

Impacts of Food Insecurity and Hunger On Health and Health Care

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Children's HealthWatch is:

- **Non-partisan network of pediatricians, public health researchers, and children's health and policy experts.**
- **Mission: to improve health and development of young children by informing policies that address and alleviate economic hardships.**

Research sites in:

**Little Rock, AR, Boston, MA,
Baltimore, MD, Minneapolis, MN,
Philadelphia, PA**

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Overview

- 1. How is food insecurity related to adverse health & child development outcomes?**
- 2. What are some major impacts of those adverse outcomes?**
- 3. Toward Solutions: The need for investment in effective social infrastructures.**

Food Insecurity Influences Health & Child Development Through Two Pathways:

- ➔ Nutritional pathways, and
- ➔ Non-nutritional pathways

Examples of Nutritional Pathways:

- Perinatal nutrition of mother and child,
- Brain and cognitive development in the child (sensitive and critical periods),
- Growth impacts (stunting, wasting),
- Compromise of immune system (risks for infection-malnutrition cycle),
- Energy deficits;
 - Compromised body temperature
 - Reduced environmental exploration

Examples of Non-nutritional Pathways

- Adverse impacts on the child's and parent's mental health and adult-child interactions,
- Impoverished home environment; lack of stimulation and nurturing support,
- “Toxic stress” (repetitive, persistent or inescapable acute or chronic stress),
- Delaying or foregoing needed health care,
- Non-compliance with treatment & Rx.

Food Insecurity and Hunger are Linked to Many Adverse Child Health Outcomes

Children in food-insecure families are more likely to:

- Have been hospitalized since birth,
- Have their health status reported as “fair/poor” versus “excellent/good”,
- Have parents report concerns indicating risk of developmental problems,
- Have anemia, with or without iron deficiency

1. Cook JT, Frank DA, Berkowitz C, Black MM, Casey PH, Cutts DB, Meyers AF, Zaldivar N, Skalicky A, Levenson SM, Heeren T, Nord M. Food Insecurity is Associated with Adverse Health Outcomes Among Human Infants and Toddlers. *J Nutr*, June 2004; 134:1432-1438.

2. Skalicky A, Meyers A, Adams W, Yang Z, Cook J, Frank DA. Child Food Insecurity and Iron Deficiency Anemia in Low-Income Infants and Toddlers in the United States. *Maternal and Child Health*; Nov 2005, 19:1-9.

Food Insecurity and Hunger Also are Linked to Adverse Maternal Health Outcomes

Children in households with “child food insecurity” are also more likely to:

- Have mothers who report having depressive symptoms,
- Have mothers who report their own health as “fair/poor”,
- Have mothers with unhealthy weight status,
- Have mothers with chronic diseases, e.g., diabetes.

