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Behçet's Disease

April 2012

Questions and Answers about Behçet's Disease

This booklet contains general information about Behçet's (Beh-CHETS or Beh-SHETS) disease. It describes what Behçet's disease is and how it may develop. It also explains how Behçet's disease is diagnosed and treated. At the end is a list of key words to help you understand the terms used in this booklet. If you have further questions after reading this booklet, you may wish to discuss them with your doctor.

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What Is Behçet's Disease?

The disease was first described in 1937 by Dr. Hulusi Behçet, a dermatologist in Turkey. Behçet's disease is now recognized as a chronic condition that causes canker sores or ulcers in the mouth and on the genitals, and inflammation in parts of the eye. In some people, the disease also results in arthritis (swollen, painful, stiff joints), skin problems, and inflammation of the digestive tract, brain, and spinal cord.

Who Gets Behçet's Disease?

Behçet's disease is common in the Middle East, Asia, and Japan; it is rare in the United States. In Middle Eastern and Asian countries, the disease affects more men than women. In the United States, the opposite is true. Behçet's disease tends to develop in people in their twenties or thirties, but people of all ages can develop this disease.

What Causes Behçet's Disease?

The exact cause of Behçet's disease is unknown. Most symptoms of the disease are caused by inflammation of the blood vessels. Inflammation is a characteristic reaction of the body to injury or disease and is marked by four signs: swelling, redness, heat, and pain. Doctors think that an autoinflammatory reaction may cause the blood vessels to become inflamed, but they do not know what triggers this reaction. Under normal conditions, the immune system protects the body from diseases and infections by killing harmful "foreign" substances, such as germs, that enter the body. In an autoimmune reaction, the immune system mistakenly attacks and harms the body's own tissues.

Behçet's disease is not contagious; it is not spread from one person to another. Researchers think that two factors are important for a person to get Behçet's disease. First, it is believed that abnormalities of the immune system make some people susceptible to the disease. Scientists think that this susceptibility may be inherited; that is, it may be due to one or more specific genes. Second, something in the environment, possibly a bacterium or virus, might trigger or activate the disease in susceptible people.

What Are the Symptoms of Behçet's Disease?

Behçet's disease affects each person differently. Some people have only mild symptoms, such as canker sores or ulcers in the mouth or on the genitals. Others have more severe signs, such as meningitis, which is an inflammation of the membranes that cover the brain and spinal cord. Meningitis can cause fever, a stiff neck, and headaches. More severe symptoms usually appear months or years after a person notices the first signs of Behçet's disease. Symptoms can last for a long time or may come and go in a few weeks. Typically, symptoms appear, disappear, and then reappear. The times when a person is having symptoms are called flares. Different symptoms may occur with each flare; the problems of the disease often do not occur together. To help the doctor diagnose Behçet's disease and monitor its course, patients may want to keep a record of which symptoms occur and when. Because many conditions mimic Behçet's disease, doctors must observe the lesions (injuries) caused by the disorder to make an accurate diagnosis.

The five most common symptoms of Behçet's disease are mouth sores, genital sores, other skin lesions, inflammation of parts of the eye, and arthritis.

- **Mouth sores** (known as oral aphthosis [af-THO-sis] and aphthous stomatitis [AF-thus stow-muh-TIEtis]) affect almost all people with Behçet's disease. Individual sores or ulcers are usually identical to canker sores, which are common in many people. They are often the first symptom that a person notices and may occur long before any other symptoms appear. The sores usually have a red border and several may appear at the same time. They may be painful and can make eating difficult. Mouth sores go away in 10 to 14 days but often come back. Small sores usually heal without scarring, but larger sores may scar.
- **Genital sores** affect more than half of all people with Behçet's disease and most commonly appear on the scrotum in men and vulva in women. The sores look similar to the mouth sores and may be painful. After several outbreaks, they may cause scarring.

