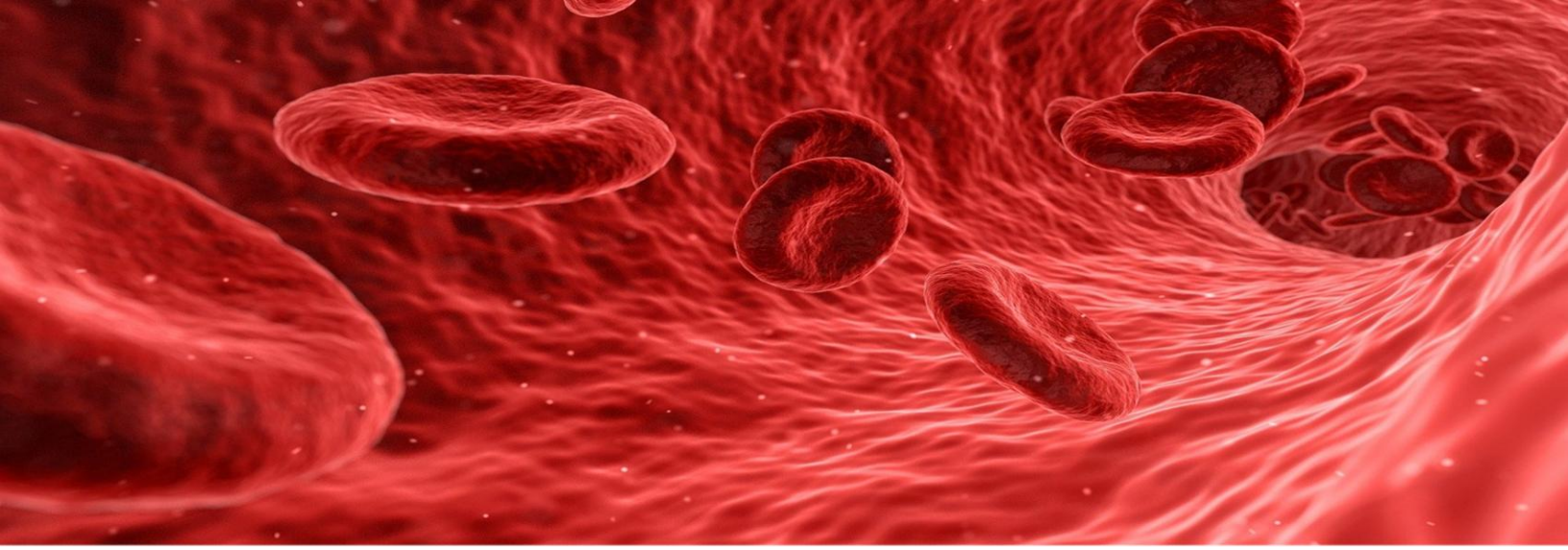


Understanding Anaemia in Children

Anaemia is a significant public health issue affecting children worldwide. It is characterized by a deficiency in the number or quality of red blood cells, leading to reduced oxygen transport in the body. This brochure aims to provide a comprehensive overview of anaemia in children, focusing on three primary causes: Reduced Production, Increased Destruction, and Increased Loss.

1. Reduced Production

One of the most common causes of anaemia in children is reduced production of red blood cells. This can occur due to nutritional deficiencies, particularly a lack of essential nutrients such as iron and folic acid.

Iron Deficiency

Iron is crucial for the production of hemoglobin, the protein in red blood cells that carries oxygen. Children require adequate iron intake to support their rapid growth and development. Insufficient dietary iron can lead to iron-deficiency anaemia, which is prevalent among young children and adolescents.