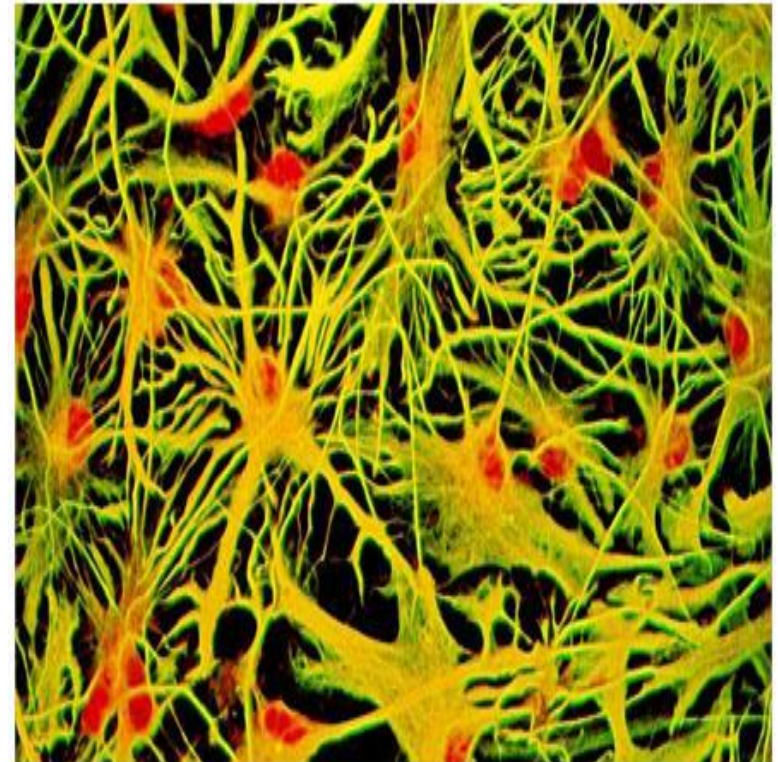
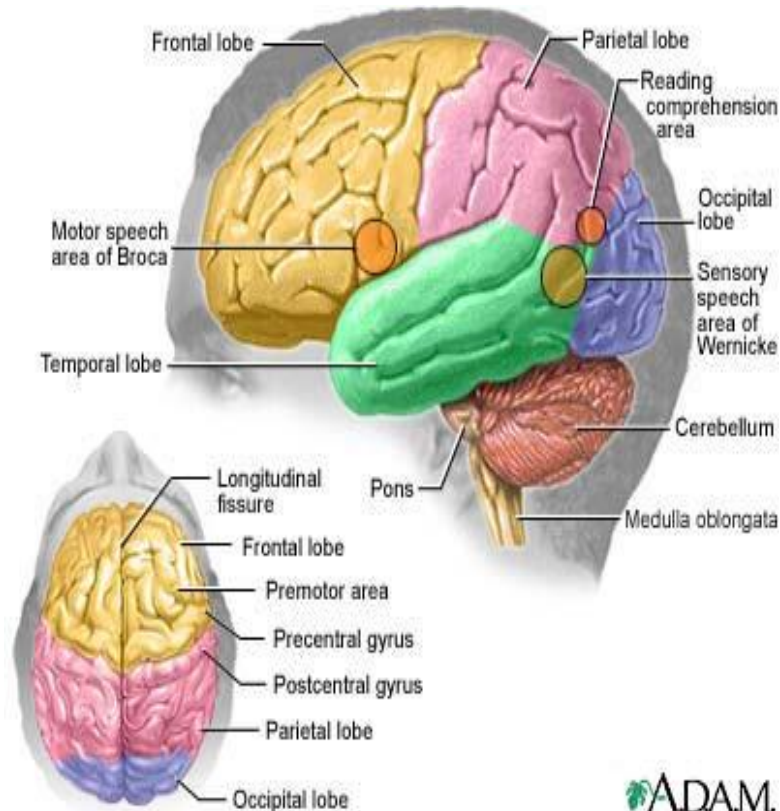
1. Casey P, Goolsby S, Berkowitz C, Frank D, Cook J, Cutts D, Black MM, Zaldivar N, Levenson S, Heeren T, Meyers A, and the C-SNAP Study Group. Maternal Depression, Changing Public Assistance, Food Security, and Child Health Status. *Pediatrics*, 2004; 113(2): 298-304.

