

ENGLISH 183 READING PRACTICE - Sarcoidosis

Read the following article and **answer** the **questions** that follow. Refer to the 'Keys' section to check your answers.

Sarcoidosis involves inflammation that produces tiny lumps of cells in various organs in the body. The lumps are called granulomas because they look like grains of sugar or sand. **They** are very small and can be seen only with a microscope. These tiny granulomas can grow and clump together, making many large and small groups of lumps. If many granulomas form in an organ, they can affect how the organ functions. This can cause the symptoms of sarcoidosis.

This disease can occur in almost any part of the body, although it usually affects some organs more than others. It typically starts in one of two places: the lungs or the lymph nodes, especially the lymph nodes in the chest cavity. Sarcoidosis also often affects the skin, eyes, and liver. Less often, sarcoidosis affects the spleen, brain, nerves, heart, tear glands, salivary glands, bones, joints, and rarely other organs. Sarcoidosis almost always occurs in more than one organ at a time.

Sarcoidosis has an active and a nonactive phase. In the active phase, the granulomas form and grow. In this phase, symptoms develop, and scar tissue can form in the organs where the granulomas occur. In the nonactive phase, the inflammation subsides, and the granulomas stay the same size or shrink. However, scars from the granulomas may remain and continue to cause symptoms.

Changes in sarcoidosis usually occur slowly (e.g., over months). Sarcoidosis does not usually cause sudden illness. However, some symptoms may occur suddenly. They include disturbed heart rhythms, arthritis in the ankles, and eye symptoms. In some serious cases in which vital organs are affected, sarcoidosis can result in death.

The cause of sarcoidosis is not known. Scientists **hypothesize** that sarcoidosis develops when the immune system responds to something in the environment (e.g., bacteria, viruses, dust, chemicals) or perhaps to one's own

body tissue (autoimmunity). Normally, the immune system defends the body against whatever **it** perceives as foreign. Cells in the body are prompted to release chemicals that produce inflammation to isolate and destroy harmful substances. In sarcoidosis, this inflammation remains and leads to the development of granulomas.

Sarcoidosis affects people of all ages and races worldwide. It occurs mostly in adults between the ages of 20 and 40, African Americans (especially women), and people of Asian, German, Irish, Puerto Rican, and Scandinavian origin. Although preliminary research indicates that a genetic link is probable, people who are more likely to acquire sarcoidosis include health care workers, nonsmokers, elementary and secondary school teachers, people exposed to agricultural dust, insecticides, pesticides, or mold, and firefighters. Close relatives of people who have sarcoidosis are more likely than others to have sarcoidosis.

A doctor will diagnose sarcoidosis by taking a detailed medical history and conducting a physical exam and several diagnostic tests. **The purpose** is to identify the presence of granulomas in any of the organs, to rule out other causes of the symptoms and determine the amount of damage to any of the affected organs.

The goals of treatment are to relieve symptoms, minimize the granulomas, and improve the function of the organs affected by sarcoidosis. Treatment may shrink the granulomas and even cause them to disappear, but this may take many months. If scars have formed, treatment may not help, and the patient may have ongoing symptoms. In general, treatment for sarcoidosis depends on the patient's symptoms, the severity of the symptoms, whether or not any of the vital organs (e.g., the lungs, heart, or brain) are affected, and how severely the organ is affected.

The main treatment for sarcoidosis is prednisone. Prednisone is a corticosteroid, an anti-inflammatory drug, and almost always relieves symptoms of inflammation. **It** is usually given for many months, sometimes for a year or more, and low doses can often relieve symptoms without causing major side effects. If **indicated**, local therapy, using other types of medication, is the safest way to treat sarcoidosis. These are applied directly to the affected area. As a result, only small amounts of the drug reach other parts of the body. Drugs used for local therapy include eye drops, inhaled

drugs for the lungs, and skin creams. In every case, regular follow-up must be maintained to avoid **relapse** and further progression of the disease.

Adapted from ' Sarcoidosis' - National Heart, Blood and Lung Institute

1. Granulomas are caused by inflammation which _____.
 - a. results in tiny lumps visible only under a microscope
 - b. worsens and forms clumps in various organs of the body
 - c. remains after being produced by the immune system
 - d. all of the above

2. The first symptoms of sarcoidosis usually appear _____.
 - a. in the lungs and the lymph nodes
 - b. in the lungs or the lymph nodes
 - c. on the lungs or the lymph nodes
 - d. in the lungs and the lymph nodes in the chest cavity

3. In regard to the two phases of sarcoidosis, _____.
 - a. the patient only experiences symptoms during the active phase
 - b. symptoms may occur throughout both phases
 - c. scars from the active phase shrink in the inactive phase
 - d. none of the above

4. Sarcoidosis may be fatal.
 - a. true
 - b. false

5. Sarcoidosis is an idiopathic disease.
 - a. true
 - b. false

6. Of the following, who is most at risk for sarcoidosis?
- a. a non-smoking Asian male who is 30 years old
 - b. an Irish male secondary school teacher of 50 who smokes
 - c. a non-smoking female African American farm worker aged 35
 - d. a female African American healthcare worker of 20 who smokes
7. You are more likely to suffer from sarcoidosis if your brother has it.
- a. true
 - b. false
8. 'They' (para. 1, line 3) refers to: _____.
- a. grains
 - b. cells
 - c. organs of the body
 - d. granulomas
9. 'hypothesise' (para. 5, line 1) means _____.
- a. predict
 - b. conclude
 - c. experiment
 - d. imagine
10. 'it' (para. 5, line 5) refers to:
- a. body tissue
 - b. the immune system
 - c. the body
 - d. autoimmunity
11. 'The purpose' (para. 7, line 3) refers to: _____.
- a. the purpose of the medical history
 - b. the purpose of the physical exam
 - c. the purpose of the diagnostic tests
 - d. the purpose of the diagnosis

12. 'it' (para. 9, line 3) refers to _____.

- a. anti-inflammatory drug
- b. corticosteroid
- c. prednisone
- d. treatment

13. 'indicated' (para. 9, line 6) means _____.

- a. necessary
- b. avoidable
- c. requested by the patient
- d. capable

14. 'relapse' (para. 9, line 11) means _____.

- a. regression
- b. infection
- c. progression
- d. improvement

15. From this reading, you can infer that sarcoidosis may be an inherited disease triggered by airborne environmental pollutants.

- a. true
- b. false

16. From this reading, you can infer that there is a cure for this disease.

- a. true
- b. false