Hunger in Orange County

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Food Insecurity and Health Outcomes

Food insecurity is linked with numerous poor health outcomes and poor mental health outcomes.

Depression

Significant correlation seen between food insecurity and depression in ages 2-17

- Stronger correlation seen in younger children

More than double the odds that a youth will attempt suicide if impacted by food insecurity

Food insecurity is related to concurrent depression and future depression

Anxiety

Food insecurity in a child in the home was the most consistent and impactful predictor of parental anxiety

Children do not as readily feel anxiety due to parental shielding

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Externalizing Behaviors

Food insecurity is associated with preschool-aged children having more externalizing behaviors

Food insecurity is also associated with poorer academic performance and poor child behavior in school

There has also been shown to be a statistical correlation between food insecurity and hyperactivity in children under the age of 10 years old

Stress

Food insecurity acts a chronic stressor, increasing cortisol and inflammation in the body

- Risk factor for obesity, diabetes, and hypertension
- Food insecure children are more likely to be hospitalized

Food Insecurity and Health Outcomes

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Obesity

The odds of a child being obese were 5 times higher in a food-insecure household compared to a food-secure household

- Significantly greater external eating, both past satiation and eating in the absence of hunger
- Statistically eat more snacks per day compared to food-secure peers

Health Service Utilization

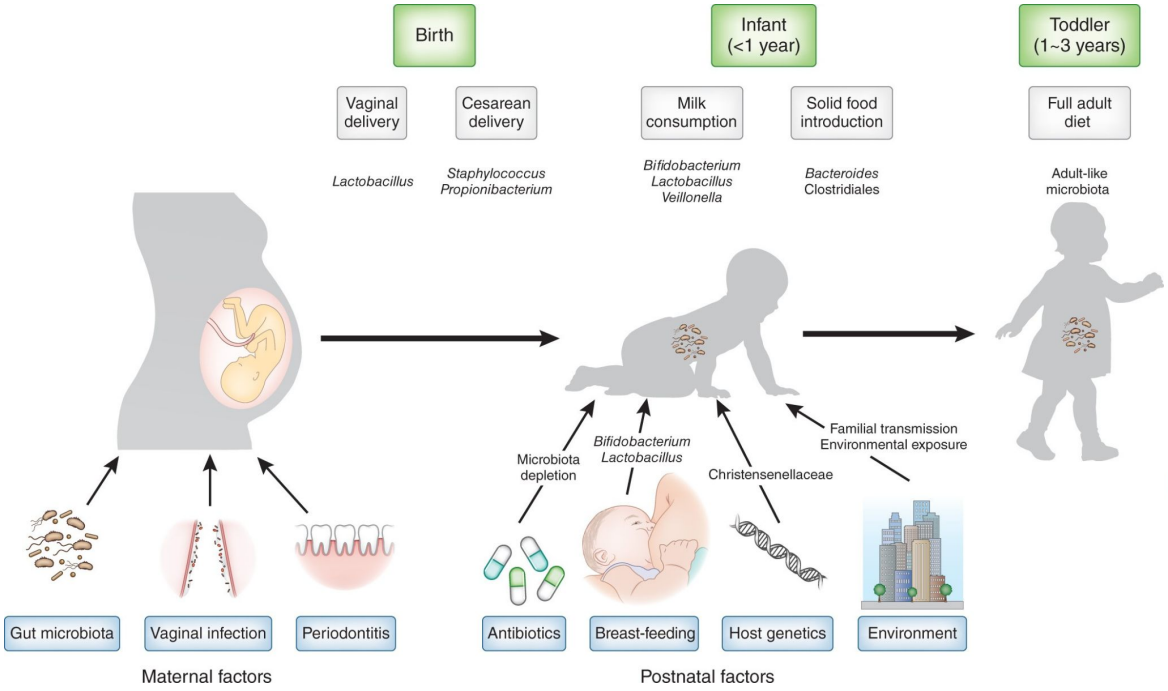
Food-insecure families are less likely to receive regular medical care and utilize emergency room services instead

- Rates of ED use are 25% higher

Food-insecure households also have higher mean healthcare expenditures than that of food-secure households

Food Insecurity and the Intestinal Microbiome

Malnutrition is associated with alterations in the intestinal microbiome.



