



## Pupils with Health Issues

### Anaemia



## Anaemia



### Classroom-based tips (focus on instructional methods)

1. **Be vigilant when interpreting a pupil's behavior.** If undiagnosed, pupils may exhibit some or all of the following behaviors: irritability, fatigue, lack of concentration, avoidance of activities, dizziness and other cognitive problems.
2. **Ensure that pupil absences are justified;** encourage parents to take their children for a full check-up.
3. **Include healthy eating and nutrition in the curriculum as a life skill** in the context of a module such as health or science.
4. **Offer pupils the opportunity to sit at the front of the class to help with concentration.**
5. **Take an inclusive approach to all activities including physical education;** bear in mind that anemic pupils might exhibit signs of fatigue or dizziness or might need extra time to recover from activity.

[Reference: *Schools and Health*: <http://www.schoolsandhealth.org/Pages/iron.aspx>]



### School-based practical tips (focus on instructional methods)

#### Food: Canteen / Visits / Camps / Trips

1. **Ensure that the school canteen offers foods or snacks that are rich in iron.**

[Reference: *Schools and Health*: <http://www.schoolsandhealth.org/Pages/iron.aspx>]

2. **Ensure that even pupils from a low socio-economic background who might not be receiving adequate nutrition at home can have access to iron-rich foods at school;** these efforts can be supported through appropriate actions organised by parents' associations.

[Reference: Kim, J. Y., Shin, S., Han, K., Lee, K. C., Kim, J. H., Choi, Y. S., ... & Ko, B. J. (2014). *Relationship between socioeconomic status and anemia prevalence in adolescent girls based on the fourth and fifth Korea National Health and Nutrition Examination Surveys. European journal of clinical nutrition*, 68(2), 253-258.]

#### Other (School Health Checks)

**Have a heart rate monitor available for use in physical education classes and other physical activities,** as pupils with anemia may experience an unusually rapid heart rate.

[Reference:

[http://www.hopkinsmedicine.org/healthlibrary/conditions/hematology\\_and\\_blood\\_disorders/iron-deficiency\\_anemia\\_85.P00077/](http://www.hopkinsmedicine.org/healthlibrary/conditions/hematology_and_blood_disorders/iron-deficiency_anemia_85.P00077/)]

## Parents / Parents' Associations

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2. **Discuss with the parents the special requirements of the pupil with anemia such as medication and nutritional needs.**

[Reference: Mayo Clinic: [www.mayoclinic.org](http://www.mayoclinic.org)]

## Safety

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## Pupil Support

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## Technology

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## Supportive literature

### Definition of Anemia

Anemia occurs when blood has a lower than normal number of red blood cells, or if red blood cells don't have enough hemoglobin. Hemoglobin is a protein that gives blood its red color and helps those cells bring oxygen from your lungs to the rest of the body. If a person is anemic, the body simply doesn't receive enough oxygen-rich blood, which makes the person feel tired and weak. Severe anemia can damage the heart, brain and other organs in the body, and may even cause death. Overall, iron deficiency is the most common cause of anemia in the developed world (Sills et al, 2016). Iron deficiency needs to exist for a long time before anemia occurs. Iron deficiency is usually caught early by pediatricians in routine screening as it exhibits very peculiar symptoms such as nailbiting and the desire to chew on ice or soil (pica). In the Western world anemia could be the result of prolonged iron deficiency due to malnutrition as seen in anorexia nervosa.

### Symptoms of anemia

Difficulty maintaining body temperature, increased likelihood of infections fatigue, weakness, pale skin, fast or irregular heartbeat, shortness of breath, chest pain, dizziness, cognitive problems, cold hands and feet, headaches and irritability.

### At risk groups

According to the **World Health Organisation (2004)**, children are particularly vulnerable to anemia and an estimated 53% of school-age children suffer from anemia globally. Adolescent girls are at higher risk of iron deficiency because their bodies lose iron during menstruation. Children who have certain health conditions, such as chronic infections or restricted diets, as well as children who are not receiving enough nutrition through their diet are also at higher risk of iron deficiency. Anemia has severe consequences on the cognitive and physical development of children, as indicated by poor school performance due to an inability to learn and concentrate (WHO, 2004).

## Websites and EU Reports

Schools and Health

<http://www.schoolsandhealth.org/Pages/iron.aspx>

Centre for Diseases Control

<https://www.cdc.gov/mmwr/preview/mmwrhtml/00051880.htm>

World Health Organisation (WHO)

[http://www.who.int/topics/anaemia/en/who\\_unicef-anaemiastatement.pdf](http://www.who.int/topics/anaemia/en/who_unicef-anaemiastatement.pdf)

## **References**

Sills R. Iron-deficiency anemia. In: Kliegman RM, Stanton BF, St Geme JW, Schor NF, eds. *Nelson Textbook of Pediatrics*. 20th ed. Philadelphia, PA: Elsevier; 2016:chap 455.

World Health Organization (2004) Focusing on anaemia joint statement. World Health Organization and the United Nations Children's Fund.