

Diagnosis of scleroderma: symptoms, manifestations, treatment

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Scleroderma is an autoimmune disease affecting the skin and other organs of the body, meaning that the body's immune system is causing inflammation and other abnormalities in these tissues. The main finding in scleroderma is thickening and tightening of the skin and inflammation and scarring of many body parts, leading to problems in the lungs, kidneys, heart, intestinal system and other areas.

There are two main types of scleroderma: localized scleroderma that just affects the skin and systemic sclerosis, which may affect blood circulation and internal organs as well as the skin. Localized scleroderma is the mildest form of the condition. It affects the skin, causing one or more hard patches to develop. Depending on the way the skin is affected scientists mark out two types, called morphea and linear. In systemic sclerosis, internal organs are affected as well as the skin. There are two types of systemic sclerosis, called limited cutaneous systemic sclerosis and diffuse systemic sclerosis. Limited cutaneous systemic sclerosis a milder form that affects skin on the hands, lower arms, feet, lower legs and face, eventually it affect the lungs and digestive system. Diffuse systemic sclerosis is a more severe form of the disease: skin thickening occurs more rapidly and involves more skin areas than in a limited type of a disease, it also affects heart and kidneys.

Manifestation of scleroderma includes changes in the fingers and hands (e.g. stiffness, tightness, and puffiness because of sensitivity to cold or emotional stress). There may be swelling in the hands and feet, especially in the morning. It also includes calcium deposits in connective tissues, a narrowing of the blood vessels in the hands and feet, known as Raynaud's disease, problems with the esophagus, red spots on the face and hands.

Currently scleroderma is incurable. Doctors develop treatment protocols based on the symptoms but the exact cause of the disease is unknown. Due to that fact, scleroderma is of great interest for scientists. Particular gene patterns and chains, that affect the immune system, are considered to be responsible, but recent studies showed that the state of the environment has direct impact on the scleroderma developing. Scientists suspect that external factors affecting the appearance of scleroderma include chemical (organic solvents, vinyl chloride, quartz dust), medicinal (bleomycin and other drugs used in chemotherapy), physical (vibrations, low temperature) causes. A great deal of research is required to find better options for this disease treatment.