



# Evaluation of Pulmonary Function Changes in Children with Type 1 Diabetes Mellitus in Upper Egypt

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## Abstract:

**Background:** Diabetes mellitus is a leading cause of morbidity and mortality among children across the world and is responsible for a growing proportion of global healthcare expenditure. However, limited data are available on lung dysfunction in children with diabetes. **Aim:** The aim of this study was to evaluate the pulmonary function changes in children with type 1 diabetes mellitus (T1DM). **Methods:** We studied 60 children with T1DM (mean age  $10.5 \pm 2.32$  years; disease duration  $2.45 \pm 0.6$  years, and 50 healthy control children (mean age  $9.9 \pm 2.5$  years). Spirometry was performed for all individuals to measure forced vital capacity (FVC), forced expiratory volume in 1 second (FEV1), FEV1/FVC ratio, and peak expiratory flow rate (PEFR). Glycemic control was assessed on the basis of glycated hemoglobin (HbA1c), with HbA1c values

## Keywords:

children Egypt pulmonary function spirometry type 1 diabetes mellitus

## Published In:

Therapeutic advances in endocrinology and metabolism , ,