

*Symptoms of iron*  
*deficiency*

- *Asymptomatic*

# Signs and symptoms

- Fatigue
- Leg cramps on climbing stairs
- Craving ice (in some cases, cold celery or other cold vegetables) to suck or chew
- Cold intolerance
- Reduced resistance to infection
- Altered behavior (eg, attention deficit disorder)
- Dysphagia with solid foods (from esophageal webbing)
- Worsened symptoms of comorbid cardiac or pulmonary disease

# In older adults

- Iron deficiency anemia may have an insidious onset and present with symptoms related to exacerbation of an underlying co-morbidity:
- Eg, increasing angina from coronary artery disease, increased confusion in subjects with dementia, increased dyspnea in those with congestive failure.

# Restless legs syndrome

- Iron deficiency is one of the more common causes of restless legs syndrome (RLS)
- Oral iron therapy may also be considered when ferritin levels are within normal range, as some patients with RLS but without iron deficiency may still respond

# Restless legs syndrome

- The same symptoms may also be present in those with extremely low levels of serum ferritin who are not anemic

# Findings on physical examination may include the following

- Impaired growth in infants
- Pallor of the mucous membranes (a nonspecific finding)
- Spoon-shaped nails (koilonychia)
- A glossy tongue, with atrophy of the lingual papillae
- Fissures at the corners of the mouth (angular stomatitis)
- Splenomegaly (in severe, persistent, untreated cases)
- Pseudotumor cerebri (a rare finding in severe cases)

# General

- Weakness, headache, irritability, and varying degrees of fatigue and exercise intolerance.



# Cognitive function

- The ability to concentrate in school, and mood

# Physical performance

- Impairs exercise capacity in adolescents
- Easy fatigability may be seen with iron deficiency in the absence of anemia

# Pica and pagophagia


- Specific for the iron deficiency state
- Clay or paper products.
- Pagophagia, or pica for ice,

# Pica and pagophagia

- It may be present in children who are not anemic

# Beeturia

- Occasional manifestation of iron deficiency
- This finding is caused by increased intestinal absorption and subsequent excretion of the reddish pigment betalaine (betanin)

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- Betalaine is decolorized by ferric ions, which presumably explains the predisposition to beeturia in iron deficiency.

# SCREENING

- Menstruating girls be screened annually by measuring hemoglobin concentration or hematocrit, and that boys be screened once during the peak growth period


# Centers for Disease Control (CDC) suggests

- All nonpregnant women every five to ten years, starting in adolescence .



# How to screen

- Complete Blood Count (CBC)

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- For adolescents with risk factors for iron deficiency, measuring serum ferritin at the time of the initial screen facilitates the diagnosis.

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