

Information Handout

Provided by the National Anemia Action Council, Inc., a nonprofit corporation.



Anemia & Hepatitis C

What is anemia?

Anemia is a below-normal level of hemoglobin* or hematocrit*. Hemoglobin is the protein in red blood cells that carries oxygen to all parts of the body. Anemia can be a temporary condition, a consequence of other health conditions, or it can be a chronic problem. People with mild anemia may not have any symptoms or may have only mild symptoms. People with severe anemia may have problems carrying out routine activities and can feel tired or experience shortness of breath with activity.¹

How common is anemia in people with hepatitis C?

As many as 67% of people with hepatitis C being treated with combination therapy (ribavirin and interferon) have anemia.^{2,3}

What causes anemia in people with hepatitis C?

Anemia of chronic disease develops as the result of a long-term infection or illness. Certain chronic diseases can interfere with the production of red blood cells, resulting in chronic anemia. The kidneys produce a hormone called erythropoietin, which stimulates your bone marrow to produce red blood cells. Iron is also needed for red blood cell production. In anemia of chronic disease a body cannot use its stored iron, erythropoietin is suppressed and the bone marrow does not respond normally. The shortage of iron and erythropoietin can result in a shortage of red blood cells.

What are the effects of untreated anemia in hepatitis C?

People on ribavirin can develop anemia rapidly and may experience symptoms such as severe chest pain or shortness of breath. If anemia remains untreated, people often need to take a lower dose of ribavirin or discontinue the therapy altogether, which can affect how well their hepatitis C treatment works.⁴⁻⁶ Experts recommend that people already diagnosed with anemia should not receive ribavirin because the treatment can trigger a serious heart problem when there is not enough oxygen getting to the heart muscle.¹

How do I know if I have anemia?

The best way to determine if you have anemia is to discuss your blood counts and changes in hemoglobin and hematocrit with your doctor. Symptoms usually develop when anemia is moderate to severe, and can include fatigue, weakness, pale skin, chest pain, dizziness, irritability, numbness or coldness in your hands and feet, trouble breathing, a fast heartbeat, and headache. It is important to see your doctor on a regular basis in order to be tested for possible anemia.

What treatments are available to help me?

If anemia is caused by ribavirin and/or interferon, early studies show drugs that stimulate red blood cell production are effective in treating anemia in people with hepatitis C and allow more people to stay on their full dose of ribavirin.⁷⁻¹³ If anemia remains untreated, people often need to take a lower dose of ribavirin or discontinue the therapy altogether, which can affect how well their hepatitis C treatment works.⁴⁻⁶ Close communication with your doctor will help him or her provide the treatment that is best for you based on what is causing the anemia.

Glossary

Bone marrow: Soft, spongy tissue found in bone cavities; responsible for production and storage of most blood cells, as well as storage of iron

Erythropoietin: Hormone that regulates red blood cell production

Hematocrit: Percentage of red blood cells in a blood sample

Hemoglobin: Protein carried by red blood cells that transports and delivers oxygen throughout your body

Interferon: Protein used to fight hepatitis C and certain forms of cancer

Ribavirin: Antiviral drug

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*Normal Lab Values: Normal hemoglobin >12 g/dL for women, >13 g/dL for men; normal hematocrit >36% for women, >39% for men.

Anemia & Hepatitis C ...Continued

References

1. National Anemia Action Council. Anemia: A Hidden Epidemic. Los Angeles, CA: HealthVizion Communications, Inc; 2002.
2. Van Vlierbergh H, et al. J Hepatology. 2001;34:911-916.
3. Sulkowski MS, et al. Hepatology. 2000;32:368.
4. Davis GL, et al. N Engl J Med. 1998;339:1493-1499.
5. McHutchison JG, et al. N Engl J Med. 1998;339:1485-1492.
6. Poynard T, et al. Lancet. 1998;352:1426-1432.
7. A. Siciliano M, et al. Hepatology. 1995;22:1132-1135.
8. Weisz K, et al. Hepatology. 1998;30:288A.
9. Wasserman R, et al. Hepatology. 2000;32:368A.
10. Gergely AE, et al. Hepatology. 2002;35:1281-1282.
11. Bruchfeld A, et al. J Viral Hepatology. 2001;8:287-292.
12. Dieerich DT. J Infect Dis. 2002;185(suppl 2):S128-S137.
13. Bizolloon T, et al. Hepatology. 1997;26:500-504.

NAAC's Online Resources for Patients & Consumers (www.anemia.org)

Information Handouts – Educational handouts describing anemia caused by different conditions including: aging, cancer, diabetes, vitamin deficiency, chronic kidney disease and more; free print or download access

Frequently Asked Questions – Answers to patients' common questions regarding anemia

Anemia Glossary – Definitions for medical terms relating to anemia which are used in NAAC's educational material

Feature Articles – Short articles covering anemia-related topics for patients, caregivers and allied healthcare providers

Anemia Watch – Our free quarterly e-newsletter covering current anemia-related topics and news

Anemia Symptoms Quiz – Printable questionnaire to fill out and take to a physician

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