

YOUNG BRAIN BIG APPETITE

The brain is the organ with the longest development and maturation time - it starts in the third week of pregnancy and continues throughout adulthood

Sleep

Sleep plays an important role in healthy cognitive & psychosocial development during the transition from infancy to childhood.

Sleep is made up of three states:

Non-rapid eye movement (NREM) - restful and restorative with low brain activity

Rapid eye movement (REM) - consolidating memories, dreaming and building connections in central nervous system

Wakefulness

Important factors for infant sleep

- ✓ Regular and consistent bedtime
- ✓ Safe and comfortable place to sleep
- ✓ Being put in cot drowsy but awake
- ✓ Limited screen time
- ✓ Appropriate activity & exposure to daylight

Sleep timelines

0-3 months	2-3 months	4-12 months	12-18 months	18 months - 4 years
day/night reversal is common, no circadian rhythm	regular periods of sleepiness & alertness	more nocturnal	two naps a day	one or no daytime nap

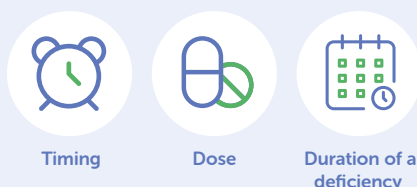
Good sleep benefits:

- Learning & memory
- Emotional regulation
- Cognitive development

Nutrition

Optimal nutrition in the fetal period and first few years of life is central to the development of a healthy brain architecture needed for lifelong cognition

Iron is currently the quintessential nutrient for the discussion of:

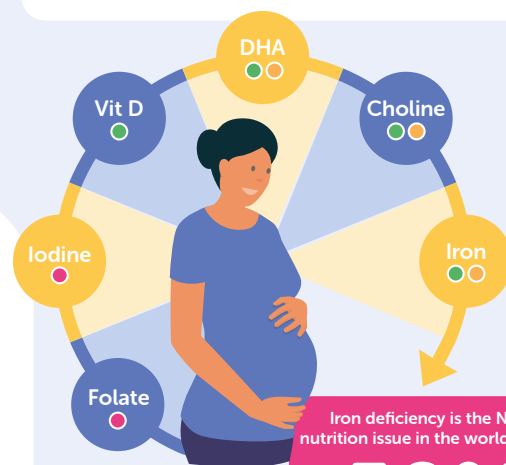


When a fetus is iron deficient for extended periods of time, brain development does not proceed on a typical trajectory

Six nutrients commonly associated with early cognitive development

These nutrients are important from pre-conception to pregnancy and after birth:

● Pre-conception ● Gestation ● Post natal



Iron deficiency is the No 1 nutrition issue in the world. Up to

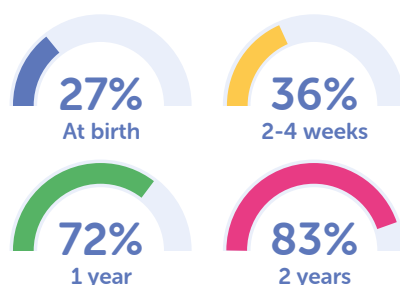
50%
of women worldwide are deficient

Energy

The brain consumes a high proportion of the body's energy, especially during times of rapid growth

The developing childhood brain uses up to 60% of the body's energy requirements

Infant brain volume vs that of an adult:



The adult brain uses glucose for energy



The developing brain needs glucose and fatty acids to produce energy

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