- **Skin problems** are a common symptom of Behçet's disease. Skin sores often look red or resemble pus-filled bumps or a bruise. The sores are red and raised, and typically appear on the legs and on the upper torso. In some people, sores or lesions may appear when the skin is scratched or pricked. When doctors suspect that a person has Behçet's disease, they may perform a pathergy test, in which they prick the skin with a small needle; 1 to 2 days after the test, people with Behçet's disease may develop a red bump where the doctor pricked the skin. However, only half of the Behçet's patients in Middle Eastern countries and Japan have this reaction. It is less commonly observed in patients from the United States, but if this reaction occurs, then Behçet's disease is likely.
- **Uveitis** (yoo-vee-EYE-tis) involves inflammation of the middle or back part of the eye (the uvea) including the iris, and occurs in more than half of all people with Behçet's disease. This symptom is more common among men than women and typically begins within 2 years of the first symptoms. Eye inflammation can cause blurred vision; rarely, it causes pain and redness. Because partial loss of vision or blindness can result if the eye frequently becomes inflamed, patients should report these symptoms to their doctor immediately.
- **Arthritis**, which is inflammation of the joints, occurs in more than half of all people with Behçet's disease. Arthritis causes pain, swelling, and stiffness in the joints, especially in the knees, ankles, wrists, and elbows. Arthritis that results from Behçet's disease usually lasts a few weeks and does not cause permanent damage to the joints.

In addition to mouth and genital sores, other skin lesions, eye inflammation, and arthritis, Behçet's disease may also cause blood clots and inflammation in the central nervous system and digestive organs.

Blood Clots

Some people with Behçet's disease have blood clots resulting from inflammation in the veins (thrombophlebitis [throm-bow-fluh-

BEYE-tis]), usually in the legs. Symptoms include pain and tenderness in the affected area. The area may also be swollen and warm. Because thrombophlebitis can have severe complications, people should report symptoms to their doctor immediately. A few patients may experience artery problems such as aneurysms (balloon-like swelling of the artery wall).

Central Nervous System

In the United States, Behçet's disease affects the central nervous system in an estimated one-fifth to one-quarter of people with the disease. The central nervous system includes the brain and spinal cord. Its function is to process information and coordinate thinking, behavior, sensation, and movement. Behçet's disease can cause inflammation of the brain and the thin membrane that covers and protects the brain and spinal cord. This condition is called meningoencephalitis. People with meningoencephalitis may have fever, headache, stiff neck, and difficulty coordinating movement, and should report any of these symptoms to their doctor immediately. If this condition is left untreated, a stroke (blockage or rupture of blood vessels in the brain) can result.

Digestive Tract

Rarely, Behçet's disease causes inflammation and ulceration (sores) throughout the digestive tract that are identical to the aphthous lesions in the mouth and genital area.

This leads to abdominal pain, diarrhea, and/or bleeding. Because these symptoms are very similar to symptoms of other diseases of the digestive tract, such as ulcerative colitis and Crohn's disease, careful evaluation is essential to rule out these other diseases.

How Is Behçet's Disease Diagnosed?

Diagnosing Behçet's disease is very difficult because no specific test confirms it. Less than half of people initially thought to have Behçet's disease actually have it. When a patient reports symptoms, the doctor must conduct an examination and rule out other conditions with similar symptoms. Because it may take several months or even years for all the common symptoms to appear, the diagnosis may not be made for a long time. A patient may even visit several different kinds of doctors before the

diagnosis is made.

These symptoms are key to a diagnosis of Behçet's disease:

- Mouth sores at least three times in 12 months
- Any two of the following symptoms: recurring genital sores, eye inflammation with loss of vision, characteristic skin lesions, or positive pathergy (skin prick test)

Besides finding these signs, the doctor must rule out other conditions with similar symptoms, such as Crohn's disease and reactive arthritis. The doctor also may recommend that the patient see an eye specialist to identify possible complications related to eye inflammation. A dermatologist may perform a biopsy of mouth, genital, or skin lesions to help distinguish Behçet's from other disorders.

What Kind of Doctor Treats a Person With Behçet's Disease?

