Misalignment simply put is when the vertebral joints lose proper positioning and alignment (structure), which then leads to abnormal motion and movement (kinesiology component)… these two factors then lead to an alteration in the afferent firing pattern into the dorsal horn/cord and into the CNS (cord-brainstem-cerebellum-thalamus-higher brain centers and cortex). Basically, the loss of positioning and movement leads to a loss of regular mechanoreception and proprioception, and increases nociception (stress).

This misalignment is often caused simply by the positioning required for even normal, natural, vaginal deliveries… and is greatly magnified in its effect from breech positioning, long labor, suction/vacuum extraction, forceps, and Cesarean deliveries. All of these situations put an excessive amount of physical force on the head, neck, and spine and lead to misalignments (by altering structure and movement/kinesiology)… that in turn causes neurological sequelae through dysafferentation, dysautonomia, and dysponesis.

This misalignment complex also causes imbalances in the musculature of the upper cervical spine and surrounding tissues, greatly affecting the function and movement of the eustachian tubes, sinuses, adenoids, etc. Basically, not only does it alter neurological function, it alters the flow of lymph, mucus, and other fluids in and “out of” the head and ENT-type structures. This fluid is then allowed to “sit” for too long in these areas, thus harboring opportunistic pathogens that can then take hold and replicate… then in turn causing infection, inflammation, and irritation. It is not that the eustachian tubes are horizontal at that age… that does not “help” the situation, but it is not the primary cause of ear infections at all.

These children are then continually challenged when the antibiotic prescribed for the ear infection, eliminates and lessens the beneficial bacteria of the gut and colon, thus causing dysregulation of the immune system and leaving them susceptible to recurrent infection. Not only does this affect their immune system, but also their digestive system as well. Now they cannot process and eliminate food stuffs and toxins near as well, and this leads to a further “spilling over” effect of these into the bloodstream… which causes further immune reaction and inflammation and can begin the autoimmune cascade that may be linked to things such as allergies, asthma, eczema, and even ADHD later in life.

What is more, the upper cervical misalignment greatly effects the neurological control of the central nervous system, especially brainstem and other centers that are important for neurological “info relay” and autonomic control of tissues, organs, and glands (esp. the vagal nerve – origin). The misalignment, along with other factors, leaves their autonomic system (dysautonomia) in a highly sustained sympathetic state (fight/flight) which as you know is associated with lowered immunity, hyperactivity, anxiety, social challenges, decreased GI function (reflux, dyspepsia, constipation), and more.

Finally, pediatric chiropractors such as myself are also highly trained in nutrition and supplementation. I won’t go into the details here, but another major contributor to things such as otitis media, ADD/ADHD, colic, allergies, eczema, and asthma is a diet high in grains and dairy. The proteins and sugars in these foods are very difficult to digest and again lead to a strained and inflamed GI system, which spills into the bloodstream and causes and autoimmune reaction. Cleaning up a kid’s diet and getting him on the right supplements goes a long way to treating, and most importantly, preventing these issues. Pediatric chiropractic is a highly under-utilized health care choice that should be made more available to parents, especially those looking for non-drug options that are safe and effective.