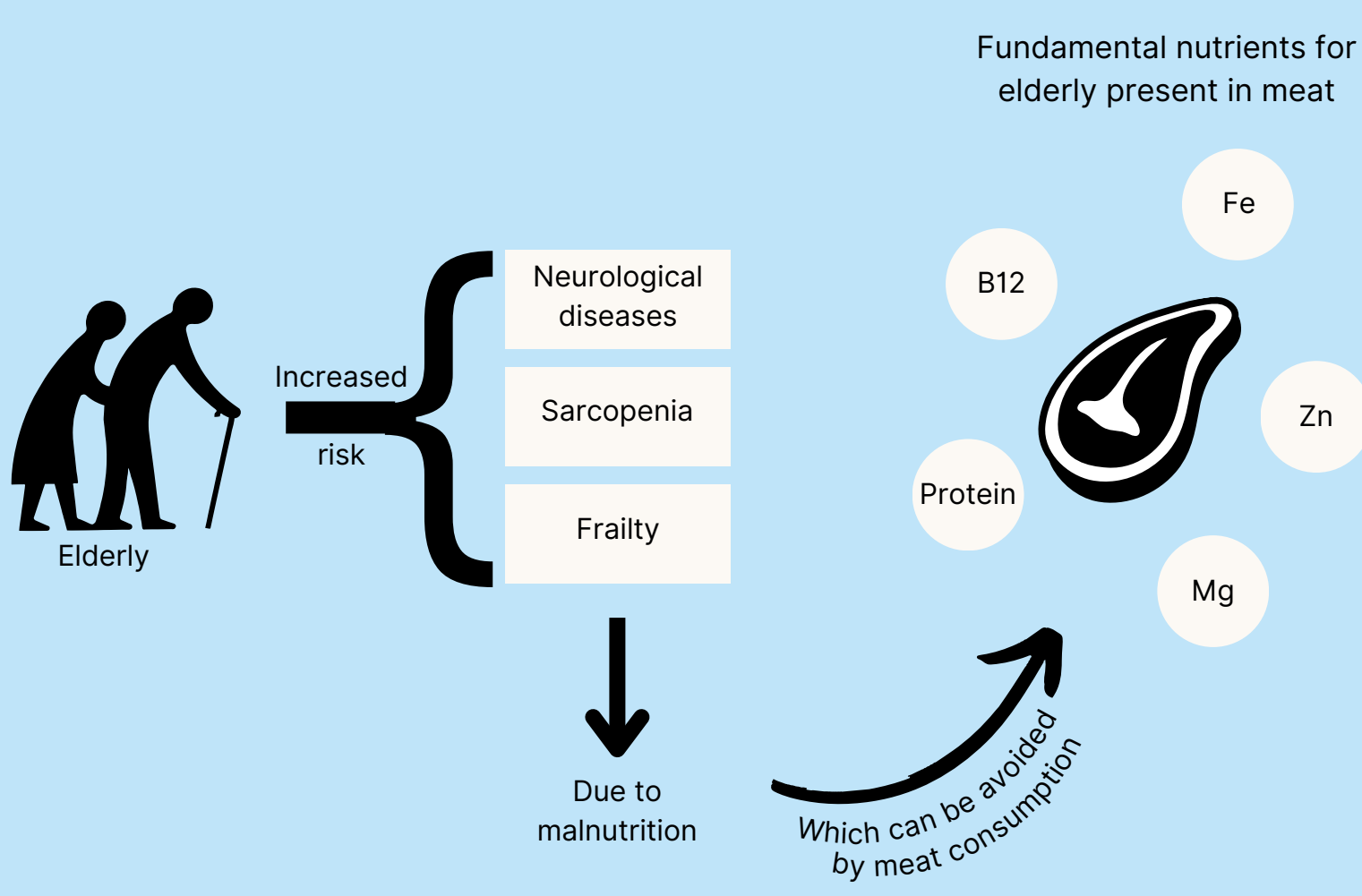
