

Tonsils and adenoids are lymph tissue and play an important role in the development of the immune system and serve as a defence against infections, being the first organs that come into contact with respiratory and digestive antigens.

Tonsils are located at the back of the throat (right and left sides) and adenoids (aka nasopharyngeal tonsils) are located at the junction of the roof and the posterior wall of the nasopharynx (at the back of the nose).

The causes of tonsil and adenoid enlargement are not fully known. However, they are most likely associated with:

Immune dysfunction:

- Recurrent Infections viral or bacterial
- Allergies (food and environmental) and Food Intolerances

Gut Function:

- Gastroesophageal Reflux Disease (GORD)
- Dysbiosis (imbalance in gut flora)
- Leaky gut

Oral function and structure:

- including the function of the muscles (including the tongue) and
- Structure of the jaw, palate and nasal passages

Oral microbiome and dental health:

Microbes that inhabit the mouth, throat and nasal passage

Enlarged tonsils can affect children in a number of ways including:

Sleep disturbance

- Disturbed sleep and/or sleep apnoea due to restricted airways
- Leading to mood disturbances and dysregulated behaviour
- Restricted airways leads to mouth breathing:
- Affecting overall health and well being;
- Changing the shape of the palette and jaw, further reducing the size of the airways and impacting structure and function

Impacting concentration/focus, mood and behaviour:

Due to a lack of restful sleep and mouth breathing



Impacting food preferences:

- Affecting sense of smell and therefore taste
- Enlarged tonsils can heighten the gag reflex and affect food intake

Speech Delay:

- Due to enlarged tonsils, affecting speech
- Recurrent ear infections (that often go along with enlarged adenoids) can impact hearing and affect speech

HOW DO WE SUPPORT CHILDREN WITH ENLARGED TONSILS AND ADENOIDS?

We aim to address the cause of inflammation. In children, inflammation is most commonly linked with immune dysregulation and gut dysfunction.

See the **table** below for common *causes*, *signs* and *symptoms*, *our* approach and recommendations. Keep in mind your child may have more than one underlying cause.

Possible Cause: Recurrent Infections

Signs and Symptoms

- An infection can be a cause of enlarged tonsils and adenoids AND enlarged tonsils and adenoids can increase the risk/frequency of developing infections.
- Frequent illness common colds
- Recurrent throat infections
- Middle ear infections and glue ear (enlarged adenoids can prevent the flow of air to the middle air, resulting in a build up of fluid.

Our approach:

Support the immune system to reduce the frequency and duration of infection

- Probiotics:
 - Activated probiotics Biome Daily Kids
- Metagenics ENT Immune Care



Possible Cause: Allergies and Intolerances

Signs and Symptoms

- Allergy signs:
 - Constant runny nose, itchy eyes, sneezing
 - Itchy skin, hives
 - Post nasal drip (sniffling and snorting, cough)
- Food Intolerances and Allergies:
 - Intolerances can contribute to generalised inflammation.
- Dairy is common cause of inflammation in children with enlarged tonsils and adenoids

Our approach:

- Support the gut to regulate the immune response
- Support the immune system to reduce inflammation with nutrients:
 - Vitamins A & D, zinc (Vitamin D deficiency has been linked to enlarged adenoids in children)
- Remove trigger foods to reduce inflammation and identify any intolerances

- Probiotics:
 - Orthoplex Immunobalance Biotic or
 - Biome Breathe (especially when with seasonal hayfever and/or asthma)
- Metagenics Alergenics (herbs and nutrients to reduce inflammatory response)
- Metagenics Cod Liver A & D
- Metagenics MetaZinc & C



Possible Cause: GORD (gastroesophageal reflux disease) & Gut Dysfunction (leaky gut and dysbiosis)

Signs and Symptoms

- *Reflux* causes inflammation in the tonsils and adenoids by aggravating the tissue.
- Signs:
 - Throat clearing &/or cough, especially after meals
 - An acid taste in their mouth
 - Frequent burping and hiccoughs
 - Pain / burning in the chest or throat
 - Nausea or vomiting after meals
- Leaky gut creates a more generalised inflammation where undigested food molecules pass through the digestive tract into the bloodstream.
 This can cause inflammation anywhere in the body – including tonsils, ears, lungs and skin.
- Diversity of beneficial microbes in the gut supports good immune function. When this is disturbed the immune system becomes dysregulated, creating inflammation.

Our approach:

- Support gut function to reduce reflux and soothe irritated tissue
- See our <u>Managing Reflux in Babies</u>, <u>Children and Adults</u> cheat sheet for more information
- Prebiotics to nourish the gut flora
- Probiotics to reduce inflammation and aid with immune regulation

- Metagenics Gut Care for Kids herbs and nutrients to soothe irritated tissue and support healing
- SFI Health Iberogast a liquid herbal formula to help normalise gut muscle function (helpful in reflux)
- Probiotics:
 - Activated Probiotics Biome Daily Kids
 - Orthoplex Immunobalance Biotic



- Prebiotics:
 - Ariya PHGG (unflavoured)
- Mediherb Prebiotica Regenex
- Probiotic and prebiotic foods

Possible Cause: Oral and Upper Respiratory Microbiome

Signs and Symptoms

- The *oral (throat and nasal) microbiome* can become disturbed by infection, GORD, mouth breathing and poor oral health.
- Studies have been performed on enlarged tonsil and adenoid tissue finding there to be an imbalance in flora with a proliferation of negative bacteria.
- Recurrent throat infections are a sign that bacteria are harbouring in the tonsils, adenoids and oral cavity

Our approach:

- Improve oral health see our <u>Oral Health</u> cheat sheet for more information
- Addressing bacterial imbalance of the oral and nasal cavity certain bacteria have been associated with chronic inflammation of the tonsils and adenoids

- Probiotics:
 - Streptococcus salivarius K12 contained in BLIS probiotic can improve the balance of the oral microbiome and reduce the frequency of colds, tonsillitis, pharyngitis and reduce inflammation.
- Activated Probiotics Biome Dental
- Saline spray, 1 spray per nostril for 6 weeks to reduce dysbiotic bacteria and inflammation





Possible Cause: Oral and Airway Dysfunction

Signs and Symptoms

- Mouth breathing, snoring, teeth grinding, bed wetting and
- Poor emotional regulation are all signs that your child's airways are restricted during sleep.
- Crowded teeth, difficulty chewing, nasal congestion and snoring are signs that your child may have a high and narrow palate

Our approach:

- Seek the support of an myofunctional orofacial and/or functional dentist therapist to address mouth breathing and support the tone of the facial muscles.
- A high and narrow palate can contribute to nasal congestion, snoring, and sleep apnea.
- A narrow palate also interferes with chewing and swallowing due to a narrow passage, affecting the alignment of teeth

- Supporting the tone of the facial muscles (including the tongue) with exercises
- Lymphatic facial massage
- A functional dentist will be able to assess the shape and height of the palate and make recommendations for treatment