

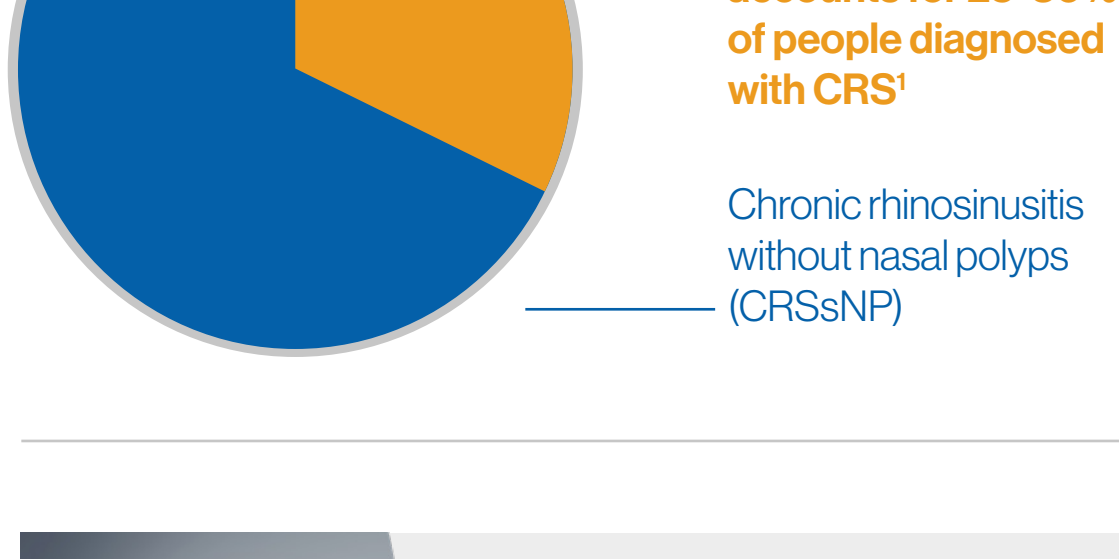
Understanding chronic rhinosinusitis with nasal polyps (CRSwNP)

What is chronic rhinosinusitis with nasal polyps (CRSwNP)?

Chronic Rhinosinusitis (CRS) is defined as inflammation of the nose and paranasal sinuses diagnosed by the presence of **two or more symptoms for at least 12 weeks**. One of the symptoms should be nasal blockage/obstruction/congestion/discharge along with either facial pain/pressure or reduction/loss of sense of smell¹.



CRS is classified into 2 subgroups, based on the presence or absence of nasal polyps:



CRSwNP is identified by the presence of noncancerous lesions (nasal polyps) on the lining of the nasal sinuses or nasal cavity^{2,3}. It is possible to have a single polyp or several that resemble a small bunch of grapes in appearance. The size of the polyps can vary from microscopic to several centimeters^{4,5}.



2-4% of people worldwide are affected by CRSwNP and it is four times more likely to occur in men than in women^{3,6}.

