MENSTRUATION.

The structural changes associated with menstruation consist of a preliminary thickening of the walls of the uterus, its mucous membrane and the subjacent tissue becoming highly vascular and eventually congested. Later the walls of the blood-vessels degenerate and permit of an escape of blood here and there beneath the mucous membrane which, in the areas overlying the effused blood, undergoes a fatty degeneration and is desquamated, allowing of the formation of a blood-clot in the cavity of the uterus. The hemorrhagic portion of the process lasts usually from three to five days; at its close a regeneration of the lost portions of the mucous membrane begins, and when this is completed a resting period ensues which persists until near the time of a new menstrual period.

The local structural changes of the uterus are associated with decided constitutional disturbances. The pulse, bloodpressure, temperature, muscular power, and lung capacity are in general somewhat increased before menstruation and sink immediately before or at the time when the hemorrhage in the uterus begins; immediately before the menstrual period there is also a diminished destruction of the nitrogenous materials of the body, as shown by the amount of nitrogen excreted being less than at other times.

These general changes may well affect the ovary as well as other portions of the body and so contribute to a coincidence of menstruation and ovulation. And, indeed, there seems little question but that the coincidence is of frequent or even usual occurrence. The appearance of menstruation indicates, as a rule, the beginning of fertility, and sterility ensues at the time of the final cessation of the menses. Furthermore, menstruation ceases when pregnancy supervenes, and the cessation persists not only until parturition, but so long as the child remains unweaned, and as a rule ovulation is also in abeyance during the same period. Ex-

22