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## Anemia in sickness and health

Anemia (low blood) is defined as less than 4.5 million red blood cells/ml, or 40 percent hematocrit, or 13.5 percent hemoglobin. In the past, doctors were taught that anemia is a

result rather than a cause of disease (intestinal bleeding, cancer, inflammation). In the elderly and in most cases of younger chronic anemics, it has an independent deleterious influence on quality and quantity of life, and figures into all causes of mortality.

Although not commonly thought of as an endocrine organ, the kidneys do produce the hormone erythropoietin. This, and testosterone, stimulates the bone marrow to pro-

duce red blood cells. As we age, both of these hormones decrease, and if there is kidney damage, the erythropoietin declines even more rapidly. Diabetes gives a further reduction of this hormone.

In chronic anemia with cancer and blood loss ruled out, nutritional deficiencies (B12, folic acid and iron), inflammation (infection and rheumatoid arthritis), or bone marrow failure (aging, fibrosis) are the usual causes. There are concomitant diseases such as heart failure and its negative, vicious cycle. Anemia itself increases heart failure, causing the heart to dilate, increasing renal insufficiency, making the anemia worse and subsequently, making the heart fail more. Even mild heart attacks and Alzheimer's disease are made worse by anemia.

Fortunately, human erythropoietin (EPOgen and Procrit), which is biologically made by genetic engineering, has been available for the last decade. It is usually self-given weekly with a small needle.

Testosterone has been available for

the last 50 years.

So, why are people's lives being compromised by anemia? This is because the erythropoietin has been FDA approved *only* for a small number of diseases such as renal failure and cancer chemotherapy. Testosterone, which is extremely safe if given judiciously, has been falsely accused of causing heart disease and even cancer and is not usually prescribed by the doctor. With the advent of the new Medicare Part D, the doctor and the patient, rather than some bureaucrat, soon will make the decision to give this expensive drug, costing over \$10,000 per year, that is life protecting. As a fringe benefit, erythropoietin has been shown to enhance memory and IQ over and above its hematologic effects. This may truly prevent Alzheimer's and make older people even more intelligent than just the wisdom of their years.

**EDITOR'S NOTE:** Views and ideas expressed in this column do not necessarily reflect those of *The Coffeyville Journal*.



**DR. J.E.  
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