STUDY GUIDE FOR CHAPTER 12
(some material was already covered in the earlier study guide to ch. 11 part 2)

IMPORTANT: Please also study the charts and illustrations on pages 364, 365, 367, 368, 369, 370, 371, 372, 374.

Immune response - a body defense that is (a) antigen specific, (b) systemic, and (c) exhibits "memory".
Antigen - any substance capable of evoking an immune response.
Antibody-Mediated (Humoral) Immunity (AMI) - an immune response that depends on antibodies that circulate in body fluids ("humors").
Cell-Mediated (Cellular) Immunity (CMI) - an immune response based on the response of lymphocytes.
Hapten - an "incomplete antigen" that is not antigenic by itself but that becomes antigenic (capable of provoking an immune response) in combination with protein molecules present in the body.
B lymphocytes - lymphocytes that secrete antiBodies and that complete their development in the Bone marrow of mammals or the Bursa of Fabricius in birds.
T lymphocytes - lymphocytes responsible for cell-mediated immunity, including cytotoxic & helper cells.
Cytotoxic T cells (T-killer cells) - lymphocytes that pierce bacterial cell walls with perforins.
Clonal selection - the process in which lymphocytes that bind to "self" antigens are destroyed and other lymphocytes divide, proliferate into clones, and produce antibodies.
Plasma cells - antibody-making cells derived from B lymphocytes.
Memory cells - B lymphocytes left over from a previous infection, capable of a secondary response.
Primary immune response - response of the immune system to an antigen not previously encountered; this "naïve" response is moderate and slow compared to a secondary response.
Secondary response - response of the immune system to an antigen encountered previously; this response is much more rapid and stronger than a primary response.
Active immunity - immunity in which your body produces the antibodies.
Passive immunity - temporary protection by antibodies that your body did not produce.
Immunoglobins - proteins that function as antibodies; see illustrations on pages 367-368.
Monoclonal antibodies - antibodies produced from a cell clone under laboratory conditions.
Agglutination - binding of antibodies to antigens, generally clumping (precipitating) the antigen-bearing cells and making them more susceptible to phagocytosis.
Helper T cells - lymphocytes that secrete cellular signals (cytokines, also called lymphokines) that help B lymphocytes and cytotoxic T cells to become mature and capable of defending the body.
Autograft - transplantation of tissue within an individual.
Isograft - transplantation of tissue from a genetically identical person (an identical twin).
Allograft - transplantation of tissue from another person.
Xenograft - transplantation of tissue from another species.
Immunosuppression - suppression of the immune response, for example, by drugs given to transplant recipients.
Allergy (hypersensitivity) - a greater than desirable immune response.
Allergen - anything capable of provoking an allergic response.
Anaphylaxis (anaphylactic shock) - a systemic (body-wide) allergic response to an allergen present throughout the bloodstream; this can be life-threatening.
Immunodeficiency - incapacity of the body to mount an adequate immune response, as in SCIDS (Severe Combined Immune Deficiency Syndrome) or AIDS (Aquired Immune Deficiency Syndrome).
Autoimmune disease - an allergic response to one's own tissues; see list on page 375.