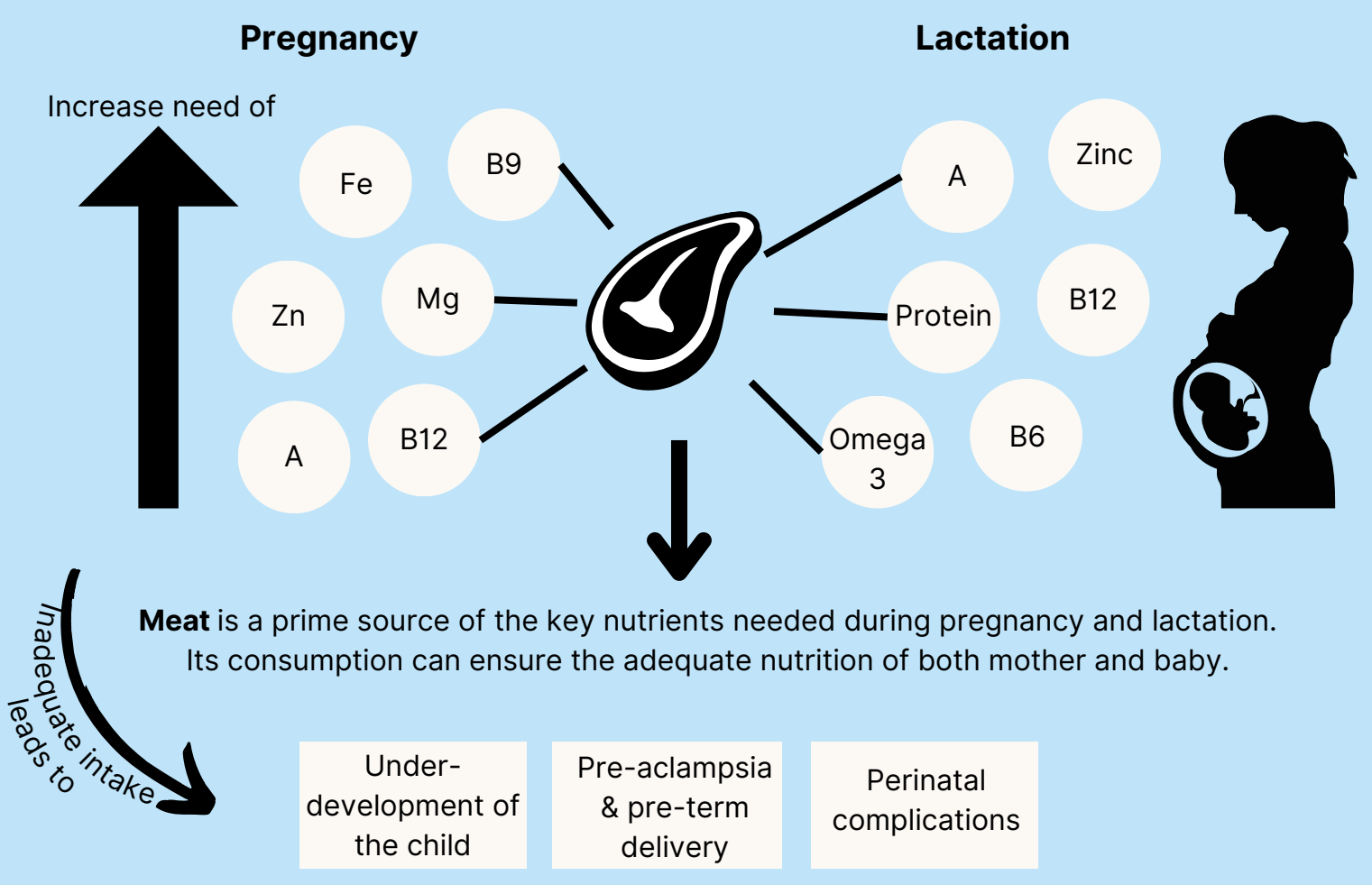