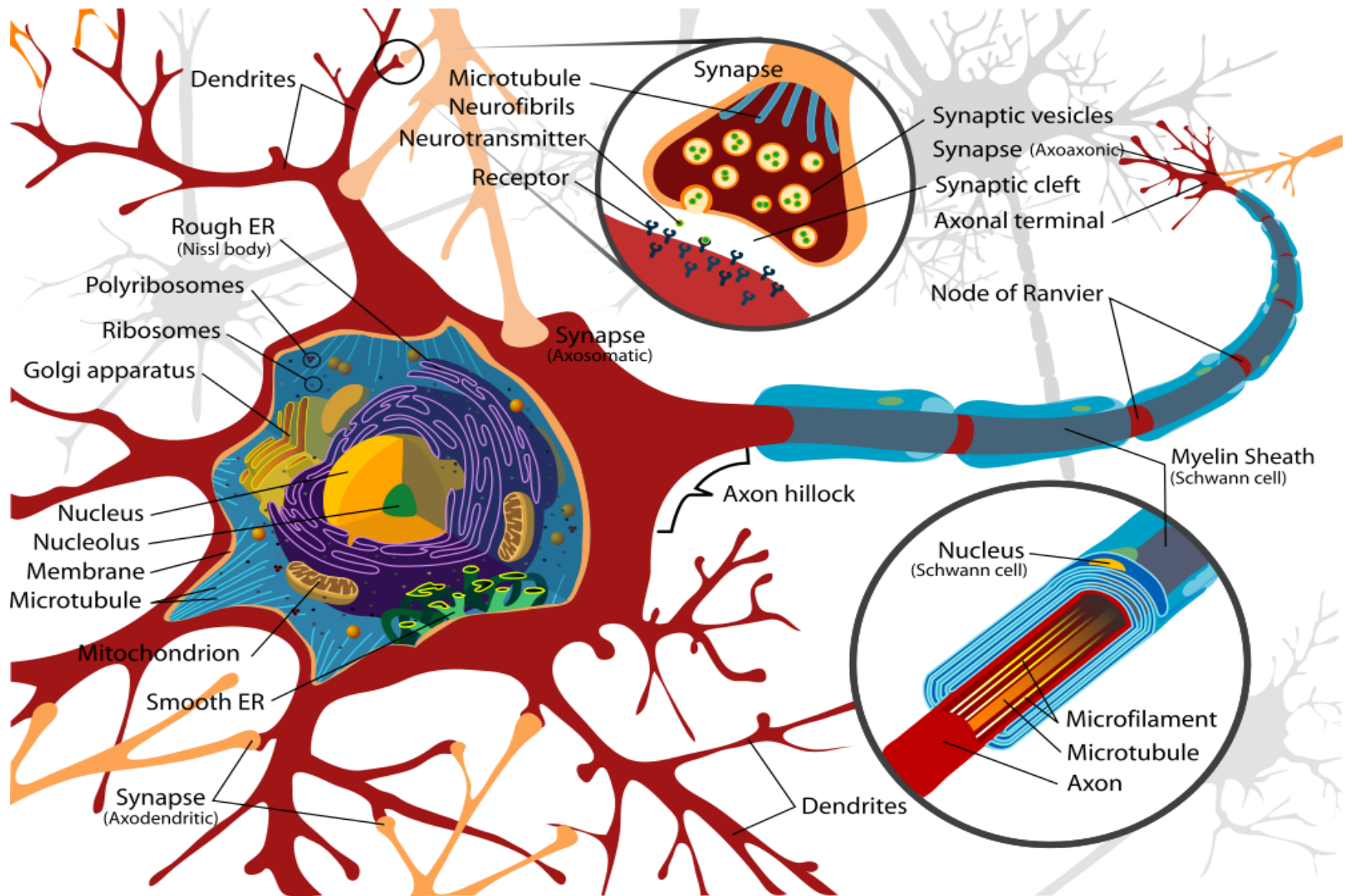
2. Laraia BA. Food Insecurity and Chronic Disease. *Adv. Nutr.* 4: 203–212, 2013.

