep the following points in mind:

- Ensure oxygen, suction, a defibrillator, and crash cart are available before attempting the procedure.
- Obtain a 12-lead ECG before and after the vagal maneuver.
- Continuous monitoring of the patient’s ECG is essential. Note the onset and end of the vagal maneuver on the ECG rhythm strip.
- In general, a vagal maneuver should not be continued for more than 10 seconds.
- Application of external ocular pressure may be dangerous and should not be used because of the risk of retinal detachment.
- Carotid massage is less effective in children than in adults and is not recommended.