Sources of Iron:

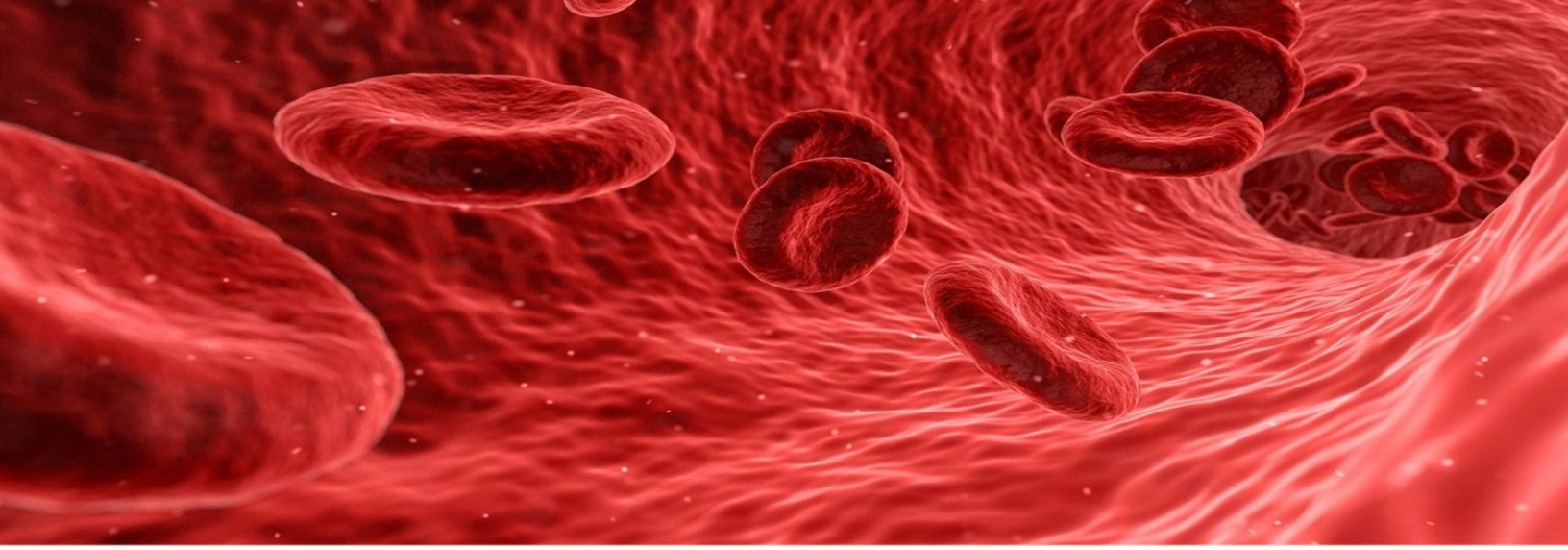
- Red meat (beef, lamb)
- Poultry (chicken, turkey)
- Fish
- Lentils and beans
- Tofu
- Spinach and other leafy greens
- Fortified cereals

Folic Acid Deficiency

Folic acid (vitamin B9) plays an essential role in DNA synthesis and cell division, making it vital for producing new red blood cells. A deficiency can result from inadequate dietary intake or malabsorption issues.

Sources of Folic Acid:

- Leafy green vegetables (kale, spinach)



- Citrus fruits (oranges, lemons)
- Beans and legumes
- Nuts and seeds
- Fortified grains

Signs and Symptoms:

Children with reduced production of red blood cells may exhibit symptoms such as fatigue, weakness, pale skin, irritability, and poor concentration. Early detection through regular screening can help prevent long-term complications.

2. Increased Destruction

In some cases, anaemia results from increased destruction of red blood cells. This condition can be caused by various factors:

- Hemolytic Anaemia

Hemolytic anaemia occurs when red blood cells are destroyed faster than they can be produced. This can be due to autoimmune disorders where the body's immune system mistakenly attacks its own red blood cells or inherited conditions like sickle cell disease or thalassemia.

Signs and Symptoms:

Children with hemolytic anaemia may experience jaundice (yellowing of the skin and eyes), dark urine, fatigue, shortness of breath, and an enlarged spleen or liver.

