Iron deficiency Anemia

Typically results when the intake of dietary iron is inadequate for hemoglobin synthesis.
Body can store about one fourth to one third of its iron, once depleted iron deficiency anemia begins to develop.
Iron deficiency anemia is most common type of anemia in all ages, and most common anemia in the world.
Cause of iron deficiency anemia should be considered to be bleeding until proven otherwise.
Men and post-menopause women: Bleeding from ulcers, gastritis, inflammatory bowel disease, or GI tumors.
Premenopausal women: menorrhagia (excessive menstruation) and pregnancy with inadequate iron supplementation.
Chronic alcoholism: chronic blood loss from the GI tract causes iron loss and eventual anemia.
Other causes include iron malabsorption, as is seen after gastrectomy or with celiac disease.

Pathophysiology

- Iron deficiency
- blood loss due to bleeding disorders or from acute/chronic blood loss
- hypoproliferative anemia
  decreased or defective production of RBCs
- hemolytic anemia
  destruction of RBCs because of hereditary disorders or hemolysis
- signs and symptoms: based on severity, speed at which it developed, metabolic needs of the patient, presence of other problems
- **Iron Deficiency Anemia (IDA) most common form**
  - cause - either hypoproliferative or from blood loss, (and I'm assuming lack of intake)

Risk For:

- blood loss
- dietary deficiency
- inability to absorb iron- gastric bypass
- pregnancy- need Fe supplement, bleeding w/ delivery

S&S

General anemia symptoms

- Weakness
- Fatigue
- Pallor
- Pica - pts craving ice, starch or dirt

Prolonged deficiency

- tongue soreness
- brittle and ridged nails
- ulceration in the corner of the mouth

Compensation

- Tachycardia
- Palpitations
- Dyspnea – lack of O2
- Dizziness
- Development of HF-
  ↑ RBC production compensates for ↓Hgb so viscous blood

ASESS to determine cause

- a nutritional assessment
- a medication history
- family history - hereditary
- GI assessment
- neurologic assessment
- menstrual history

Labs

- Ferritin levels ↓ - stored iron
- hemoglobin levels ↓ - this & ferritin most useful to eval IDA
- Serum iron levels ↓ - loss > absorb
- TIBC ↑ Total Iron Binding Capacity is up cuz no iron bound to it
- Hematocrit ↓
- RBC count ↓
- Mean Corpuscular Volume (MCV) ↓

Interventions

- Prioritize activities (balance activity and rest)
- Healthy diet, limit alcohol, dietary supplements, risk for iron overload
- Monitor pulse oximetry, vital signs, esp BP
- Promote medication compliance
- Monitor for and manage heart failure
- Patient teaching

Dietary

- Beans—(black, garbanzo, pinto)
- Egg yolks
- Fruits—especially dried fruits (prunes,raisins)
- Grains--whole grains, iron-fortified breads & cereals
- Meat, poultry, fish, shellfish –esp red meat & organ meat
- Nuts
- Vegetables—dark green, leafy vegetables

Oral Supplements

- Ferrous fumarate, -gluconate, -sulfate (varied amts of Fe)
- Patient Teaching:
  - Timing with food
  - Need for fiber
  - Avoid staining of the teeth
  - Stool color change

Evaluation

maintain normal iron-deficiency related lab values
Symptoms start to improve w/in a few days,, but recovery is a slow . cause of the anemia is corrected , then takes 3-6 months iron stores to be replenished
maybe unknown cause or uncorrectable - lifetime tx

Parenteral Supplements

- Iron Dextran or Iron Sucrose