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Effect of paracetamol on semen quality

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Abstract: Several published studies, both direct and indirect, have connected paracetamol, also named acetaminophen, a commonly used over-the-counter analgesic and antipyretic medication, with semen quality and male infertility, although as yet this connection is unclear. This review addresses the effect of paracetamol on semen quality and hence on male factor infertility. We searched the MEDLINE database from January 1980 through January 2017 for English-language articles using the key words "paracetamol" and "acetaminophen" versus "sperm." References from articles were used only if relevant. In summary, paracetamol, when used at high doses, appears to change semen quality, particularly sperm morphology, and hence its fertilising ability. Such effect of paracetamol on semen quality may occur by suppressing testosterone synthesis, inducing oxidative stress, provoking apoptosis of spermatocytes, reducing nitric oxide production and inhibiting prostaglandin synthesis. Further research, particularly clinical research, will be very important to confirm these effects.