Nasal irrigation is a personal hygiene practice in which the sinonasal cavity is washed using an isotonic or hypertonic salt water solution. Using saline solutions in nasal irrigation reduces inflammation through osmosis.

### Conclusion:

According to the Bernoulli equation, during nasal irrigation the openings of the sinuses along with the nose portion, become areas with very low static pressure. This is because of the high dynamic pressure, which is a result of the movement of the rinsing solution in the nose. Static pressure becomes very low - lower than the pressure inside the sinuses. Then the pressure in the sinuses pushes secretions out of the sinuses, because it is higher than the static pressure. Thus, the secretions along with the solution, which is constantly circulating during the process, is discharged from the nose through one of the nostrils. The process occurs until the pressure in the sinuses becomes equal to the static pressure, which increases by reducing the dynamic pressure.

### Indications:

- Allergic rhinitis
- Acute and chronic sinusitis
- Following sinonasal operations
- Rhinitis arachnoidalis (Prof. R. Mladina)
- Upper respiratory infections
- Following long-term use of nasal decongestants

---

Bernoulli Equation is one of the most fundamental equations in Fluid Mechanics. It is an approximate relation between fluid's pressure, velocity and elevation in the fluid. The Bernoulli Equation can be considered to be a statement of the conservation of energy principle appropriate for flowing fluids.

\[ p + \frac{\rho v^2}{2} + \rho g h = \text{const} \]

Where \( p \) is static pressure, \( \rho \) is fluid density, \( v \) is velocity of fluid flow, \( h \) is height above reference surface. The second term in this equation \( \frac{\rho v^2}{2} \) is known as dynamic pressure. The qualitative behavior that is usually labeled with the term Bernoulli effect is the lowering of fluid pressure in region where the flow velocity is increase. Bernoulli principle states that a rise in pressure in a flowing fluid must always be accompanied by a decrease of speed. If an increase in, the speed of the fluid results in a decrease of the pressure. This is at the heart of the number of everyday phenomena.