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## **Effect of Oxidative Stress on Lipid Profile and Blood Parameters to a Sample of Students at University of Zakho During Exams**

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## **Abstract**

Worry, anxiety through Study and preparative to exam may lead to mental stress. Mental stress may contribute to oxidative stress in the body which is the change in balance between oxidants and antioxidants. In this study a concentration of Malondialdehyde (MDA) as a lipid oxidation biomarker, lipid profile and some blood parameters like Minimum Inhibitory dilution (MID) were estimated in twenty chemistry and biology students at the day of exam as Stress Condition (SC) compared with the same parameters which obtained from the same students during the university vacation after a month of doing the latest exam as non-Stress Condition (nSC). A significant increase in MDA ( $p=0.0019$ ), Total Cholesterol ( $p<0.05$ ), Triglyceride ( $p<0.05$ ), Low Density Lipoprotein LDL-Cholesterol ( $p<0.05$ ), Very Low density lipoprotein VLDL-cholesterol ( $p<0.05$ ) and A significant decrease in High - Density Lipoprotein HDL - Cholesterol ( $p<0.05$ ), HDL-Cholesterol to total cholesterol ratio( $p=0.0012$ ) in stress condition were observed when compared with “non-stress” conditions. Also there were high significant decreases in lymphocyte and minimum inhibitory dilution (MID) ( $p=0.0001$ ,  $p<0.0001$  respectively) and significant increases in granulocyte and platelets (PLT) ( $P=0.0113$ ,  $P=0.0031$  respectively) in stress condition compared to non-stress condition. Whereas no significant changes in total WBCs and RBCs in stress and non-stress conditions. These results suggested that during university examinations when students are under mental stress or psychiatric disorder may put them at risk of developing inflammatory disorders like atherosclerosis and/or coronary arteries disorders.

## **Reference:**

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