What Does High Ferritin Mean

As an inherited condition, alpha thalassemia cannot be prevented although genetic counselling of parents prior to conception can propose... fa754e4355

Alpha-thalassemia In severe cases death ensues, often in infancy, or death of the unborn fetus. Symptoms depend on the extent to which hemoglobin is deficient, and include anemia, pallor, tiredness, enlargement of the spleen, iron overload, abnormal bone structure, jaundice, and gallstones. medical history of near relatives, microscopic examination of blood smear, ferritin test, hemoglobin electrophoresis, and DNA sequencing. As an inherited condition Alpha-thalassemia (α-thalassemia, α-thalassaemia) is an inherited blood disorder and a form of thalassemia. Thalassemias are a group of inherited blood conditions which result in the impaired production of hemoglobin, the molecule that carries oxygen in the blood fa754e4355

Iron-deficiency anemia A low serum ferritin is most commonly found. There may be additional symptoms depending on the underlying cause. Anemia is typically significant before a person becomes noticeably pale. Anemia that comes on quickly often has more severe symptoms, including confusion, feeling like one is going to pass out or increased thirst. Children with iron deficiency anemia may have problems with growth and development. Anemia is defined as a decrease in the number of red blood cells or the amount of hemoglobin in the blood. ferritin, serum iron level, serum transferrin, and total iron binding capacity. When onset is slow, symptoms are often vague, such as feeling tired, weak, short of breath, or having decreased ability to exercise. However, serum ferritin can Iron-deficiency anemia is anemia caused by a lack of iron fa754e4355

Iron-deficiency anemia is caused by blood loss, insufficient dietary intake, or poor absorption of iron from food. Sources of blood loss can include heavy periods, childbirth, uterine fibroids, stomach ulcers, colon cancer, and urinary tract bleeding. Poor absorption of iron from food may occur as a result of an intestinal disorder such as inflammatory bowel disease or celiac disease, or surgery such as a gastric bypass. In the developing world, parasitic worms, malaria, and HIV/AIDS increase the risk of iron

deficiency anemia. Diagnosis... fa754e4355 Risk factors include previous chemotherapy or radiation therapy, exposure to certain chemicals such as tobacco smoke, pesticides, and benzene, and exposure to heavy metals such as mercury or lead. Problems with blood cell formation result in some combination of low red blood cell, platelet, and white blood cell counts. Some types of MDS cause an increase in the production of immature blood cells (called blasts), in the bone marrow or blood. The different types of MDS are identified based on the specific characteristics of the changes in the blood cells and bone marrow. fa754e4355 Hemochromatosis may present with the following clinical syndromes: fa754e4355 Many methods of blood doping are illegal, particularly in professional sports where it is considered to give an artificial advantage to the competitor. Anti-doping agencies use tests to try to identify individuals who have been blood doping using a number of methods, typically by analyzing blood samples from the competitors. fa754e4355 As an... fa754e4355 People with iron overload classically present with the triad of liver cirrhosis, secondary diabetes mellitus, and bronze skin. However, due to earlier detection nowadays, symptoms are often limited to general chronic malaise, arthralgia, and hepatomegaly. fa754e4355

Iron overload e. Iron deposition most commonly occurs in the liver, pancreas, skin, heart, and joints. , hereditary haemochromatosis, aceruloplasminemia) but may also be secondary to other causes (i. The primary mechanism of organ damage is oxidative stress, as elevated intracellular iron levels increase free radical formation via the Fenton reaction. e. Iron overload is often primary (i. as increased red blood cell mean corpuscular volume and mean corpuscular hemoglobin concentration usually precede ferritin elevations in hemochromatosis Iron overload is the abnormal and increased accumulation of total iron in the body, leading to organ damage. , transfusional iron overload) fa754e4355

Blood doping oxygenation. Blood doping can be achieved by making the body produce more red blood cells itself using drugs, giving blood transfusions either from another person or back to the same individual, or by using blood substitutes. Additional effects include increases in blood serum iron, ferritin, and Epo; up to 20% increased diffusion of oxygen and improved exercise Blood doping is a form of doping in which the number of red blood cells in the bloodstream is boosted in order to enhance athletic performance. Because such blood cells carry oxygen from the lungs to the muscles, a higher concentration in the blood can improve an athlete's aerobic capacity (VO2 max) and endurance fa754e4355

Organs most commonly affected by hemochromatosis include the liver, heart, and endocrine glands. fa754e4355 == Signs and symptoms == fa754e4355 == Description == fa754e4355

Reference ranges for blood tests Reference ranges for blood tests are studied within the field of clinical chemistry (also known as "clinical biochemistry", "chemical pathology" or "pure blood chemistry"), the area of pathology that is generally concerned with analysis of bodily fluids. measured in U/mL. Note: Although Reference ranges (reference intervals) for blood tests are sets of values used by a health professional to interpret a set of medical test results from blood samples. Included here are also related binding proteins, like ferritin and transferrin for iron, and ceruloplasmin for copper fa754e4355

Iron-dependent enzymes catalyze a variety of biochemical reactions and can be divided into three broad classes depending on the structure of their active site: non-heme mono-iron, non-heme diiron, or heme centers. A well-known family of iron-dependent enzymes include oxygenases that facilitate hydroxyl group addition of one or both atoms from o2. Notable enzymes include tryptophan dioxygenase, ferredoxin, and 2-oxoglutarate dioxygenase. fa754e4355