New findings from genetics, neuroscience, developmental psychology and the economics of human capital formation indicate:

- Early experience and gene-environment interactions affect the architecture of young children's maturing brains,
- Positive stress (short term, quickly relieved, with adult support) can be beneficial,
- Tolerable stress (moderate, short-lived) -/+
- **Toxic stress (inescapable, acute or chronic)** harms the brain architecture of developing children, is associated with serious disease later

Brain architecture is laid down during the first three years of life; systems & neural pathways

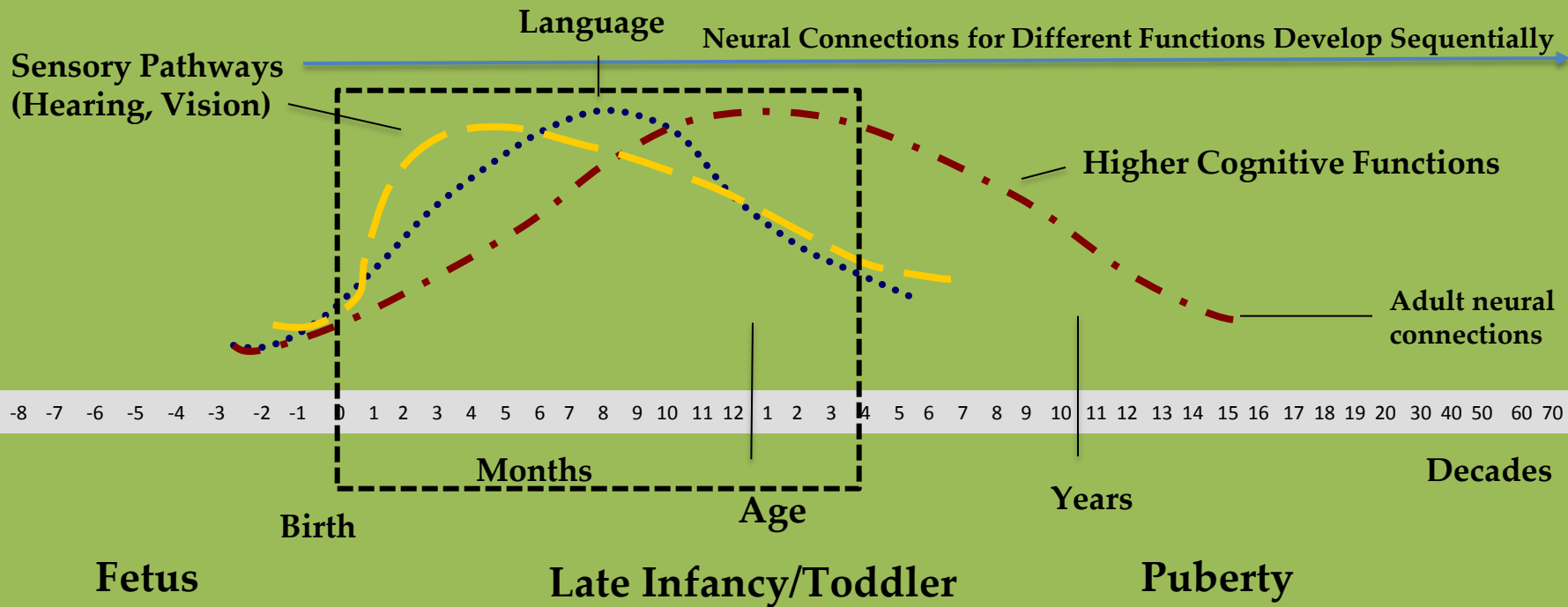




