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

**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

**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.

**Energy**
The brain consumes a high proportion of the body’s energy, especially during times of rapid growth.

**Infant brain volume vs that of an adult:**
- **27%** At birth
- **36%** 2-4 weeks
- **72%** 1 year
- **83%** 2 years

Iron deficiency is the No 1 nutrition issue in the world. Up to 50% of women worldwide are deficient.

**Six nutrients commonly associated with early cognitive development**
These nutrients are important from pre-conception to pregnancy and after birth:

- **DHA**
- **Choline**
- **Vit D**
- **Iodine**
- **Folate**
- **Iron**

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

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

- The developing brain needs glucose and fatty acids to produce energy
- The adult brain uses glucose for energy