- ✓ **Hemochromatosis** A hereditary disorder in which there is an excessive absorption and storage of iron. This can lead to damage of organs such as the liver, pancreas, and endocrine glands.
- ✓ **Hemoglobin** A substance in red blood cells that is responsible for its color. It is composed of a pigment called heme bound to the protein globulin. Hemoglobin transports oxygen through the blood.
- ✓ **Hemolysis** The destruction of red blood cells (erythrocytes). This usually leads to anemia.
- ✓ **Hydroxylation** The process of addition of the hydroxyl (OH) radical
- ✓ **Hyperproteinemia** A condition of excessive protein in the blood
- ✓ **Hypoproteinemia** A condition of abnormally low protein in the blood
- ✓ Leukocyte A blood cell that contains a nucleus, also known as white blood cell. The three major types of leukocytes are granulocytes, lymphocytes, and monocytes. Leukocytes are involved in the immune system, protecting the body against foreign substances.
- ✓ Linoleic acid One of the unsaturated fatty acids that are essential for the unsaturated fatty acids the uns but cannot be synthesized by the body. Linoleic acid is mainly for in and Notesale sovbean oil.
- ✓ Linolenic acid An essential fatty
- ✓ Liter A unit of volume erosi to the volume occupied by one kilogram of water at 4 degrees and 760 millimeters of secury pressure. It is also used to 🙂 s ci 😂 🛛 cubic decim 🕫
- ✓ **Megaloblastic anemia** A form of anemia that is characterized by abnormally large red blood cells. It is usually caused by folic acid and/or vitamin B12 deficiency.
- ✓ Microcytic anemia A form of anemia that is characterized by abnormally small red blood cells and low circulating levels of hemoglobin
- ✓ **Micrograms** A millionth of a gram. The symbol is mcg.
- ✓ **Micromoles** A unit of measure that is one millionth of a mole. A mole is an amount of a substance with a weight in grams equal to the molecular weight of the substance.
- ✓ **Milligrams** A thousandth of a gram. The symbol is mg.
- ✓ Nanograms A billionth of a gram. The symbol is ng.
- ✓ **Nephrosis** A degeneration of the outer tissue of the kidney tubules.
- ✓ **Picogram** A trillionth of a gram. The symbol is pg.

deciliter (mcg/dL). Low iron levels that do not reflect low body stores can result from blood loss, infections, chronic illness, and malignancies. High serum iron levels are seen in cases of megaloblastic anemia, when inflow into the plasma is increased, and in cases of aplastic anemia, when outflow from the plasma is decreased.

Transferrin levels are normally 350-380 mg/dL, and increase with iron deficiency and pregnancy. Levels are decreased with chronic disease, protein deficiency, or hepatic disease.

Interpretation of iron and transferrin are based on both values and the percent saturation. Low serum iron and low iron-binding capacity are the best indicators of anemia of chronic inflammation.

Ferritin

Ferritin is the major storage form of iron in the liver, spleen, and bone marrow. Serum ferritin levels are thought to reflect body stores. Normal values range from 15-400 nanograms (ng) per milliliter in males and 10-200 ng/ml in females. Lower values are indicative of iron deficiency with anemia. Serum ferritin levels between 15 and 45 ng/ml may indicate a deficiency in patients with chronic intermation. High levels are seen with hemochromatosis and transfusions. Serum territin is the best creening test because levels fall only with decreated iron stores.

Free Explorecyte Protoporphyric (FEP) Protoporphyrins cannot be utilized for the synthesis of heme during iron deficiency; thus they will be found in higher levels when a patient is iron- deficient. However, FEP levels rise with other disorders of heme synthesis and so are not specific for iron deficiency

4 Zinc

There is no reliable method of assessing zinc stores. Suspected zinc deficiency can best be tested by monitoring the symptomatic response to the administration of zinc.

Plasma Zinc

anemia.

A change in plasma zinc does not occur until zinc intake is extremely low. Only 10 to 20% of the zinc in blood is contained in the plasma. Most is bound to alpha2-