



Nutrition In Anemia Of Chronic Disease

ANEMIA OF
CHRONIC DISEASE

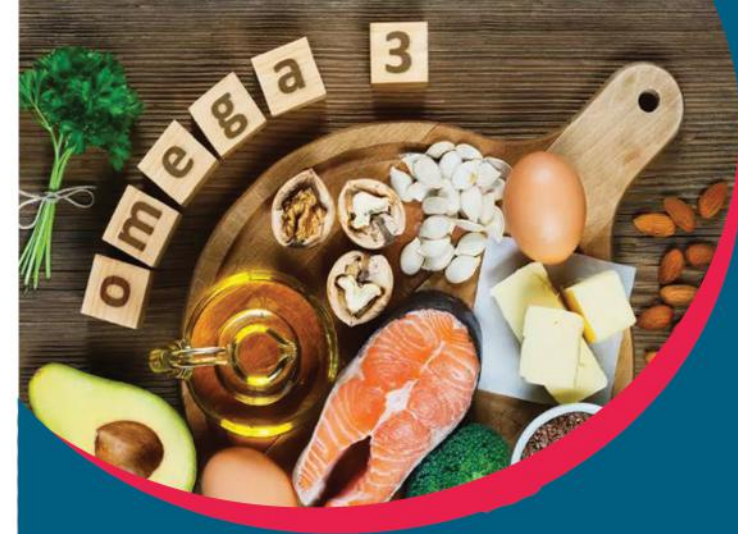
► Etiology of ACD ◀

The most common diseases that can cause anemia:

- Infections in elsewhere of the body
 - Cancer
- Chronic kidney disease (CKD) (almost every CKD patient will suffer from anemia. Because kidneys produce erythropoietin. Erythropoietin is a hormone that controls the production of red blood cells in the bone marrow.
- Autoimmune diseases; such as, rheumatoid arthritis, systemic lupus erythematosus (SLE), vasculitis (inflammation of blood vessels)
- Sarcoidosis (an inflammatory disease that generally affects the lungs and lymph nodes and is most likely caused by an abnormal immune response)
- Inflammatory bowel disease (Crohn's disease and ulcerative colitis), which affects the intestines.
 - Heart failure
 - Obesity

► Nutritional Treatment for ACD ◀

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Iron therapy is not recommended in this disease; because several microorganisms and tumor cells use excess iron for cell proliferation, which is harmful to the body.



More consumption of unsaturated fatty acids and omega-3 fatty acids can be effective.

Omega-3 food sources: Moro fish liver, canola oil, sardine, salmon, flaxseed, nuts (especially walnuts) and eggs.

Also, it should be noted that in old people who have vitamin D deficiency, ACD may occur; because, there is a significant relationship between vitamin D deficiency and hemoglobin level. So you should include rich sources of vitamin D in your diet.

Obesity is one of the causes of ACD. Our findings suggest that obesity is associated with changes in serum iron indices; which show the presence of chronic inflammation. So you should try to achieve a normal weight and maintain it for the rest of your life.

Finally, the latest choice for the treatment of ACD is blood transfusion.

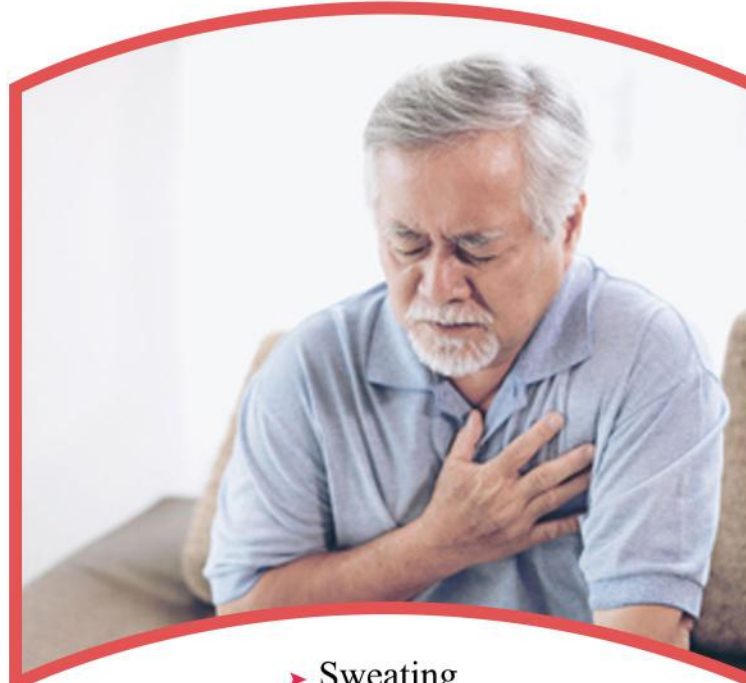


ANEMIA

► Symptoms of ACD ◀

The Symptoms of ACD are similar to the symptoms of iron deficiency anemia; including:

- Fatigue and weakness
- Paleness
- Dyspnea



- Sweating
- Tachycardia
- Headache

► Anemia Of Chronic Disease ◀

Anemia of chronic disease (ACD) is the second most common form of anemia worldwide and occurs in a variety of inflammatory and infectious diseases, and malignancies. ACD is caused by low levels of red blood cells in autoimmune diseases or chronic diseases that have been prolonged for more than 3 months.

Note that in many cases ACD may be confused with iron deficiency anemia, while in ACD only serum iron level is low. Also, usually recombinant erythropoietin (glycoprotein growth factor) corrects ACD.

Previous studies show that recombinant erythropoietin increases hemoglobin level in ACD patients.

► Diagnosis of ACD ◀

- Complete blood count (CBC)
 - Blood cell morphology
 - Serum hepcidin
- Serum ferritin or ferritin receptor
 - Stool exam
 - Billirubin
- Lactate dehydrogenase enzyme (LDH)
 - Kidney function tests