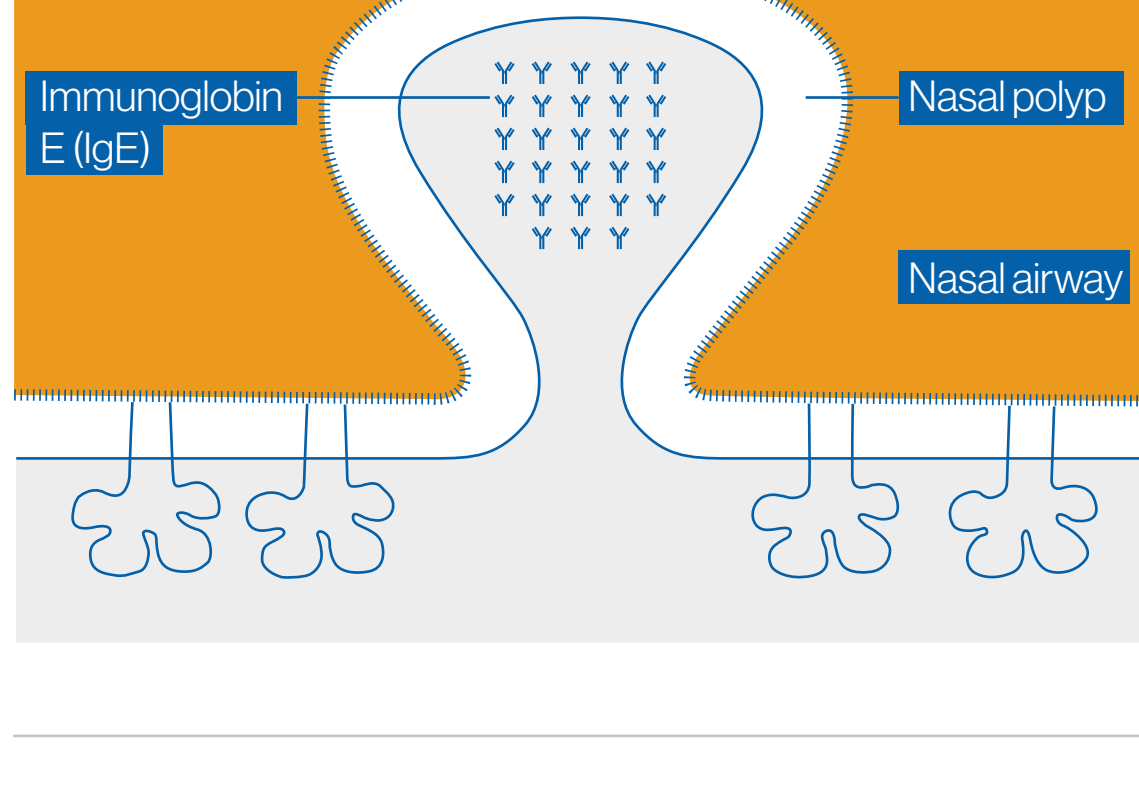
Risk factors for nasal polyps include conditions that can trigger chronic inflammation in the sinuses or nasal passages, such as allergies or infections. Specifically, these conditions can include asthma, aspirin sensitivity, allergic fungal sinusitis, cystic fibrosis and Churg-Strauss syndrome (a blood vessel inflammation disorder that can restrict blood flow to vital organs and tissues)⁷.

CRSwNP is associated with asthma, cystic fibrosis and aspirin sensitivity⁸.

How do nasal polyps develop

In patients with CRSwNP, there is an increased amount of inflammatory cells and tissue swelling.

A key feature is an increased concentration of **immunoglobulin E (IgE)** - antibodies produced by the immune system - found in CRSwNP locally and/or in the blood stream. This inflammation results in tissue remodeling - which in turn produces a polyp^{9,10}.



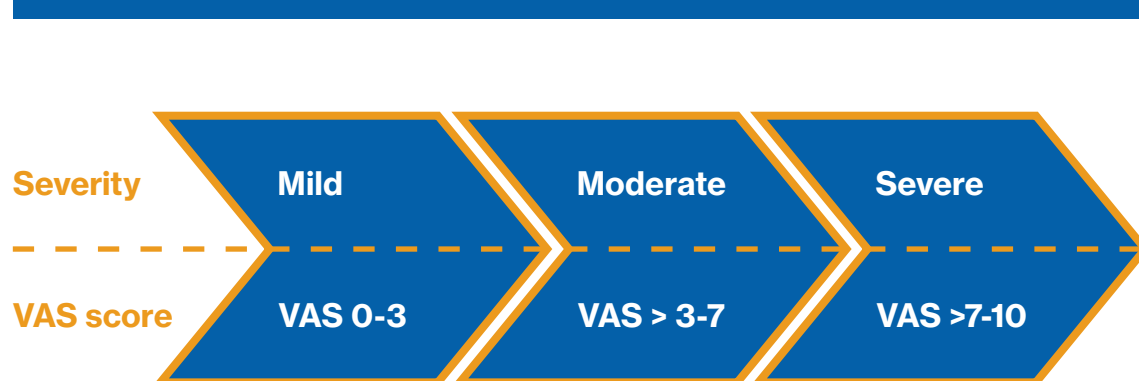
Diagnosis of Nasal Polyps

Endoscopy is performed to assess the severity scores of nasal polyps. Computerized tomography (CT) scans or magnetic resonance imaging (MRI) may be required pre-surgery or for investigating more serious conditions^{11,12}.

