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## Hemoglobin derivatives concentration enhancement after usage of magnetic treated water (MTW) through heavy metal chelation therapy

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Safe drinking water is essential to humans and other life forms even though it provides no calories or organic nutrients. Access to safe drinking water has improved over the last decades in almost every part of the world but approximately one billion people still lack access to safe water and over 2.5 billion lack access to adequate sanitation. The aim of this work was to evaluate the enhancement of the hemoglobin different derivatives concentration when normal drinking water replaced by magnetic treated water (MTW) through a heavy metal chelation process. 41 male rats were included. Control group (G1), animals did not subject to lead poisoning and drink normal water. Second group (G2) whose did not subject to lead but drink MTW. Third group (G3) received lead ions for 21 days and drink normal water. Fourth group (G4) those received lead ions concomitant with chelation therapy of dimercaptosuccinic acid (DMSA) and drink normal water. Fifth group (G5) those subjected to lead ions concomitant with chelation therapy of dimercaptosuccinic acid (DMSA) and drink MTW. The rate by which hemoglobin undergo oxidation, hemoglobin normal and abnormal derivatives concentration, superoxide dismutase and glutathione peroxidation activity and electrical conductivity of hemoglobin were measured. Results showed a significant enhancement in normal hemoglobin derivatives concomitant with reduction in abnormal derivatives. Usage of MTW revealed increase in antioxidants activity. In conclusion, it is safe to say that MTW improved the chelation process.

### Biography

Bassem M Raafat has completed his PhD from Cairo University and Postdoctoral studies from the National Research Center, Egypt. He is the Vice Dean of Applied Medical Science College, Taif University, Saudi Arabia. He is the Head of E-Learning Unit and Scientific Research and Higher Education. He is the Coordinator of The Genetic Engineering and Biotechnology Division in NRC. He has published more than 42 papers in reputed journals and has been serving as an Editorial Board Member for more than 15 international well ranked journals.

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