



# Bone and joint problems associated with diabetes

By Mayo Clinic Staff

If you have diabetes, you're at increased risk of various bone and joint disorders. Certain factors, such as nerve damage (diabetic neuropathy), arterial disease and obesity, may contribute to these problems — but often the cause isn't clear.

Learn more about various bone and joint disorders, including symptoms and treatment options.

## What is it?

Charcot (shahr-KOH) joint, also called neuropathic arthropathy, occurs when a joint deteriorates because of nerve damage — a common complication of diabetes. Charcot joint primarily affects the feet.

## What are the symptoms?

You might have numbness and tingling or loss of sensation in the affected joints. They may become warm, red and swollen and become unstable or deformed. The involved joint may not be very painful despite its appearance.

## How is it treated?

If detected early, progression of the disease can be slowed. Limiting weight-bearing activities and use of orthotic supports to the affected joint and surrounding structures can help.

## What is it?

Diabetic hand syndrome, also called diabetic cheiroarthropathy, is a disorder in which the skin on the hands becomes waxy and thickened. Eventually finger movement is limited. What causes diabetic hand syndrome isn't known. It's most common in people who've had diabetes for a long time.

## What are the symptoms?

You may be unable to fully extend your fingers or press your palms together flat.

## How is it treated?

### **What is it?**

Osteoporosis is a disorder that causes bones to become weak and prone to fracture. People who have type 1 diabetes have an increased risk of osteoporosis.

### **What are the symptoms?**

Osteoporosis rarely causes symptoms in the early stages. Eventually, when the disease is more advanced, you may experience loss of height, stooped posture or bone fractures.

### **How is it treated?**

A healthy lifestyle, including weight-bearing exercise, such as walking, and eating a balanced diet rich in calcium and vitamin D — including supplements if needed — are the best ways to address this condition. In some patients with more severe or advanced disease, medications to prevent further bone loss or increase bone mass may be needed.

### **What is it?**

Osteoarthritis is a joint disorder characterized by the breakdown of joint cartilage. It may affect any joint in your body. People who have type 2 diabetes have an increased risk of osteoarthritis, likely due to obesity — a risk factor for type 2 diabetes — rather than to the diabetes itself.

### **What are the symptoms?**

Osteoarthritis may cause joint pain, swelling and stiffness, as well as loss of joint flexibility or movement.

### **How is it treated?**

Treatment involves exercising and maintaining a healthy weight, caring for and resting the affected joint, physical therapy, medications for pain, and surgery such as knee or hip replacement (joint arthroplasty). Complementary treatments — such as acupuncture and massage — also may be helpful for managing pain.

### **What is it?**

Diffuse idiopathic skeletal hyperostosis (DISH), also called Forestier disease, is a hardening of tendons and ligaments that commonly affects the spine. DISH may be associated with type 2 diabetes, perhaps due to insulin or insulin-like growth factors that promote new bone growth.

### **What are the symptoms?**

You may experience pain, stiffness or decreased range of motion in any affected part of your body. If DISH affects your spine, you may experience stiffness in your back or neck.

### **How is it treated?**

Treatment involves managing symptoms, usually with pain relievers (Tylenol, others), and in rare cases may require surgery to remove bone that has grown due to the condition.

caused by thickening and scarring of connective tissue in the palm of the hand and in the fingers. Dupuytren's contracture is common in people who've had diabetes for a long time, perhaps due to the metabolic changes related to diabetes.

### **What are the symptoms?**

You may notice thickening of the skin on the palm of your hand. Eventually, you may not be able to fully straighten one or more fingers.

### **How is it treated?**

If you have pain, a steroid injection may help by reducing inflammation. Surgery, collagenase enzyme injection and a minimally invasive technique called aponeurotomy to break apart the thick tissue are other options if the condition prevents you from being able to grasp objects.

### **What is it?**

Frozen shoulder is a condition characterized by shoulder pain and limited range of motion. It typically affects only one shoulder. Although the cause is often unknown, diabetes is a common risk factor.

### **What are the symptoms?**

Frozen shoulder causes pain or tenderness with shoulder movement, stiffness of the joint, and decreased range of motion.

### **How is it treated?**

If started early, aggressive physical therapy can help preserve movement and range of motion in the joint.

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