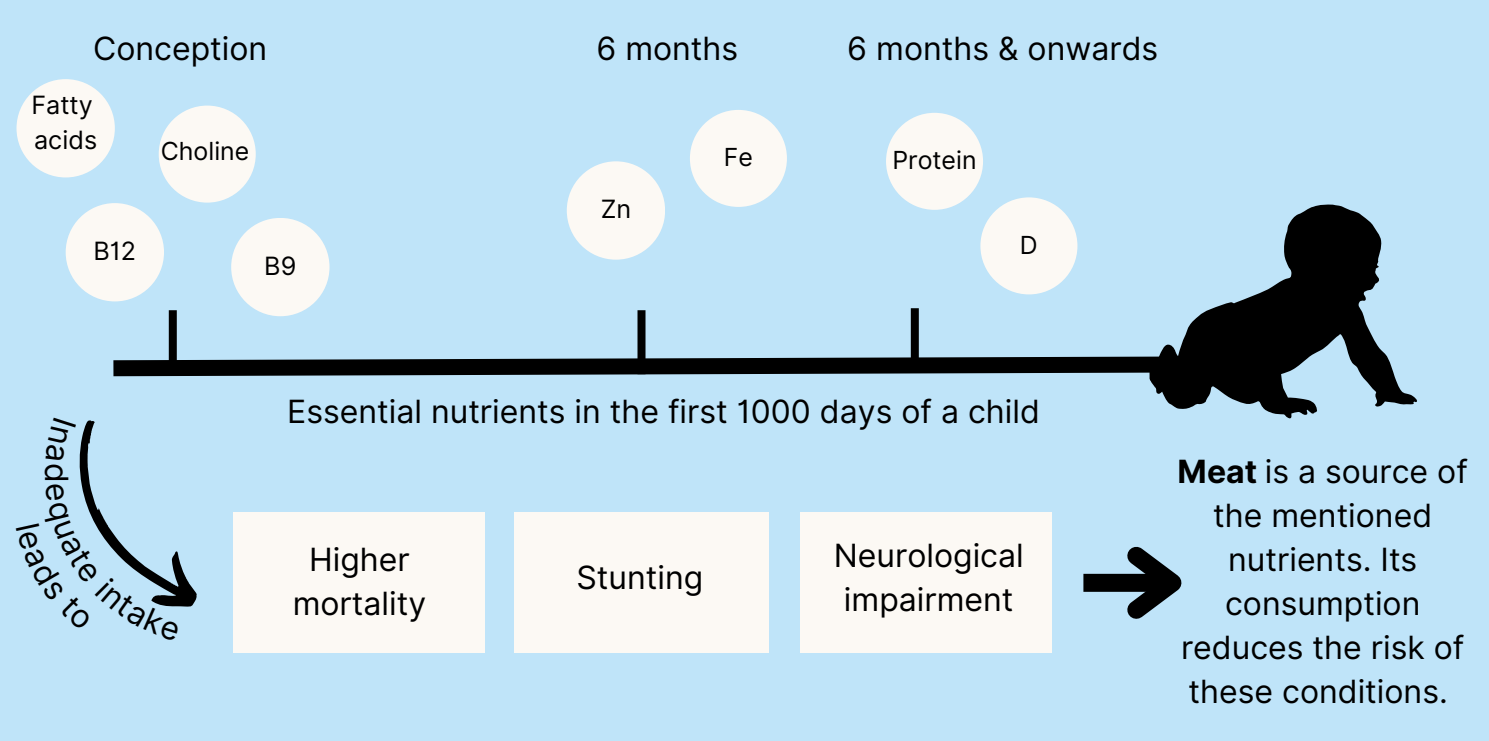