There are various scoring systems measuring the size or severity of polyps. One scoring system, the Nasal Polyp Score (NPS), is based on the size of polyps¹³.

Nasal Polyp Score (NPS)	Polyp size
0	No polyps
1	Small polyps in the middle meatus (a nasal passage) not reaching below the inferior border of the middle turbinate (projections of soft tissue on the side walls inside the nasal cavity)
2	Polyps reaching below the lower border of the middle turbinate
3	Large polyps reaching the lower border of the inferior turbinate or polyps medial to the middle turbinate
4	Large polyps causing complete obstruction of the inferior nasal cavity

The Visual Analogue Scale (VAS) score helps evaluate the severity of the condition. Symptoms-related questions answered by patients will help diagnosis by providing a total severity VAS score¹.



Impact and burden of CRSwNP

Although the disease is not visible, people with nasal polyps may have significantly impaired quality of life (QoL)¹¹. In particular, asthmatics have increased nasal obstruction and increased loss sense of smell, affecting them physically, socially and mentally¹⁴.

The annual direct healthcare costs of CRS in US was estimated to be

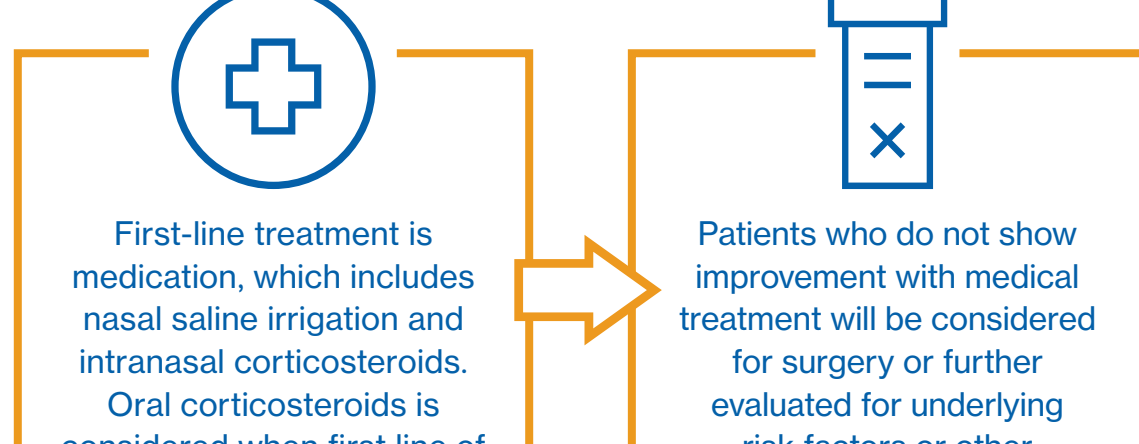
\$8.6 billion

Patients with recurrent polyps reported increased overall medication costs compared with patients with/without polyps¹⁵.

Treatment and management of CRSwNP

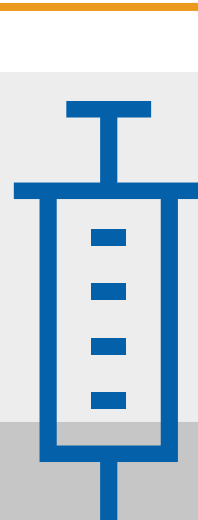
The ultimate goal of treatment is to shrink or even completely remove the polyps. A comprehensive treatment plan can help manage symptoms caused by chronic inflammation contributing to onset and progression of CRSwNP¹⁶.

Medical guidelines for CRSwNP provide recommendation of therapeutic options based on degree of control and disease severity^{11,12,17}.



Currently, a new class of medications (biologics) is under regulatory review for the treatment of nasal polyps.

These investigational drugs are intended to treat nasal polyps by targeting the underlying inflammatory process related to their development¹⁹.



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