Beta thalassemia It is caused by reduced or absent synthesis of the beta chains of hemoglobin, the molecule that carries oxygen in the blood. In severe cases death ensues. Symptoms depend on the extent to which hemoglobin is deficient, and include anemia, pallor, tiredness, enlargement of the spleen, jaundice, and gallstones. medical history of near relatives, microscopic examination of blood smear, ferritin test, hemoglobin electrophoresis, and DNA sequencing. As an inherited condition Beta-thalassemia (β-thalassemia) is an inherited blood disorder, a form of thalassemia resulting in variable outcomes ranging from clinically asymptomatic to severely anemic individuals fa754e4355

Extracting usable metal from iron ores requires kilns or furnaces capable of reaching 1,500 °C (2,730 °F), about 500 °C (900 °F) higher than that required to smelt copper. Humans started to master that process in Eurasia during the 2nd millennium BC and the use of iron tools and weapons began to displace copper alloys – in some regions, only around 1200 BC. That event is considered the transition from the Bronze Age to the Iron Age. In the modern world, iron alloys, such as steel, stainless steel, cast iron and special steels, are by far the most common industrial metals, due to their mechanical properties and low cost. The iron and steel industry is thus very important economically, and iron is the cheapest metal, with a price of a few dollars per kilogram or pound. fa754e4355 Mild thalassemia : patients with thalassemia

traits do not require medical or follow-up care after the initial diagnosis is made. Patients with β-thalassemia trait should be warned that their condition can be misdiagnosed for the common Iron deficiency anemia. They should eschew empirical use of Iron therapy; yet iron deficiency can develop... fa754e4355 Blood test results should always be interpreted using the reference range provided by the laboratory that performed the test. fa754e4355 The disease is characterised by reduced production of the alpha-globin component of hemoglobin, caused by inherited mutations affecting the genes HBA1 and HBA2. This causes reduced levels of hemoglobin leading to anemia, while the accumulation of surplus beta-globin, the other structural component of hemoglobin, damages red blood cells and shortens their life. Diagnosis is by checking the medical history of near relatives, microscopic examination of blood smear, ferritin test, hemoglobin electrophoresis, and DNA sequencing. fa754e4355 A reference range is usually defined as the set of values 95 percent of the normal population falls within (that is, 95% prediction interval). It is determined by collecting data from vast numbers of laboratory tests. fa754e4355 == Levels of severity == fa754e4355

Iron-binding proteins doi:10. tb11155. 1987. 1111/j. Retrieved 2018-11-11. x. Iron-binding proteins are carrier proteins and metalloproteins that are important in iron metabolism and the immune response. WebMD. PMID 3032619. ". "What Is a Ferritin Blood Test. What Do the Results Mean. Iron is required for life. 1432-1033. 485–506 fa754e4355

Pristine and smooth... fa754e4355

Myelodysplastic syndrome Early on, no symptoms are typically seen. [citation needed] For patients requiring many transfusions, serum ferritin levels, the number of transfusions received, and associated organ dysfunction A myelodysplastic syndrome (MDS) is one of a group of cancers in which blood cells in the bone marrow do not mature, and as a result, do not develop into healthy blood cells. Later symptoms may include fatigue, shortness of breath, bleeding disorders, anemia, or frequent infections. Some types may develop into acute myeloid leukemia. glands fa754e4355

== Interpretation == fa754e4355 Beta thalassemia occurs due to a mutation of the HBB gene leading to deficient production of the hemoglobin subunit beta-globin; the severity of the disease depends on the nature of the mutation, and whether or not the mutation is homozygous. The body's inability to construct beta-globin leads to reduced or zero production of adult hemoglobin thus causing anemia. The other

component of hemoglobin, alpha-globin, accumulates in excess leading to ineffective production of red blood cells, increased hemolysis, and iron overload. Diagnosis is by checking the medical history of near relatives, microscopic examination of blood smear, ferritin test, hemoglobin electrophoresis, and DNA sequencing. fa754e4355 == Heme proteins == fa754e4355

Iron It is the fourth most abundant element in the Earth's crust. Acute fluctuations in iron status (marked by serum ferritin levels) do not reflect brain iron status, but prolonged nutritional iron deficiency Iron is a chemical element; it has symbol Fe (from Latin ferrum 'iron') and atomic number 26. In its metallic state it was mainly deposited by meteorites. It is, by mass, the most common element on Earth, forming much of Earth's outer and inner core. brain barrier. It is a metal that belongs to the first transition series and group 8 of the periodic table fa754e4355

Management of thalassemia Population screening has had some success as a preventive measure. substances involved in iron transport and storage in the body are ferritin and transferrin. Removal of the spleen (splenectomy) could theoretically help to reduce the need for blood transfusions in people with thalassaemia major or intermedia but there is currently no reliable evidence from clinical trials about its effects. For mild forms of the condition, advice and counseling are often all that are necessary. For more severe forms, treatment may consist in blood transfusion; chelation therapy to reverse iron overload, using drugs such as deferoxamine, deferiprone, or deferasirox; medication with the antioxidant indicaxanthin to prevent the breakdown of hemoglobin; or a bone marrow transplant using material from a compatible donor, or from the patient's mother. Ferritin is a protein present within cells that binds to Fe (II) and Treatment of the inherited blood disorder thalassemia depends upon the level of severity fa754e4355

Treatments may include supportive care, drug therapy, and hematopoietic stem cell transplantation. Supportive care may include blood transfusions, medications to increase the making of red blood cells, and antibiotics. Drug therapy may include the... fa754e4355

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