Because the disease affects different parts of the body, a patient probably will see several different doctors. It may be helpful to both the doctors and the patient for one doctor to manage the complete treatment plan. This doctor can coordinate the treatments and monitor any side effects from the various medications that the patient takes.

A rheumatologist (a doctor specializing in arthritis and other inflammatory disorders) often manages a patient's treatment and treats joint disease. The following specialists also treat other symptoms that affect the different body systems:

- **A gynecologist**, who treats genital sores in women.
- **An urologist**, who treats genital sores in men and women.
- **A dermatologist**, who treats genital sores in men and women and skin and mucous membrane problems.
- **An ophthalmologist**, who treats eye inflammation.
- **A gastroenterologist**, who treats digestive tract symptoms.
- **A hematologist**, who treats disorders of the blood.

- **A neurologist**, who treats central nervous system symptoms.

How Is Behçet's Disease Treated?

Although there is no cure for Behçet's disease, people usually can control symptoms with proper medication, rest, exercise, and a healthy lifestyle. The goal of treatment is to reduce discomfort and prevent serious complications such as disability from arthritis or blindness. The type of medicine and the length of treatment depend on the person's symptoms and their severity. It is likely that a combination of treatments will be needed to relieve specific symptoms. Patients should tell each of their doctors about all of the medicines they are taking so that the doctors can coordinate treatment.

Topical Medicine

Topical medicine is applied directly on the sores to relieve pain and discomfort. For example, doctors prescribe rinses, gels, or ointments. Creams are used to treat skin and genital sores. The medicine usually contains corticosteroids (which reduce inflammation), other anti-inflammatory drugs, or an anesthetic, which relieves pain.

Oral Medicine

Doctors also prescribe medicines taken by mouth to reduce inflammation throughout the body, suppress the overactive immune system, and relieve symptoms. Doctors may prescribe one or more of the medicines described below to treat the various symptoms of Behçet's disease.

- **Corticosteroids.** A corticosteroid medication is prescribed to reduce pain and inflammation throughout the body for people with severe joint pain, skin sores, eye disease, or central nervous system symptoms. Patients must carefully follow the doctor's instructions about when to take a corticosteroid and how much to take. It also is important not to stop taking the medicine suddenly, because the medicine alters the body's production of the natural corticosteroid hormones. Long-term use of these medications can have side effects such as osteoporosis (a disease that leads to bone fragility), weight gain, delayed wound healing, persistent heartburn, and elevated

blood pressure. However, these side effects are rare when they are taken at low doses for a short time. It is important that people with the disease see their doctor regularly to monitor possible side effects. Corticosteroids are useful in early stages of disease and for acute severe flares. They are of limited use for long-term management of central nervous system and serious eye complications.

- **Immunosuppressive drugs.** These medicines (in addition to corticosteroids) help control an overactive immune system, which occurs in Behçet's disease, and reduce inflammation throughout the body and lessen the number of disease flares. Doctors may use immunosuppressive drugs when a person has eye disease or central nervous system involvement. These medicines are very strong and can have serious side effects. Patients must see their doctor regularly for blood tests to detect and monitor side effects.

Doctors may prescribe other medications to reduce inflammation and treat specific manifestations of the disease.

Rest and Exercise

Although rest is important during flares, doctors usually recommend moderate exercise, such as swimming or walking, when the symptoms have improved or disappeared. Exercise can help people with Behçet's disease keep their joints strong and flexible.

What Is the Prognosis for a Person With Behçet's Disease?

Most people with Behçet's disease can lead productive lives and control symptoms with proper medicine, rest, and exercise. Doctors can use many medicines to relieve pain, treat symptoms, and prevent complications. When treatment is effective, flares usually become less frequent. Many patients eventually enter a period of remission (a disappearance of symptoms). In some people, treatment does not relieve symptoms, and gradually more serious symptoms such as eye disease may occur. Serious symptoms may appear months or years after the first signs of Behçet's disease.

What Are Researchers Trying to Learn About Behçet's Disease?