The Role of Meat in Vulnerable Populations



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Children

The **first 1000 days** are critical for the healthy development and a healthy life for the newborn. **Optimal nutrition is key** to ensure this, as **deficiencies in these early stages cause higher mortality rate, impaired mental development and increased risk of chronic disease**, which has repercussions throughout the whole life of a child (1).

Meat has been studied as one of the **main foods to optimise health in children**. As it is a **source of protein, vitamin B12 & B9, zinc, iron, essential fatty acids and choline**, nutrients that play major roles in the newborn development, **its consumption can help decrease stunting, increase cell proliferation, bone growth and neurological capability** (1).

Infant **iron and zinc reserves are depleted** by the time they reach **the age of 6 months**, thus diets containing these minerals should be prioritised. **Growth and development also pick up speed after the age of six months**, and nutrients like **protein and vitamin D are necessary** for the **development of skeletal mass** and to help **prevent nutritional rickets**. Meat can be introduced in the infant's diet already at 6 months, allowing the adequate ingestion of the nutrients described above (2).

Prevention of stunting in children leads to **better health and social outcomes**, which is particularly relevant for children prevenient from lower social classes. Studies show that **meat consumption improves cognitive performance and increased physical activity, leadership and initiative behaviours** in children (3).

In conclusion, **meat consumption contributes to a healthy development and prevention of stunting and deficiencies due to its high quality and richness in key nutrients for children**.



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The Role of Meat in Vulnerable Populations

Pregnant and lactating women

Pregnancy and lactation are two states in which **nutritional demands are higher than usual**. Since the **mother's ability to nurture, feed, and care for herself and her child is dependent on her health**, ensuring a healthy and optimal nutrition is fundamental (1).

Pregnancy

Pregnant women have increased needs of vitamins of complex B, vitamine A, choline, magnesium, iron, zinc, among others, compared to non-pregnant women.

Deficiency of these **nutrients** has a negative impact on the health of the mother and the child, **increasing the risk for pre-term labor and pre-eclampsia and underdevelopment of the baby, which could result in spontaneous abortion or neurological impairment**. There is also an **increased risk of death** for the mothers that present this condition.

Following an adequate diet during this period is crucial to ensure the best outcome, with **meat having a pivotal role due to its high quality and high bioavailability of nutrients**.

A regular consumption of meat can help obtain the appropriate levels of vitamins and minerals and avoid deficiencies (1).

Lactation

Exclusive breastfeeding up to 4-6 months is advised as the gold standard for child's nutrition.

Lactating women require **increased amounts of vitamins A, B6, B12, choline, folate, iodine, zinc, omega-3 fatty acids and protein**, among others, in order to assure the production of breastmilk and the proper function of the body. In case of **nutrients' deficiencies** it can have **negative repercussions on both the mother and the baby**, such as neurological impairment (2).

Meat is a **prime source** of the nutrients described, which make it an **excellent food choice** to prevent deficiencies and **ensure an adequate composition of breastmilk** (1).

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The Role of Meat in Vulnerable Populations

Elderly

The **ageing** process entails **increased risks** of developing illnesses such as **dementia, frailty or sarcopenia**, which affect the quality of life, by increasing morbidity, and life expectancy of the population (1). **Diet plays a crucial role to avoid it, by avoiding malnutrition.**

Malnutrition refers to deficiencies, excesses or imbalances in a person's intake of energy and/or nutrients (2). **In elderly it is associated with poorer immune function, increased risk of infections, neurological diseases, sarcopenia, longer stays in intensive care units and increased mortality** (1). **Adequate protein** with appropriate energy intake **is crucial** in order **to prevent malnutrition and sarcopenia.**

It is estimated that **a quarter of European adults +65 are at high risk of malnutrition** (1).

Meat is fundamental to decrease such risks. **Due to its richness in all the essential amino acids and high availability of proteins**, meat, even in modest amounts, offers the required protein to sustain muscular mass (3).

Older individuals also tend to suffer from **calcium, vitamin B12, iron, magnesium and zinc deficiency**. This further worsens malnutrition and all the conditions associated with it. Meat is a great source of the nutrients cited above, but also helps to **regulate the absorption and metabolism of other nutrients, which helps decrease micronutrients' deficiency** (1,3).

Meat provides, as well, **bioactive molecules** such as taurine and creatine, which are being **studied as agents for a healthy aging** (3).

In conclusion, **meat consumption contributes to a better quality of life and to a healthier aging due to its nutrients' richness.**

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