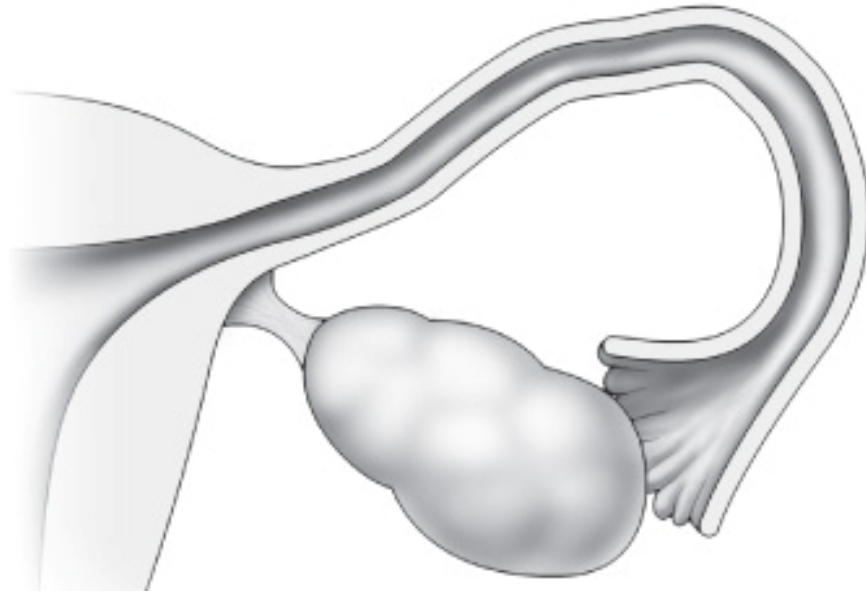


Thought Lab 14.3: Development of the Corpus Luteum

Purpose: Identify the structures that remain constant and the structures that change in the ovary.

Procedure

1. Copy the outline of an ovary into your notebook. (The fimbriae, oviduct, and a portion of the uterus have been included to help you visualize the orientation of the ovary. Do not include these structures in your copy.)



2. Using the descriptions in your textbook as a reference, sketch and label the following structures in your diagram:
 - immature follicle
 - developing follicle
 - mature follicle
 - ovum
 - mature corpus luteum
 - disintegrating corpus luteum
3. All of these structures are not visible in an ovary at any one time. Which structures would you expect to see if this diagram showed the ovary of a woman who was just beginning her menstrual period? Highlight the labels for these structures.

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| HANDOUT | | |
| | | |

Analysis

1. If you were using a microscope to find the corpus luteum in a tissue sample, would you first look near the outer edge of the ovary or near the centre of the ovary? Explain your answer in terms of the events of the ovarian cycle.
2. Unlike most human organs, the corpus luteum is not a permanent structure in the body. What might be one adaptive advantage of having reproductive function regulated by a gland that develops and then disappears within a few weeks?

Extension

3. Use appropriate presentation software or develop and write your own code to demonstrate—for example, through animation—the development and disintegration of the corpus luteum within the ovary.