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Histamine-2 Receptor Antagonists and Semen Quality.

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Abstract: Histamine-2 receptor antagonists are a class of drugs used to treat the acid-related gastrointestinal diseases such as ulcer and gastro-oesophageal reflux disease. Although such drugs, especially ranitidine and famotidine, are still widely used, their effects on semen quality, and hence on male infertility, is still unclear. This MiniReview systematically addresses and summarizes the effect of histamine-2 receptor antagonists (cimetidine, ranitidine, nizatidine and famotidine) on semen quality, particularly, on sperm function. Cimetidine appears to have adverse effects on semen quality. While the effects of ranitidine and nizatidine on semen quality are still controversial, famotidine does not appear to change semen quality. Therefore, additional studies will be required to clarify whether histamine-2 receptor-independent effects of these drugs play a role in semen quality as well as further clinical studies including direct comparison of the histamine-2 receptor antagonists.