

## **Limited joint mobility and plantar pressure in type 1 diabetic subjects in India.**

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### **Author information**

#### **Abstract**

##### **AIM:**

Limited joint mobility and plantar pressure in the foot has not been assessed in type 1 diabetes. The aim of this study was to investigate the joint mobility and plantar foot pressure in Asian Indian type 1 diabetic subjects and to see its association with duration of diabetes.

##### **MATERIAL AND METHODS:**

The joint mobility and plantar pressure were measured in 115 consecutive subjects attending the foot clinic. The study groups were: Control- non diabetic controls (n=40) (M:F 19:21) and type 1 diabetic patients (n=75) (M:F 42:33). Joint mobility was assessed using a goniometer at two sites, in the subtalar joint and in the hallux. Plantar pressure was measured using the RS-Scan platform system. Data obtained on the metatarsal heads were used for analysis.

##### **RESULTS:**

Patients with type 1 diabetes had significantly lesser joint mobility ( $p < 0.0001$ ) and higher plantar pressure ( $p < 0.0001$ ) compared with the control group. Duration of diabetes had an inverse association with joint mobility ( $p < 0.0001$ ). The degree of joint mobility was more restricted in patients with longer duration of diabetes. Plantar pressure increased with increasing duration of diabetes.

##### **CONCLUSION:**

In conclusion, type 1 diabetic patients in India had limited joint mobility which decreased further with longer duration of diabetes and they had high plantar pressure also.