Researchers are exploring possible genetic, bacterial, and viral causes of Behçet's disease as well as improved drug treatment. For example, genetic studies show strong association of the gene HLA-B51 with the disease, but the exact role of this gene in the development of Behçet's is uncertain. Researchers hope to identify genes that increase a person's risk for developing Behçet's disease. Studies of these genes and how they work may provide new understanding of the disease and possibly new treatments.

Researchers are also investigating factors in the environment, such as bacteria or viruses, that may trigger Behçet's disease. They are particularly interested in whether *Streptococcus*, the bacterium that causes strep throat, is associated with Behçet's disease. Many people with Behçet's disease have had several strep infections. In addition, researchers suspect that herpes virus type 1, a virus that causes cold sores, may be associated with Behçet's disease.

Finally, researchers are identifying other medicines to better treat Behçet's disease. TNF inhibitors are a class of drugs that reduce joint inflammation by blocking the action of a substance called tumor necrosis factor (TNF). Although serious side effects have been reported for TNF inhibitors, they have shown some promise in treating Behçet's disease. TNF inhibitors belong to a family of drugs called biologics, which target the immune response. Also, interferon alpha, a protein that helps fight infection, has shown promise in treating Behçet's disease.

More information on research is available from the following resources:

- ClinicalTrials.gov offers up-to-date information for locating federally and privately supported clinical trials for a wide range of diseases and conditions.
- [National Institutes of Health \(NIH\) Clinical Research Trials and You](http://www.nia.nih.gov/healthinfo/behcets_disease/clinical_research_trials_and_you) was designed to help people learn more about clinical trials, why they matter, and how to participate. Visitors to the website will find information about the basics of participating in a clinical trial, first-hand stories from actual clinical trial volunteers,

explanations from researchers, and links to how to search for a trial or enroll in a research-matching program.

- [NIH RePORTER](#) is an electronic tool that allows users to search a repository of both intramural and extramural NIH-funded research projects from the past 25 years and access publications (since 1985) and patents resulting from NIH funding.
- [PubMed](#) is a free service of the U.S. National Library of Medicine that lets you search millions of journal citations and abstracts in the fields of medicine, nursing, dentistry, veterinary medicine, the health care system, and preclinical sciences.
- [The NIH Clinical Center](#) is the nation's largest hospital devoted entirely to clinical research. It is the research hospital for the NIH, and it supports clinical research done by the Institutes and Centers as well as by NIH staff.

Where Can People Find More Information About Behçet's Disease?

National Institute of Arthritis and Musculoskeletal and Skin Diseases (NIAMS) Information Clearinghouse National Institutes of Health

1 AMS Circle
Bethesda, MD 20892-3675
Phone: 301-495-4484
Toll Free: 877-22-NIAMS (877-226-4267)
TTY: 301-565-2966
Fax: 301-718-6366
Email: NIAMSinfo@mail.nih.gov
Website: <http://www.niams.nih.gov>

Other Resources

National Institute of Dental and Craniofacial Research (NIDCR) National Institutes of Health

Website: <http://www.nidcr.nih.gov>

National Institute of Diabetes and Digestive and Kidney Diseases

Website: <http://www.niddk.nih.gov>

National Eye Institute (NEI) National Institutes of Health

Website: <http://www.nei.nih.gov>

**National Institute of Neurological Disorders and Stroke (NINDS)
NIH Neurological Institute**

Website: <http://www.ninds.nih.gov>

American Academy of Dermatology (AAD)

Website: <http://www.aad.org>

American College of Rheumatology

Website: <http://www.rheumatology.org>

Dermatology Foundation

Website: <http://www.dermfnd.org>

American Behçet's Disease Association

Website: <http://www.behcets.com>

American Skin Association (ASA)

Website: <http://www.americanskin.org>

Arthritis Foundation

Website: <http://www.arthritis.org>

National Organization For Rare Disorders (NORD)

Website: <http://www.rarediseases.org>

For additional contact information, visit the NIAMS website or call the NIAMS Information Clearinghouse.

