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### Research progress of exercise therapy on type 1 diabetes mellitus

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**Objective** Type 1 diabetes mellitus (T1DM) is an autoimmune disease with a clear genetic basis, and early islet cell function appears clearly in recession or even lost. Insulin deficiency allows patients to rely on exogenous insulin for life, and long-term complications seriously affect quality of life and shorten life expectancy.

**Methods** This paper retrieves 1998-2018 years' literatures on "Sports" and "type 1 diabetes" through the PubMed database, and collate and analyze the progress of the research and induction of type 1 diabetes exercise therapy.

**Results** Numerous studies have shown that regular physical exercise can reduce the daily insulin dose in patients with T1DM. At the same time, they should master the contraindications in order to avoid the risks of movement. Currently a recommendation for all T1DM patients is engaging in at least 150 min/week of moderate to vigorous intensity aerobic exercise, sustainability or HIIT, combined with resistance training such as resistance machines and bands, as well as other stretching and balance exercises such as yoga, tai chi, 3 to 7 times per week which is depended on the physical condition of patients and exercise intensity, and resistance training can be performed on nonconsecutive days.

**Conclusions** So patients need to be clear how to safely increase their physical activity, and incorporate more independent physical activity into daily life.