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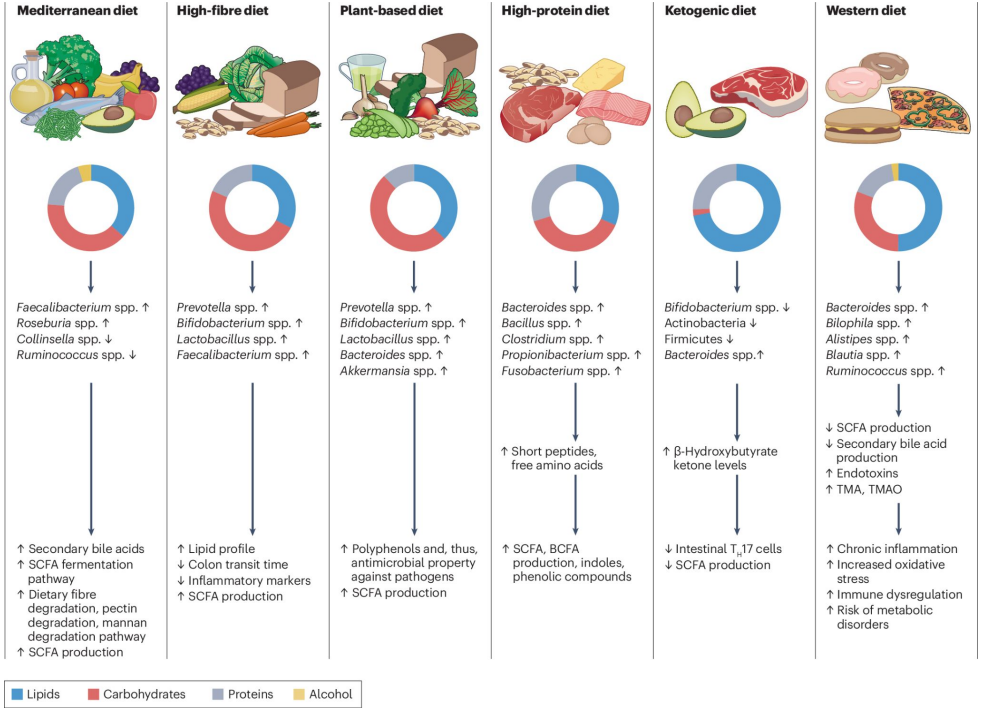
Food Insecurity and the Intestinal Microbiome

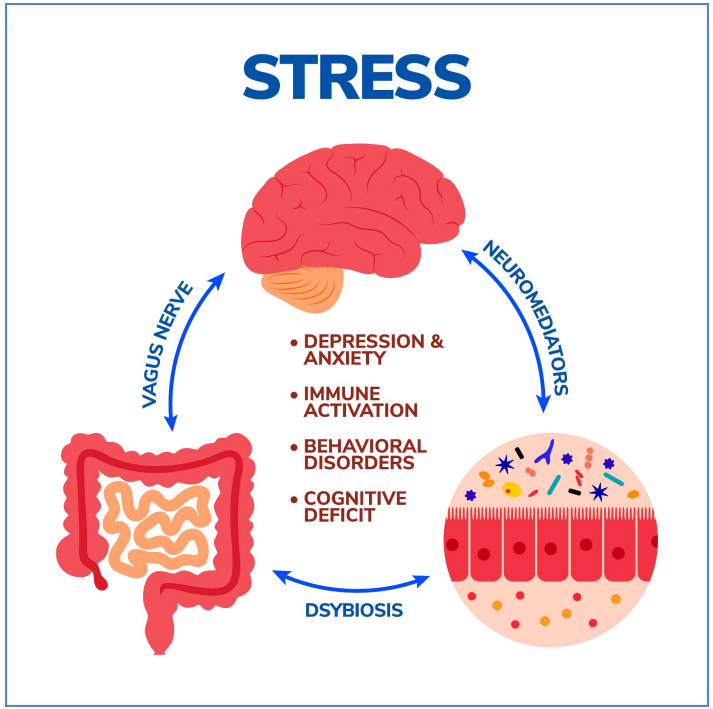
Malnutrition is associated with alterations in the intestinal microbiome.

Malnourished children have a higher fecal proportion of Proteobacteria and a lower fecal proportion of Bacteroidetes

- **Proteobacteria** is associated with inflammatory conditions such as metabolic disorders, IBD, and asthma
- **Bacteroidetes** metabolize complex carbohydrates



Food Insecurity and the Intestinal Microbiome



Children experiencing food insecurity have been found to have less diverse gut microbiome

This dysbiosis in the gut microbiome has been linked to epigenetic changes, which in mice studies has led to enteropathy and growth stunting

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Screening for Food Insecurity

TABLE 2 Screening for Food Insecurity

1. Within the past 12 mo, we worried whether our food would run out before we got money to buy more. (Yes or No)
2. Within the past 12 mo, the food we bought just didn't last and we didn't have money to get more. (Yes or No)

Adapted from Hager et al.[35] Although an affirmative response to both questions increases the likelihood of food insecurity existing in the household, an affirmative response to only 1 question is often an indication of food insecurity and should prompt additional questioning.

Resources in Orange County

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