

Morning sickness, reproductive aging – menopause, childbirth

EVOLUTION AND REPRODUCTION

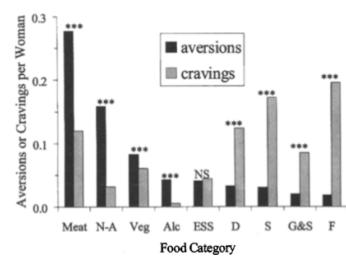
Morning Sickness

- What hypotheses might explain nausea in pregnancy?
- Food avoidance behavior?
- Sherman and Flaxman hypothesis

Embryo protection hypothesis

- Vomiting and positive pregnancy outcomes
- Maternal immunocompromise
- Embryo sensitivity to toxins

Meat avoidance – Fruit craving



Embryo organogenesis timing

- First trimester phenomenon
- Nausea and vomiting of pregnancy occur in first trimester

Foods carry different risks

- They not only carry risk of toxins and food-borne disease
- They alter the intestinal microbiota
- Important consequences

Reproductive Delay

- Lactation
- Delay in ovulation during post- natal period – who does it benefit
- Breastfeeding vs. Early weaning

Childhood eating patterns

- Is there a connection with reproductive conflict?
- Prader willi syndrome
- Angelman syndrome

Reproductive Aging

- Why does menopause occur?
- Name the hypotheses?

Lifespan Hypothesis

- Women rarely lived past 45-50 in pre-historic era.
- True?

Grandmother hypothesis

- Greater reproductive success helping offspring than continuing to reproduce?

Hill and Hurtado

- In Ache – continued personal reproduction beats helping kin reproduce
- Argues against the grandmother hypothesis

Risky Childbirth Hypothesis

- Is childbirth so risky that older women would be likely to die if they tried to reproduce?

Age-related maternal mortality – Packer hypothesis

- Orphan offspring

Shanley et al

- Test of the grandmother hypothesis in a Gambian population
- Found evidence for a significant contribution from grandmother helping

Hormone replacement – a test?

- Is menopause a treatable deficiency “disease”?
- If it is a disease of reproductive senescence, would you predict that “treating” the disease would result in improved health and longer lifespan?
- Hormone replacement therapy.