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## Scleroderma

### What is scleroderma?

Scleroderma is a connective tissue disorder. It leads to hardening, and thickening of the skin (Acorn & Joachim, 2003). It can also involve muscles, joints, blood vessels, and internal organs (Acorn & Joachim). Scleroderma has two main types, localized and systemic (Leininger, 2003). Localized scleroderma only affects the skin in limited areas and has a gradual onset (Leininger). Systemic scleroderma has a rapid onset and causes extensive skin changes (Leininger).

### What causes scleroderma?

There is no known cause for scleroderma (Leininger, 2003). It is thought that it could be caused by an autoimmune response (Leininger). This response causes the cells to produce too much collagen (Leininger). The excess of collagen is what causes skin to become hard and thick (Leininger).

There has also been some evidence that certain environmental factors may increase risk of scleroderma (Acorn & Joachim, 2003). According to Acorn and Joachim, these factors include: silica, certain drugs (bleomycin, pentazocine, and cocaine), and organic solvents (benzene, toluene, and vinyl chloride). Organic solvent exposure has also been linked to systemic scleroderma (Aryal, Khuder, & Schaub, 2001).

### Who can get scleroderma?

Scleroderma is not contagious, infectious, or cancerous (Scleroderma Foundation, 2008). A person of any age can have scleroderma however it most common between the ages of 25-55 (Scleroderma Foundation). More women than men tend to have scleroderma (Acorn & Joachim, 2003).

### What are the signs and symptoms of scleroderma?

Common symptoms of scleroderma include (Acorn & Joachim):

- Tiredness
- Weight loss
- Pain
- Swollen fingers
- Joint pain
- Hard skin
- Tight facial skin
- Shiny, thick skin on arms and legs
- Acid reflux
- Difficulty swallowing
- Skin discoloration



### **How does scleroderma progress?**

The disease progression depends on the type of scleroderma a person has (Acorn & Joachim, 2003). In some cases scleroderma can be a mild disease that only affects the skin (Leininger). In other cases scleroderma can get worse quickly and can affect the internal organs and potentially be fatal (Leininger).

### **How is scleroderma diagnosed?**

Diagnosis of scleroderma is based on medical history and physical exam (Acorn & Joachim, 2003). Depending on the type of scleroderma different tests may be performed (Scleroderma Foundation, 2008). Some tests that might be used include: barium swallow test, skin biopsy, electrocardiogram (ECG), kidney function tests, blood tests and endoscopy (Acorn & Joachim).

### **How is scleroderma treated?**

There is no known cure for scleroderma (Leininger, 2003). Treatment is aimed at slowing disease progression and managing symptoms of scleroderma (Acorn & Joachim, 2003).

## References

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