

Rhinorrhea

Rhinorrhea or rhinorrhoea is a condition where the nasal cavity is filled with a significant amount of mucus fluid. The condition, commonly known as a “runny nose”, occurs relatively frequently. Rhinorrhea is a common symptom of allergies or certain diseases, such as the common cold or hay fever. It can be a side effect of crying, exposure to cold temperatures, cocaine abuse or withdrawal, such as from opioids like methadone.e.

The term Rhinorrhea was coined in [1866](#) and is a combination of the Greek terms “rhino-” meaning “of the nose” and “-rhoia” meaning “discharge or flow”.

Classification

Rhinorrhea Classification can be categorized based on its cause, duration, and characteristics of nasal discharge. Below is a comprehensive classification:

- Based on Etiology
 - Infectious Rhinorrhea:** Caused by viral, bacterial, or fungal infections. Common examples: Viral rhinitis (e.g., common cold). Bacterial sinusitis. Fungal sinusitis (less common, e.g., in immunocompromised patients).
 - Non-Infectious Rhinorrhea:**
 - Allergic Rhinorrhea:** Triggered by allergens like pollen, dust mites, or animal dander. Often associated with sneezing, itching, and nasal congestion.
 - Non-Allergic, Non-Infectious Rhinorrhea:**
 - Vasomotor rhinitis:** Triggered by irritants like smoke, weather changes, or strong odors.
 - Drug-induced rhinitis:** Due to medications like nasal decongestant overuse (rhinitis medicamentosa) or certain antihypertensives (e.g., beta-blockers).
 - Hormonal rhinitis:** Seen in pregnancy or hypothyroidism.
 - Cerebrospinal Fluid (CSF) Rhinorrhea:** Caused by a breach in the dura mater, leading to leakage of CSF into the nasal cavity. Often occurs after trauma, surgery, or spontaneously.
 - Structural Abnormalities:** Nasal polyps or deviated septum causing chronic nasal discharge.
 - Trauma or Post-Surgical Rhinorrhea:** May result from nasal fractures, endoscopic sinus surgery, or skull base surgery.
 - Idiopathic Rhinorrhea:** No identifiable cause even after thorough evaluation.
- Based on Duration
 - Acute Rhinorrhea:** Lasts less than 4 weeks. Common in viral infections or acute allergic responses.
 - Chronic Rhinorrhea:** Persists for more than 12 weeks. Often linked to chronic conditions like allergic rhinitis, chronic sinusitis, or structural abnormalities.
 - Recurrent Rhinorrhea:** Episodic, recurring symptoms with symptom-free intervals.
- Based on Characteristics of Discharge
 - Clear, Watery Discharge:** Associated with: Allergic rhinitis. Vasomotor rhinitis. CSF leak (may have salty taste). Viral infections (initial phase).
 - Thick, Mucopurulent Discharge:** Suggestive of: Bacterial sinusitis. Advanced viral infections. Fungal infections (especially in immunocompromised patients).
 - Bloody Discharge (Epistaxis-associated Rhinorrhea):** Seen with: Trauma. Neoplasms. Vasculitis (e.g., granulomatosis with polyangiitis).
 - Unilateral Discharge:** Suggestive of: Foreign body in children. CSF leak. Tumors or nasal polyps.
- Based on Pathophysiology
 - Hypersecretion:** Due to overactive nasal glands, often in response to parasympathetic stimulation. Seen in allergic or vasomotor rhinitis.
 - Reduced Clearance:** Impaired mucociliary clearance leads to accumulation of secretions. Associated with conditions like cystic fibrosis or chronic sinusitis.
 - Leakage:** Loss of barrier integrity (e.g., CSF rhinorrhea due to trauma).
- Special Subtypes
 - Honeymoon Rhinorrhea:** Triggered by autonomic activation during sexual activity or orgasm.
 - Cold-induced Rhinorrhea:** Occurs in response to cold temperatures (gustatory or vasomotor rhinitis).

Conclusion Classifying rhinorrhea is essential for accurate diagnosis and treatment. A detailed history, clinical examination, and appropriate investigations (e.g., imaging, allergy testing, beta-trace test for CSF rhinorrhea) help identify the underlying cause and guide management.

see [Cerebrospinal fluid rhinorrhea](#)

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