Key Words

Anesthetic. Pain relief medicine that dulls feeling in the sore area. Doctors sometimes use an anesthetic to relieve pain caused by mouth and genital sores in people with Behçet's disease.

Aneurysm. Swelling of an artery due to a weakness in its wall.

Antibody. A special protein produced by the body's immune system that recognizes and helps fight infectious agents and other foreign substances that invade the body.

Aphthosis. Ulcers in the mouth or on the genitals. Oral or mouth aphthosis, also called aphthous stomatitis, is the most common symptom of Behçet's disease.

Arthritis. Literally means joint inflammation. It is a general term for more than 100 of the rheumatic diseases. Arthritis causes joint

swelling, pain, and stiffness. Some people with Behçet's disease develop a form of arthritis that goes away after a few weeks or months and causes no long-term damage to the joints.

Autoimmune disease. A disease that results when the immune system mistakenly attacks the body's own tissues.

Biologics. A class of drugs, also known as biologic response modifiers, that target the immune response.

Blood vessels. Arteries, veins, and capillaries that carry blood through the body.

Central nervous system. This body system includes the brain and spinal cord. Its functions are to process information and coordinate thinking, behavior, sensation, and movement. In some people with Behçet's disease, blood vessels in the central nervous system become inflamed, causing headaches, stiff neck, and clumsiness.

Corticosteroids. Strong anti-inflammatory hormones that are made naturally in the body or synthetically (man-made) for use as medicine. They also are called glucocorticoids. The most commonly prescribed medicine of this type is prednisone.

Crohn's disease. Inflammation of the small intestine or colon that causes diarrhea, cramps, and weight loss.

Digestive tract. The body system that breaks down food. The digestive tract includes the stomach, intestines, pancreas, gallbladder, and liver.

Flare. A period of time when disease symptoms reappear or become worse.

Immune system. A complex network of specialized cells and organs that work together to defend the body against attacks by "foreign" invaders such as bacteria and viruses. In some rheumatic conditions, it appears that the immune system does not function properly and may even work against the body.

Immunosuppressive drugs. Medicines that reduce the immune response and therefore may relieve some symptoms of Behçet's disease.

Inflammation. A reaction of tissues to injury or disease, marked by four signs: swelling, redness, heat, and pain.

Meningitis. Inflammation of the membranes that cover the brain and spinal cord.

Meningoencephalitis. Inflammation of the membranes that cover and protect the brain and spinal cord. This condition sometimes occurs in patients with Behçet's disease.

Pathergy (a state of heightened reactivity). A test that detects pathergic skin sensitivity is sometimes used to help diagnose Behçet's disease. The skin is pricked with a small needle and in some people, a bump appears after 1 or 2 days. This reaction is called positive pathergy.

Reactive arthritis. A form of arthritis that can develop after an intestinal or urinary tract infection. The disease causes pain and swelling around the joints and in the spine. People with the disease may also experience swelling of the eye and the reproductive and urinary tracts.

Streptococcus. A bacterium that causes infections such as strep throat. Doctors think that it also may trigger Behçet's disease in some people.

Thrombophlebitis. Inflammation of a vein and formation of a blood clot in the vein.

Topical treatment. Medicine, such as a cream or rinse, that is put directly on the affected body part.

Ulcerative colitis. Inflammation of the colon. Symptoms include stomach pain and diarrhea.

Uveitis. Inflammation of the inner eye that includes the iris, the tissue that holds the lens of the eye, and a network of blood vessels surrounding the eyeball called the choroid plexus.

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For Your Information

This publication contains information about medications used to treat the health condition discussed here. When this publication was developed, we included the most up-to-date (accurate) information available. Occasionally, new information on medication is released.

For updates and for any questions about any medications you are taking, please contact

U.S. Food and Drug Administration

Toll Free: 888-INFO-FDA
(888-463-6332)
Website: <http://www.fda.gov>

For updates and questions about statistics, please contact

Centers for Disease Control and Prevention's National Center for Health Statistics

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