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## Pentoxifylline increases the level of nitric oxide produced by human spermatozoa

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**Abstract:** Pentoxifylline (PF) is a xanthine derivative drug primarily used to treat peripheral vascular disorders. It is currently used in assisted reproductive technologies to enhance human sperm motility. However, the mechanism by which this enhancement occurs is not fully understood. Given that nitric oxide has been identified as a trigger to sperm motion, we asked whether nitric oxide modulates the stimulatory effect of PF on sperm motility. A total of 41 semen samples from infertile males were studied. Nitric oxide production in the presence of 5 mM PF was tested using different bio-analytical methods (spectrophotometry, fluorometry and fluorescence microscopy). The spectrophotometric determination showed higher levels of nitrite, an indirect measure for nitric oxide, in sperm samples supplemented with PF compared to controls. The fluorometric experiment showed higher 4, 5 ?