

Guaifenesin in Fertility

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Does guaifenesin improve fertility and/or pregnancy rates?

Response:

Guaifenesin is an over-the-counter medication with indications for use in cough to loosen phlegm and expel bronchial secretions. Although its mechanism of action is not fully known, it is thought to decrease viscosity of mucous and increase fluid volumes¹. Guaifenesin has also been investigated in improving fertility. The question remains whether guaifenesin would have similar effects on loosening cervical mucus and whether it could be used as an alternative to conventional fertility treatments.

A study by Check et.al. included 40 couples displaying at least 10 months of infertility as well as post-coital testing revealing no sperm motility². Baseline tests were required to determine hostile cervical mucus to be the cause as opposed to impaired spermatogenesis. Each woman was given guaifenesin 200mg three times daily from day 5 of her menstrual cycle until a rise in biphasic basal body temperature. Women in the study were not permitted to undergo any other therapy that would affect cervical mucus. Response to guaifenesin was graded as “no improvement”, “marked improvement”, or “slight improvement” as determined by the number of sperm per high-powered microscopic field. Twenty-three patients displayed “marked improvement” in post-coital testing and of those, fifteen patients became pregnant (65.2%). In women whose infertility was attributed only to hostile cervical mucus, the average time to pregnancy occurred within 2.4 months with guaifenesin treatment. In patients who had additional fertility problems, pregnancy was achieved in an average of 5.6 months².

Anecdotal reports also exist regarding the benefit of guaifenesin use in males to increase sperm motility. While the mechanism of action is, again, not well understood, it is thought to benefit by decreasing mucus viscosity³. In a case report, a 32 year old male and his wife were unable to conceive after 18 months of regular, unprotected intercourse. The patient underwent a sperm analysis that showed decreased sperm counts and motility. The patient was treated with guaifenesin 600mg twice daily and another sperm analysis was completed after 2 months of therapy. The second sperm analysis showed a distinctly marked improved with sperm counts rising from 2.4 million/mL to 34.7 million/mL and motility increasing from 10% to 61%. This case however, does not truly prove sufficient causality measures³.

Final Recommendation:

The efficacy of guaifenesin in fertility treatment is not supported by large prospective randomized, controlled trials. It has shown benefit in a small study in which hostile cervical mucus was the primary cause for infertility². Case studies have also showed increased sperm counts and motility in men, although causality is not proven³. The benefits of guaifenesin treatment in infertility may be investigational, however it may have value for some patients unwilling to try more involved pharmaceutical hormonal regiments to stimulate pregnancy. Guaifenesin is a pregnancy category C medication⁴. No conclusive evidence has pointed to fetal

harm, although it is recommended to avoid unless the benefit outweighs the risk. Once a woman has conceived, it is recommended to discontinue use of guaifenesin as fertility treatment⁴.

References:

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3. Means G, Berry-Caban CS, Hammermueller K. Guaifenesin and increased sperm motility: a preliminary case report. *Int J Gen Med*. 2011;4:13–14.
4. Silva R, Lee J, Tweed E. Is guaifenesin safe during pregnancy? *J Fam Pract*. 2007;56(8):669-70.