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Information leaflet: Diabetes and the hand

What is the association with diabetes?

Diabetes unfortunately causes various manifestations in the hand. It is hence possible that patients with diabetes will seek opinion from a hand specialist frequently. Conditions like trigger fingers / thumbs, Dupuytren's disease, Carpal tunnel syndrome, Cubital tunnel syndrome and limited joint mobility are more common in diabetics than in the general population. They may manifest at the same time or over time.

Is it called by any other name?

Diabetic hand syndrome, Shoulder-hand syndrome (with frozen shoulder)

What are the symptoms and how is the condition diagnosed?

Please refer to the information leaflets on this website for further individual information on conditions like Trigger fingers/ thumbs, Dupuytren's disease, Carpal tunnel syndrome and Cubital tunnel syndrome (Ulnar neuritis).

Limited joint mobility: Due to diabetes, the end-blood supply to the muscles / ligaments in the hands is poor. Hence these muscles / ligaments may scar and lose their normal elasticity. This leads to stiffness or limited mobility in the small joints of the hand. This is a frequent problem with diabetes and more common in type 1 juvenile diabetics. Patients are unable to flatten their hands against one another with the wrists extended (preacher's sign). There is a positive relationship between limited joint mobility and diabetic retinopathy.

Trigger fingers: This condition occurs in 20% of diabetics causing locking of the fingers. In diabetics the condition is more common in females, more often on both sides with involvement of multiple digits. The clinical impression is that trigger fingers respond less well to steroid injection and will more often need surgery in diabetics.

Numbness of the hands and feet: The nerve endings in diabetics are affected by poor blood supply. Due to this diabetics develop peripheral neuropathy and hence it is common for diabetics to complain of numbness in their hands and feet. Peripheral neuropathy is different from carpal or cubital tunnel syndrome. In these conditions the median or the ulnar nerves are compressed respectively under a thickened ligament causing numbness. Carpal tunnel syndrome is present in about 10 to 20% of diabetics.

Hand weakness: Because of one or more of the above conditions, patients may complain of hand weakness.

What is the treatment?

Generally diabetic patients will present with one or more of the above manifestations. Treatment is directed to each individual condition.

Please refer to the individual information leaflets on this website for treatment options on conditions like Trigger fingers/ thumbs, Dupuytren's disease, Frozen shoulder, Carpal tunnel syndrome and Cubital tunnel syndrome (Ulnar neuritis).



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What is the success of treatment in Diabetics?

Most of the conditions described above can be treated with some success but as compared to the general population having the same conditions, the treatment outcomes are relatively less successful in diabetics.

Limited joint mobility is difficult to manage, though in most instances it does not cause any functional problem. In the few cases when it does cause problems, hand therapy and splintage is usually advised.

Carpal tunnel syndrome is more of a problem in patients who have diabetes and surgery for carpal tunnel seems to provide less reliable outcome in diabetics. This is probably related to poor nerve regeneration potential in diabetics.

The clinical impression is that trigger fingers respond less well to steroid injection and will more often need surgery. Please watch your blood sugar levels as the steroid injection may affect them for a few days.

Frozen shoulder is usually a more severe disease in diabetics and the results of both manipulation and arthroscopic capsular release are relatively less successful.