

**Saladin 7E**  
**Answer Key**  
**Chapter 28, The Female Reproductive System**

**Testing Your Comprehension**

1. Children in puberty exhibit positive nitrogen balance. They are growing rapidly, thus synthesizing new protein. Consequently, their rate of protein (nitrogen) intake exceeds the rate of excretion.
2. Prostaglandins are one of the stimuli that induce labor contractions. Aspirin and ibuprofen inhibit cyclooxygenase and thus inhibit prostaglandin synthesis.
3. A loss of the vascular connection between the hypothalamus and pituitary gland should not affect milk production, because lactation results (in part) from the absence of prolactin-inhibiting hormone (PIH). Severance of the hypothalamo–hypophyseal portal system merely ensures that PIH will not be able to exert its inhibitory effect. However, the accident will affect her future ovarian cycles because gonadotropin-releasing hormone (GnRH) will be unable to reach the anterior pituitary. In both cases, the regulatory effect of the hypothalamus on pituitary function is disrupted, but the difference in effect arises because of the difference between the inhibitory and stimulatory effects of PIH and GnRH, respectively.
4. In the first 6 weeks, the corpus luteum is the major source of progesterone, which is needed to maintain the pregnancy. Therefore, if the ovaries are removed within that time, the pregnancy is aborted. After 6 weeks, the placenta produces the necessary progesterone and the pregnancy is no longer dependent on the corpus luteum. Furthermore, the corpus luteum has degenerated by then and the ovaries are dormant.
5. Hearing the cry of an infant can lead to stimulation of the hypothalamus, which in turn can stimulate the posterior pituitary gland to release oxytocin, triggering milk ejection. Thus, milk ejection does not absolutely require physical stimulation of the areola or nipple.