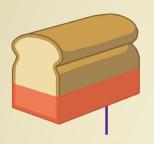
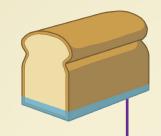
# Autism, Allergies, and the Immune System

Individuals with autism spectrum disorder (ASD) are vulnerable to food and seasonal allergies as well as disruptions of the immune system. Research suggests that 36% of children with ASD have food allergies. So what is the link?

### **Food Allergies & Sensitivities**



of children with autism have food allergies

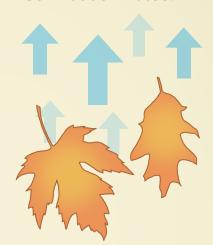


**5-8%** of children without autism have them<sup>1</sup>

The difficult to manage behaviors associated with ASD can be **exacerbated by reactions to food allergens** or intolerance for certain foods.

### **Seasonal Allergies**

Asthma rates rose 28% between 2001 and 2010<sup>2</sup> in a similar trajectory to the rise in autism rates.



Seasonal allergies and asthma can be difficult to manage for those with ASD. Both symptoms and medication side-effects can increase maladaptive behavior.

#### Ear Infections

Children with autism have

10 times

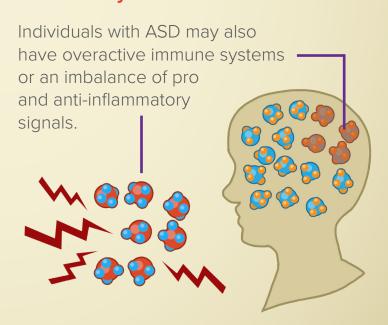
more ear infections in the first three years than do neurotypical children.3

vs

1 x

Can lead to overuse of antibiotics as well an increase in behavioral issues due to pain from the infection.

## **Immune System**



For more information, visit focus for health.org



- 1. http://www.autism.com/gastrointestinal
- 2. http://www.cdc.gov/nchs/data/series/sr\_03/sr03\_035.pdf
- 3. http://www.epidemicanswers.org/ear-infections-and-autism/
- 4. https://www.autismspeaks.org/science/science-news/clues-immune-system%E2%80%99s-role-autism