

Low Grade Chronic Inflammation in Sport.Molecular Nutrition Solutions

Miguel Cabezas Andreu*

Sport Molecular Nutrition (Individualized Supplements Protocols), Pharmacist, University of Barcelona, Spain

***Corresponding Author:** Miguel Cabezas Andreu, Sport Molecular Nutrition (Individualized Supplements Protocols), Pharmacist, University of Barcelona, Spain.

Received: April 30, 2018; **Published:** January 28, 2019

The regular sport practice, independently of the intensity and volume of the same one, has innumerable benefits for the Health of the people who practice it although, nevertheless, it is not exempt of a small number of harmful effects that we must minimize for the good of the organism. One of these is the Chronic Inflammation or physiological and metabolic situation of permanent state that entails that many organs and cells of our organism are not in an ideal situation. Current scientific evidence affirms that this state favors the appearance of the so-called Metabolic Syndrome or state with increases in blood pressure, elevated plasma glucose, increases in plasma Triglycerides and low HDL values. However, in this brief article we will focus on its influence on the muscle cell.

When practicing sports, the muscle cells perform an increased activity that results in these cells breaking down and our body must increase the repair processes of them. Depending on the volume and intensity of the same in addition to the physical preparation of the person who practices the levels of muscle cell breakage can be moderately high or very much and it is necessary that the body is able to reverse this situation during the night's sleep to be in fullness the next day. The degree of broken or non-functional muscle cells can be easily quantified by measuring Creatine Kinase with portable autoanalyzers and finger puncture to remove a few drops of blood. The optimal values should not exceed 200 U.L approximately. However, there are many athletes who reach averages of 500 U.L equivalent to 15% of muscle cells broken or non-functional. Regardless of the impact on performance, this leads to an inflammatory state of the muscle cell itself with the subsequent loss of strength and power. In the following images of electron micrograph we can observe the different degrees of inflammation and damage of a muscle cell.

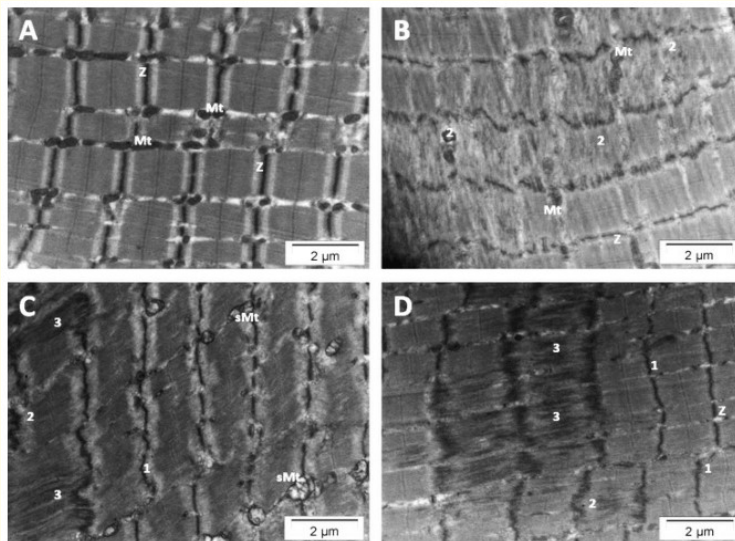


Figure 1

Our body has cellular and molecular mechanisms to reduce the muscular inflammatory processes that are generated in sports practice. The macrophage cells, various types of lymphocytes and other cells have a very important mission to repair this situation thanks to the synthesis of anti-inflammatory interleukins (IL 4 and IL 10 fundamentally). However, to cushion this effect, the healthiest is to resort to the intake of certain supplements to help us boost the immune system and reduce the inflammatory state. Supplements with molecules such as Squalene, Hydroxytyrosol, Omega 3, Zinc and many others will help us. In the following monograph we summarize the previously described.

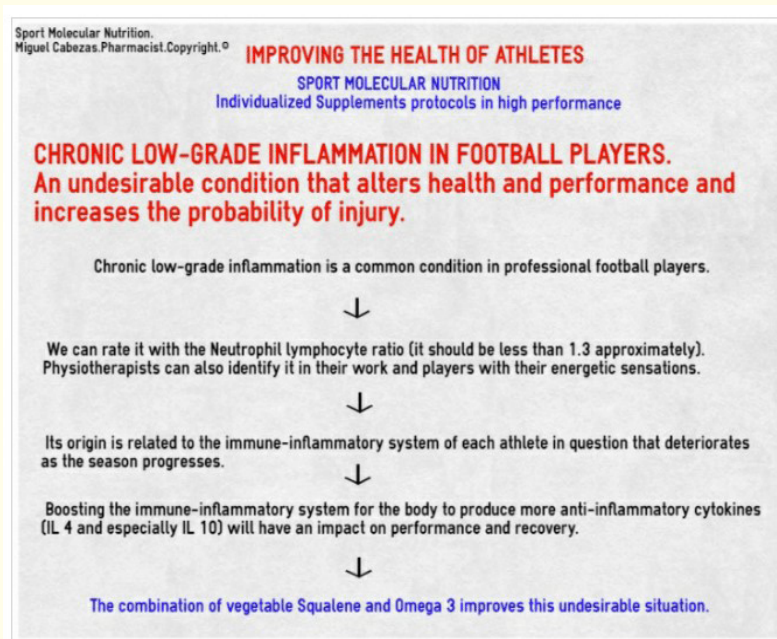


Figure 2

Volume 14 Issue 2 February 2019

©All rights reserved by Miguel Cabezas Andreu.