

Blood donation as a therapeutic exercise for lowering plasma lipids and improving hemorheology in Nigerians

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The use of lipid profile to determine the risk of coronary artery disease has been well documented. Studies on the effect of blood donation on lowering lipids especially cholesterol have variable but inconclusive reports and most, are not recent. This study was therefore aimed at identifying and documenting the acute effects of blood donation on lipids as well as rheological indices in Nigerians first time donors. We measured longitudinally, total cholesterol (TC), Triglycerides (Trig), low density lipoproteins (LDL) and high density lipoproteins (HDL) and rheological indices such as plasma fibrinogen concentration (PFC) and plasma viscosity (PV) in 20 apparently healthy first time voluntary donors comprising of 15 males and 5 females. Their average age was 30years. Informed and verbal consents as well as ethical approvals were sought from relevant authorities. Standard Laboratory methods were used for the analysis of samples obtained before donation (Pre) and post donation samples taken at 30minutes, 24th hr and 5th day. There were graded decreases in all parameters measured except the HDL concentration that showed incremental values throughout the duration of the study ($P < 0.05$, respectively). Triglycerides remained relatively stable. We conclude that reductions in the values of LDL, PFC and PV coupled with an increase in HDL could be directly related to blood donation and therefore, it could be recommended that voluntary blood donations as often as possible may be therapeutically beneficial to the donors in terms of thrombotic complications and efficient blood flow mechanisms. This is also a plus for blood donation campaigns.

Biography

Olutayo Ifedayo Ajayi is a Biomedical Scientist/Physiologist. He holds professional diplomas in Haematology and Clinical Chemistry; M.Sc. and Ph.D. degrees in Human Physiology with a bias in Cardiovascular and Blood Physiology. His Research interests are on Haemostasis, Hemorheology and Vascular biology. He has over 30 publications in both local and international peer review journals. He has attended several local and international conferences and won many travel awards and grants as a young scientist. He is currently a Senior Lecturer in Human Physiology at the College of Medical Sciences, University of Benin, Benin city, Nigeria. He is also a member of many learned societies.

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