

## **Mastery Series: Erythropoiesis**

---

1. What hormone stimulates erythropoiesis?
2. What two stimuli did I note stimulate the kidney to release EPO?
3. What are the 5 ways I noted that anemia could develop?
4. What do diet and the stomach have to do with pernicious anemia?
5. What is polycythemia?
6. How could blood doping lead to polycythemia?
7. Why does a blood doper wait 2 or 3 weeks before giving themselves the transfusion? What was going on in his/her body during those weeks?

## **Erythropoiesis**

## **Mastery Series Answers**

1. erythropoietin (EPO)
2. thyroxine and/or low blood oxygen/volume
3. iron-deficiency; B12 deficiency; mutation in Hb; hypothyroidism; blood loss
4. Stomach produces intrinsic factor which is necessary for B12 absorption
5. “too many blood cells”—too many RBCs
6. Blood doping is when a person draws their blood, refrigerates it for a couple of weeks, then transfuses it back into their body to increase their total RBC count (for an endurance athletic event).
7. During those weeks, the kidneys had responded to the loss of blood by increasing EPO production, which then increased RBC production back up to normal levels.