

## Endometriosis and Ovarian Reserve



**E**ndometriosis is the presence of endometrial tissue in an abnormal location outside the uterus. It may affect up to 10% of reproductive aged women and is commonly associated with infertility and pelvic pain. The underlying cause is unknown. **Ovarian reserve** is term describing the capability of a woman's eggs to yield a healthy pregnancy. It has been suspected that ovarian endometriosis may lead to a lowering of ovarian reserve (**diminished ovarian reserve** or **DOR**), although the exact mechanisms involved are still controversial. Some women with endometriosis may develop large ovarian cysts known as endometriomas. Some scientists have suspected that endometriomas may play a role in the development of DOR. Since most endometriomas do not respond well to medical treatment with pills or shots, surgery to remove these cysts is usually recommended. It is suspected that the surgery to remove these cysts can, in itself, result in DOR.

Ovarian follicles are commonly known as “egg sacs”, and are easily identifiable under the microscope. Follicular density refers to the number of ovarian follicles present in a given volume of ovarian tissue. It has been thought that a lowering of follicular density is associated with DOR. Kitajima and colleagues recently published their research in a respected medical journal studying the role of smaller (less than 4 cm) endometriomas on the density of ovarian follicles. During surgery to remove a small endometrioma from one ovary, a small portion of normal ovarian tissue from the ovary with the endometrioma, as well tissue from the opposite normal, unaffected ovary was removed. They then compared the follicular density in both of these ovarian specimens to see if the presence of an endometrioma reduced the density of ovarian follicles in the affected ovary, compared to the other unaffected ovary.

The results of this study are interesting in that they found a lowering of follicular density in the ovary with the endometrioma compared to the other ovary that did not have an endometrioma. The relationship between reduced follicular density and DOR is not entirely understood. However, these scientists theorize that a reduction in follicular density secondary to ovarian endometrioma formation may possibly play a role in the development of DOR. This may result in infertility in some women with endometriosis.

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