

**MODULE 44 STRESS AND ILLNESS**

**STRESS AND DISEASE**

- **PSYCHOPHYSIOLOGICAL ILLNESS** is broken down to literally mean “mind-body” illness; any stress-related physical illness, such as hypertension and some headaches.
- **PSYCHONEUROIMMUNOLOGY** is the study of how psychological, neural, and endocrine processes together affect the immune system and resulting health. This awkward name makes sense when said slowly: Your thoughts and feelings (psycho) influence your brain (neuro), which influences the endocrine hormones that affect your disease-fighting immune system. This field is the study of (ology).
- Four types of cells are active in the search to destroy infections. Two are types of white blood cells, called **LYMPHOCYTES**. B lymphocytes form in the bone marrow and release antibodies that fight bacterial infections; T lymphocytes form in the thymus and other lymphatic tissue and attack cancer cells, viruses, and foreign substances. The third agent is the macrophage (“big eater”), which identifies, pursues, and ingests harmful invaders and worn-out cells. The last is the natural killer cells (NK cells) pursue diseased cells.
- Women are more immune than men.
- Surgical wounds heal more slowly in stressed people. Stressed people are more vulnerable to colds.

**STRESS AND SUSCEPTIBILITY TO DISEASE**

- AIDS is an immune disorder, caused by the human immunodeficiency virus (HIV). AIDS has become the world’s fourth leading cause of death and Africa’s number one killer.
- Stress cannot give people AIDS but can stress and negative emotions speed the transition from HIV infection to AIDS in someone already infected? HIV-infected men who experience stressful events, such as the loss of a partner, exhibit somewhat greater immune suppression and travel a faster course in this disease. The benefits, once infected, of reducing stress is small.
- Stress weakens the immune system; might this weaken a person’s ability to fight off implanted tumor cells in rodents...yes. It is hard to find the same link between humans cancer and stress. Stress does not create cancer cells.
- **CORONARY HEART DISEASE** or the clogging of the vessels that nourish the heart muscle; the leading cause of death in many developed countries. Stress and a heart attack have a better predictor than that of anything else.
- In a study, men were interviewed and split up into **TYPE A** (Friedman and Rosenman’s term for competitive, aggressive, and anger-prone people) and **TYPE B** (Friedman and Rosenman’s term for easygoing, relaxed people). Type A had a higher rate of suffered heart attacks than Type B.
- Depressed people have an increased risk of death, especially death by unnatural causes and cardiovascular disease. Depressed people tend to smoke more and exercise less.

- Mind and body interact; everything psychological is simultaneously physiological. We are biopsychosocial systems.

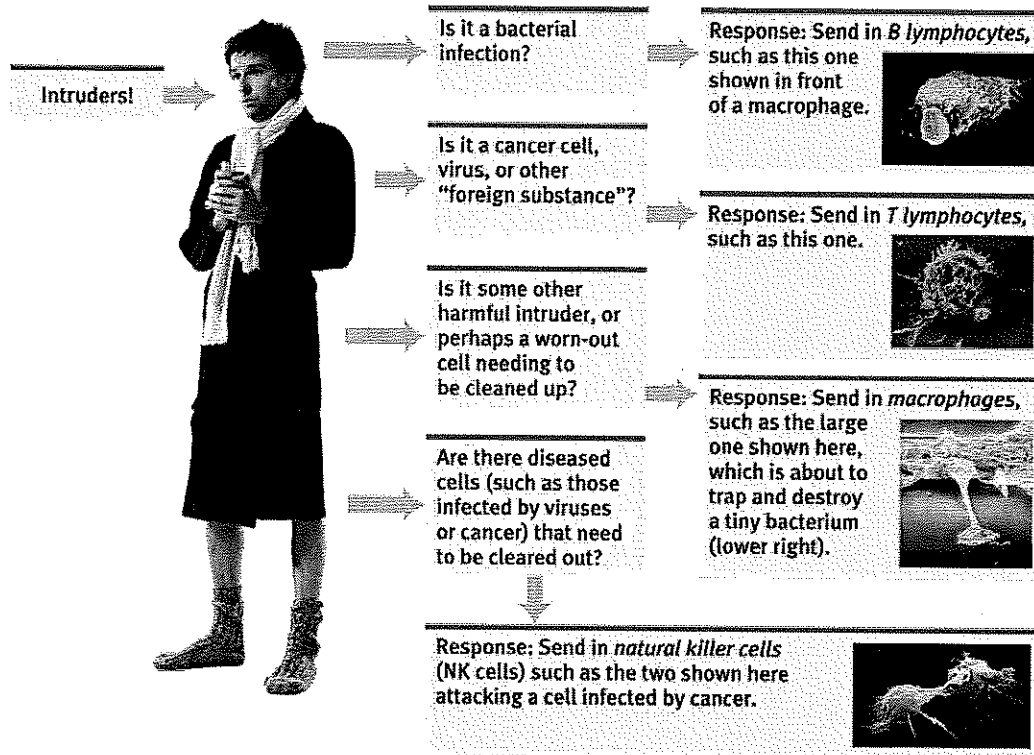


Figure 11.4 A simplified view of immune responses  
 Myers: Exploring Psychology, Ninth Edition  
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**BE ABLE TO ANSWER:** Which component of the Type A personality has been linked most closely to coronary heart disease?

**PRACTICE FRQ:** Explain the two types of people identified by Friedman and Rosenman in their study on stress responses and personality traits.