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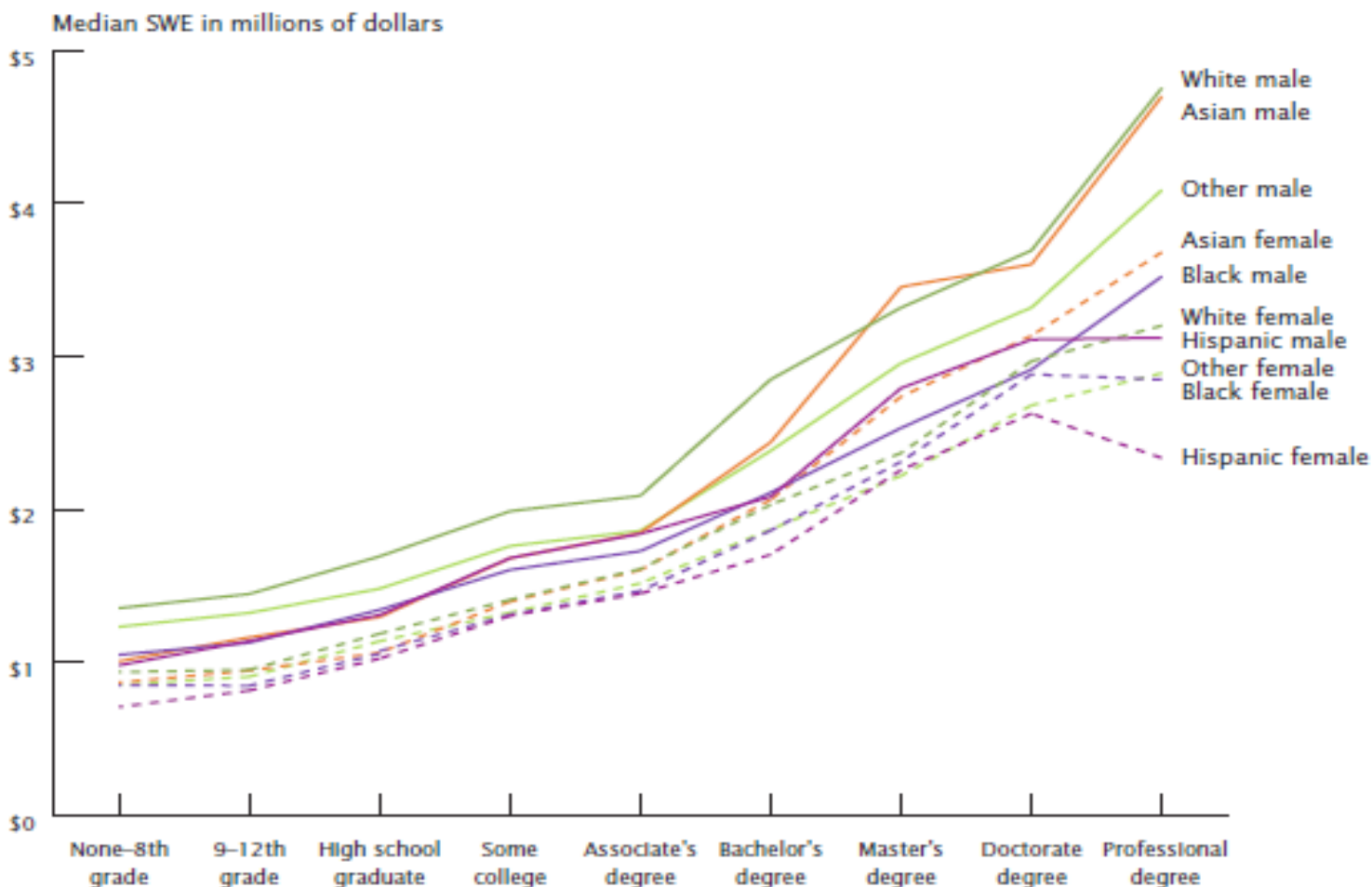
Human Brain Development

Most Vulnerable Period: Birth – Age 3-4 Yrs
Synapse formation, neural networks – “brain architecture”



Why Impacts of Food Insecurity on Health and Child Development Matter

Figure 4.
Synthetic Work-Life Earnings for Gender/Race-Ethnicity Groups by Education Level
(Full-time, year-round workers)



Source: U.S. Census Bureau, American Community Survey, 2006-2008.

Toward Solutions:

We can & must frame pathways forward, that eliminate poverty & food insecurity, and lead to future prosperity for all Americans!

But first we have to honestly identify the problem.

