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**Acquired methemoglobinemia in diabetic blood exposed to organic nitrites and organic nitrates**

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Acquired methemoglobinemia in diabetics' blood may be attributed to the intake of toxins and medications. Specifically organic nitrites such as butyl nitrite and amyl nitrite have been implicated in methemoglobin formation in diabetic patients, given these drugs while organic nitrates such as nitroglycerin and isosorbide nitrates have been implicated in methemoglobin formation in diabetic coronary heart disease patients using these nitrates. While these organic nitrates and organic nitrites pose a risk to the general community of causing methemoglobin in both diabetic and non-diabetic alike, recent *in vitro* oxidation studies of diabetic blood samples by organic nitrites have clearly indicated their blood to be more susceptible to oxidation than non diabetics blood ( $n=20$  and  $P<0.05$ ). The results for organic nitrates however did not show these findings. Specifically, diabetics blood treated with nitroglycerin was oxidized at a rate similar to that of non-diabetics ( $n=15$  and  $P>0.05$ ). Isosorbide mononitrate and isosorbide dinitrate treatment of diabetic blood samples and non-diabetic blood samples revealed no discernable oxidation of hemoglobin into methemoglobin for either group. These studies then revealed that the diabetic population is at a greater relative risk of getting methemoglobinemia from organic nitrites than organic nitrates.

**Biography**

John Philip Tarburton completed his PhD from the University of Nebraska and also did Postdoctoral studies at the University of Nebraska. He is an Assistant Professor at National University, USA. He has published more than 30 papers and abstracts in reputed journals and a book chapter about his research findings.

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