

# Blood group may affect woman's fertility

October 26 2010, by Lin Edwards

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(PhysOrg.com) -- Scientists in the US have for the first time demonstrated that having type O blood may have a negative effect on fertility through a lower egg count and poor egg quality. Women with type A blood appeared to be more fertile.

Researchers from Yale University and the Albert Einstein College of Medicine in New York studied over 560 [women](#) with an average age of 35, all of whom were undergoing [fertility treatment](#) in two different clinics. Blood samples were taken from each of the women and analyzed for blood group and the levels of the follicle stimulating hormone (FSH).

FSH is a known marker of fertility, with lower levels (less than 10) suggesting a woman will have better chances of conceiving than one with higher levels. High levels of FSH indicate a diminished ovarian reserve, which means egg quality is poor and the quantity of eggs remaining may be low. The ovarian reserve declines naturally from the middle to late 30s.

The results of the study showed that among women seeking fertility treatment, those with blood group O had double the likelihood of having an FSH level over 10 than women with any other blood type. This result remained true when the results were adjusted to take into account the woman's age and other factors such as body mass index (BMI), and was true for women from both clinics. Women with blood group A were significantly less likely to have FSH levels over 10.

Leader of the research team, Dr. Edward Nejat from the Albert Einstein

College of Medicine's department of obstetrics and gynecology, said women with blood type A and the much less common AB — both of which have the A blood group gene — were protected in some way from a diminished ovarian reserve. He said the study included "a good mix of patients ethnically and racially."

Dr. Nejat said baseline FSH levels "gives us an idea of the quality and quantity of a woman's eggs," but they were only one marker of fertility. He said more studies were needed to see if [blood group](#) affects other hormone levels, and to see if the same effects were seen in the general population and not just women who were already seeking treatment for fertility problems. Nejat added that the woman's age remained the most important factor in fertility.

The results of the research will be presented in Denver at the annual conference of the American Society for Reproductive Medicine (ASRM). President of the ASRM, Dr. William Gibbons, said studies such as this were needed to help us to better understand the "complexities of the human reproductive system."

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