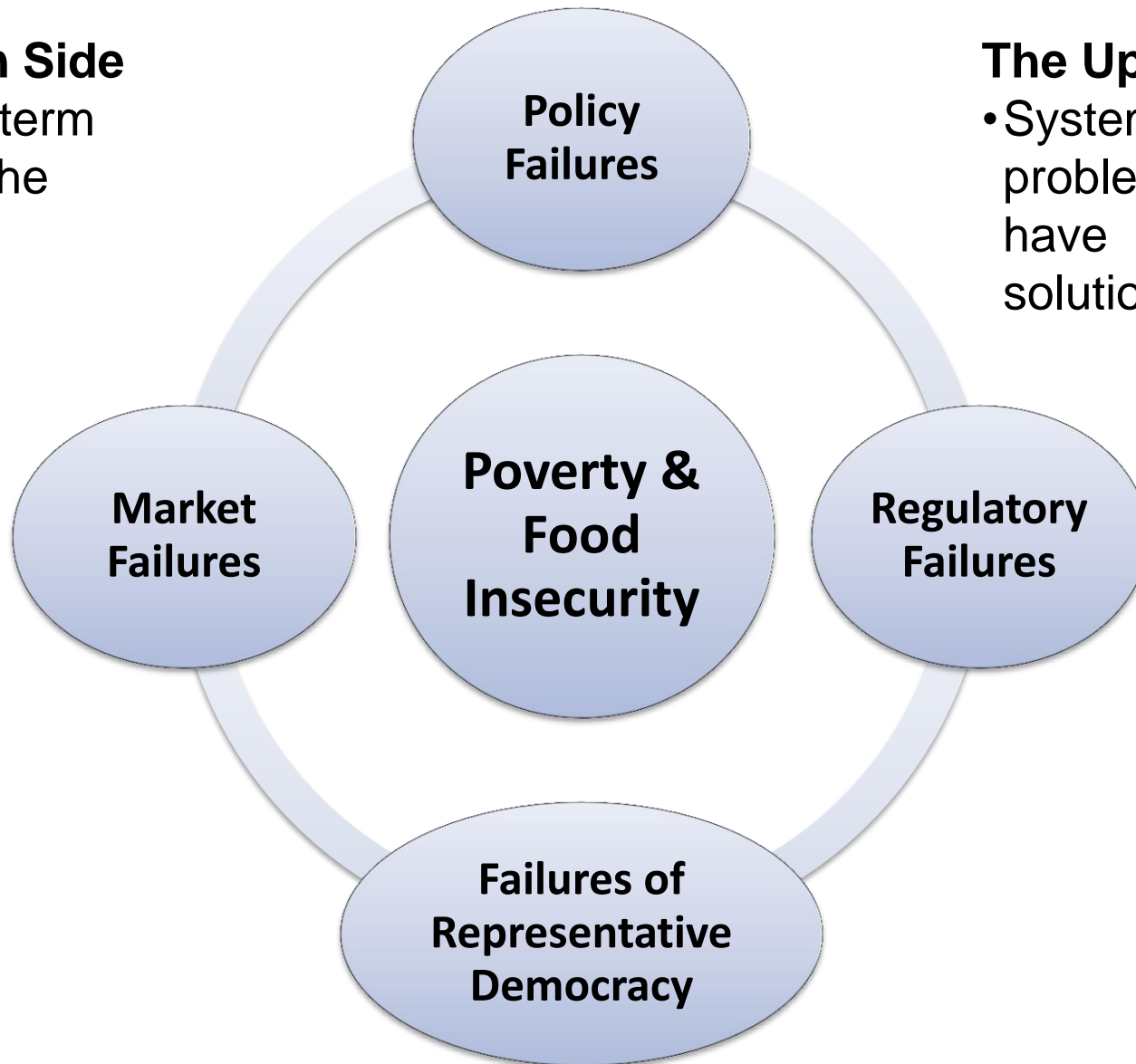
Poverty and food insecurity are results of systemic failures, not individuals' or families' failures

The Down Side

- No short-term fixes for the systemic problems

The Up side

- Systemic problems do have solutions!!



Thank You!

<http://www.childrenshealthwatch.org/>

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