**Microcytic Anemia**

Anemia is a medical condition caused by a reduction in the amount of hemoglobin in the blood stream. There are different types of anemia, microcytic being one of them. This type is characterized by small red blood cells called microcytes. A patient with this type of anemia usually has red blood cells which are paler than the usual red blood cells hence it is increased by different conditions that prevent the body from producing the right amount of hemoglobin. Hemoglobin being a blood component which transports oxygen to the body tissues and is responsible for giving color to the red blood cells, lack of it therefore or inadequacy of it leads to microcytic anemia. This condition is popular in different parts of the world and people who suffer from it mostly show symptoms at an advanced stage (Takai, 2012). In this paper, I will discuss the causes, symptoms and ways of prevention of this type of anemia.

Microcytic anemia can occur both in childhood and adulthood. The major cause however is iron deficiency. The human body requires sources of iron to produce hemoglobin which is essential in giving color to the red blood cells, lack of it therefore causes this type of anemia. Iron deficiency can be as a result of excessive blood loss, chronic diseases and consumption of iron deficient diet. The symptoms nevertheless are hard to detect unless one goes through a physical checkup. They include fatigue, dizziness, chronic headaches, skin paleness and whiteness in the eyes, chest pain, lack of appetite and weight loss, rapid heartbeats and heavy menstrual flow in women. However, all these symptoms are not a total guarantee that a patient is suffering from microcytic anemia unless a blood test is conducted commonly known as Complete Blood Count (CBC) (fung et al 2014).  After this test, the doctor can then conduct a final test called  ‘Blood Smear’ which will identify all the changes in the red blood cells and seal the presence of microcytes. Other complex signs can be scanned through an abdominal ultrasound or an abdominal CT scan.

Treatment of this type of anemia is a lifelong process. The process pays attention to the underlying causes of the condition and works on building that. Consumption of iron rich and vitamin C food substances is the main method of treatment recommended by doctors as it increases levels of hemoglobin in the body. In cases of excessive blood loss especially in women due to severe periods, doctors opt for hormonal therapy methods such as birth control pills to reduce the excess blood loss. Additionally, in very severe cases that can lead to heart failure doctors recommend blood transfusion of donor red blood cells to double up the number of red blood cells needed by the body organs. This type of anemia has been recorded as treatable and even curable through strict following of diet and proper maintenance adhering to doctors’ prescriptions and recommendations (Bottomley, 2010).

**Conclusion**

Microcytic anemia is preventable from an early stage. This is through administering proper diet full of all the required nutrients in the body especially iron rich. For those already suffering from this condition, a daily intake of iron supplement is efficient in boosting the immune system. However, this should be done after the doctor’s approval. Iron rich foods include beans, red meat, poultry and dark green leafy vegetables. On the other hand, vitamin C rich foods are mainly fruits and green vegetables. Proper intake of all these guarantee a healthier body system.

**References.**

Kawabata, H., Takai, K., Kojima, M., Nakamura, N., Aoki, S., Nakamura, S., & Masaki, Y. (2013). Castleman-Kojima disease (TAFRO syndrome): a novel systemic inflammatory disease characterized by a constellation of symptoms, namely, thrombocytopenia, ascites (anasarca), microcytic anemia, myelofibrosis, renal dysfunction, and organomegaly: a status report and summary of Fukushima (6 June, 2012) and Nagoya meetings (22 September, 2012). *Journal of clinical and experimental hematopathology*, *53*(1), 57-61.

DeLoughery, T. G. (2014). Microcytic anemia. *New England Journal of Medicine*, *371*(14), 1324-1331.

Garg, A., Hernandez, M. D., Sousa, A. B., Subramanyam, L., Martínez de Villarreal, L., dos Santos, H. G., & Barboza, O. (2010). An autosomal recessive syndrome of joint contractures, muscular atrophy, microcytic anemia, and panniculitis-associated lipodystrophy. *The Journal of Clinical Endocrinology & Metabolism*, *95*(9), E58-E63.

Bergmann, A. K., Campagna, D. R., McLoughlin, E. M., Agarwal, S., Fleming, M. D., Bottomley, S. S., & Neufeld, E. J. (2010). Systematic molecular genetic analysis of congenital sideroblastic anemia: evidence for genetic heterogeneity and identification of novel mutations. *Pediatric blood & cancer*, *54*(2), 273-278.

Urrechaga, E., Hoffmann, J. J. M. L., Izquierdo, S., & Escanero, J. F. (2015). Differential diagnosis of microcytic anemia: the role of microcytic and hypochromic erythrocytes. *International journal of laboratory hematology*, *37*(3), 334-340.