

Please read this section first

The HPCSA and the Med Tech Society have confirmed that this clinical case study, plus your routine review of your EQA reports from Thistle QA, should be documented as a “Journal Club” activity. This means that you must record those attending for CEU purposes. Thistle will not issue a certificate to cover these activities, nor send out “correct” answers to the CEU questions at the end of this case study.

The Thistle QA CEU No is: MTS 18/059

Each attendee should claim ONE CEU point for completing this Quality Control Journal Club exercise, and retain a copy of the relevant Thistle QA Participation Certificate as proof of registration on a Thistle QA EQA.

DIFFERENTIAL SLIDES LEGEND

CYCLE 52 SLIDE 4

Iron Deficiency Anaemia

Anaemia occurs when you have a level of red blood cells in your blood that is lower than normal. Iron Deficiency Anaemia is the most common type of anaemia, and it occurs when the body does not have enough of the mineral iron. The body needs iron to make a protein called haemoglobin. This protein is responsible for carrying oxygen to the body’s tissues, which is essential for the tissues and muscles to function effectively. When there is not enough iron in the blood stream, the rest of the body cannot get the amount of oxygen it needs.

While the condition may be common, a lot of people do not know they have iron deficiency anaemia. It is possible to experience the symptoms for years without even knowing the cause.

What causes Iron Deficiency Anemia?

- Inadequate Iron Intake: Eating too little iron over an extended amount of time can cause a shortage in the body. Foods such as meat, eggs and some green leafy vegetables are high in iron. Because iron is essential during times of rapid growth and development, pregnant women and young children may need even more iron-rich foods in their diet.
- Pregnancy or blood loss due to menstruation: In women of child bearing age, the most common cause of iron deficiency anemia are heavy menstrual bleeding and blood loss during child birth.
- Internal bleeding: Certain medical conditions can cause internal bleeding which can lead to iron deficiency anemia. Examples include an ulcer in the stomach, polyps in the colon or intestines or colon cancer. Regular use of pain relievers such as aspirin can also cause bleeding in the stomach.
- Inability to absorb iron: Certain disorders or surgeries that affect the intestines can also interfere with how the body absorbs iron. Even if the body gets enough iron from a diet, celiac disease or intestinal surgery, such as a gastric bypass may limit the amount of iron the body can absorb.

Who is at risk for Iron Deficiency Anaemia?

Anaemia is a common condition and can occur in both men and women of any age and from any ethnic group. Some people may be at greater risk for iron deficiency anaemia than others. These include:

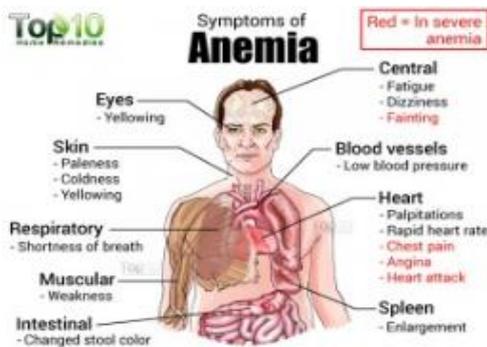
- Women of child bearing age
- Pregnant women

- People with poor diets
- People who donate blood frequently
- Infants and children especially those born prematurely or experiencing a growth spurt
- Vegetarians who don't replace meat with another iron-rich food

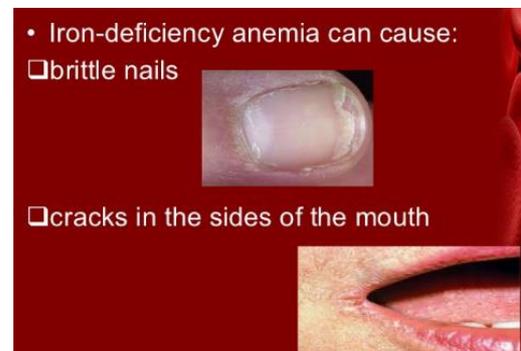
Symptoms of Iron Deficiency Anaemia

The symptoms of iron deficiency anemia can be very mild at first and one may not even notice them. The symptoms of moderate to severe include:

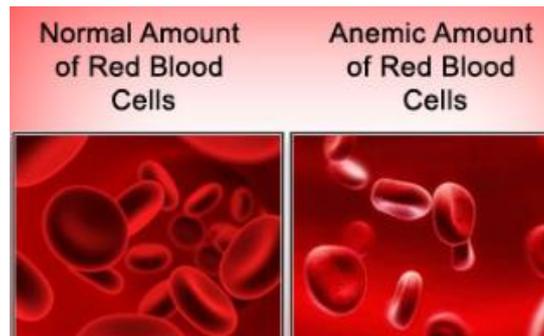
- General fatigue
- Weakness
- Pale skin
- Shortness of breath
- Dizziness
- Strange cravings to eat items that are not food, such as dirt, ice or clay
- A tingling or crawling feeling in the legs
- Tongue swelling or soreness
- Cold hands and feet
- Fast or irregular heartbeat
- Brittle nails
- Headaches



Physical effects of iron deficiency anemia



Symptoms of iron deficiency anemia



Normal cells vs anemic cells

How to diagnose Iron Deficiency Anemia?

Anemia can be confirmed by the results of the following blood tests:

- Full blood count
- Ferritin levels
- Total iron-binding capacity

How is Iron Deficiency Anemia treated?

- Iron supplements: Iron tablets can help restore iron levels in the body. They should be taken on an empty stomach which helps the body absorb them better. They may need to be taken over a period of several months
- Diet: Foods such as red meat, green vegetables, dried fruits, nuts and iron fortified cereals should be included in one's diet. A source of vitamin C helps the body absorb iron faster.
- Treating the underlying cause of bleeding: Iron supplements will not help if excess bleeding causes the deficiency. A doctor may prescribe birth control pills to women who have heavy menstruation. In most cases, a blood transfusion can replace iron and blood loss quickly,

References

1. <http://www.healthline.com/health/iron-deficiency-anemia?m=0&rwd0>
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Questions

1. Name the protein that the body needs the mineral iron to produce
 2. How can iron deficiency anaemia be diagnosed?
 3. Which vitamin helps the body absorb iron faster?
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