Background: Physical activity has important health benefits for children with type 1 diabetes (T1DM), although many do not meet recommended guidelines for daily physical activity.

Aims: The primary aim of this research is to explore the feasibility of delivering an online intervention (STAK-D) to children aged 9-12 years with T1DM, and to assess the feasibility of further research to demonstrate its clinical and cost effectiveness.

Methods: Up to 50 children aged 9-12 years and their parents will be recruited from two paediatric diabetes clinics in the UK and randomised to intervention (STAK-D website plus activity monitor) or control (treatment as usual). We will assess feasibility of the research design by rate of recruitment, adherence, retention, data completion and adverse events. Qualitative interviews will be undertaken with a sub-sample of children and parents and healthcare professionals.

Results: Health outcomes and the feasibility of outcome measurement tools will be assessed at baseline, 8 weeks and 6 months. These include self-efficacy (CSAPPA), objective physical activity, self-reported physical activity (PAQ), fear of hypoglycaemia (CHFS; PHFS), glycaemic control (HbA1c), insulin dose, BMI, health-related quality of life (CHU9D; CHQ-PF28), health service use and patient-clinician communication.
Conclusions: The goal of this feasibility trial is to assess the delivery of STAK-D to promote physical activity among children with type 1 diabetes, and to assess the potential for further, definitive research to demonstrate its effectiveness. Results will provide information necessary to design a larger randomised controlled trial and maximise the recruitment rate, intervention delivery and trial retention.