3. Increased Loss (Blood Loss)

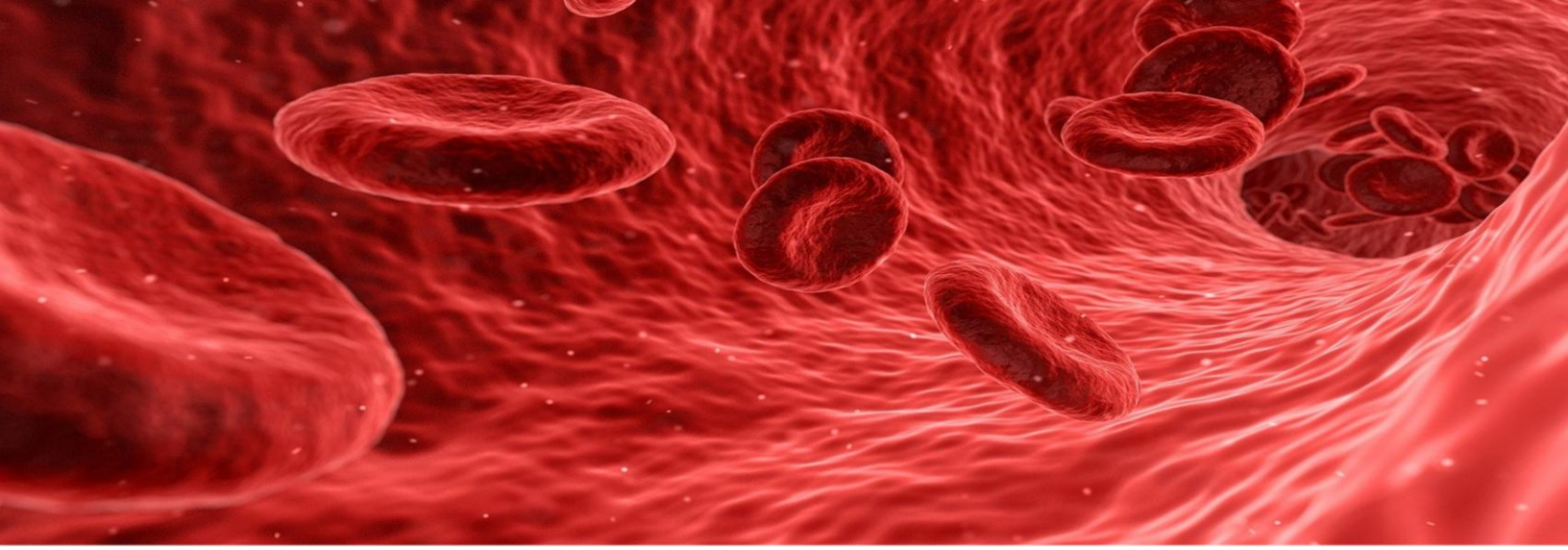
Another significant cause of anaemia in children is increased loss of blood. This can occur due to several reasons:

Gastrointestinal Bleeding

Conditions such as ulcers or inflammatory bowel disease can lead to chronic gastrointestinal bleeding in children.

Menstrual Blood Loss

Adolescent girls may experience heavy menstrual periods (menorrhagia), which can contribute significantly to iron loss over time.



Trauma or Surgery

Acute blood loss from injuries or surgical procedures can also lead to temporary but severe anaemia if not managed properly.

Signs and Symptoms:

Symptoms associated with increased blood loss include fatigue, pallor, dizziness upon standing up (orthostatic hypotension), rapid heartbeat, and cold extremities.

Conclusion

Anaemia in children is a multifaceted condition that requires careful attention to nutritional needs as well as monitoring for underlying health issues that may contribute to increased destruction or loss of red blood cells. Parents should ensure their children receive a balanced diet rich in iron and folic acid while being vigilant about any signs that may indicate anaemia's presence.

Regular check-ups with healthcare providers are essential for early detection and management strategies tailored to each child's specific needs, diagnosis and management.