



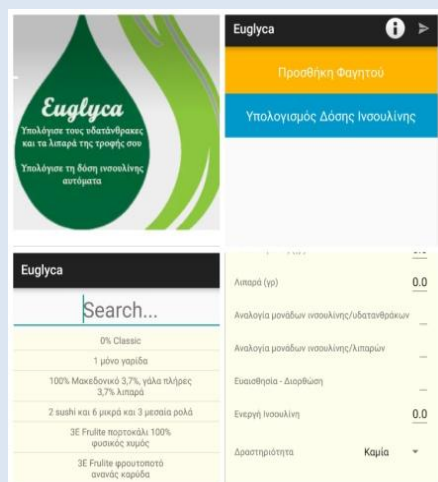
# THE EFFECT OF THE MOBILE APPLICATION "EUGLYCA" ON GLYCEMIC CONTROL OF CHILDREN AND ADOLESCENTS WITH DIABETES MELLITUS TYPE 1.

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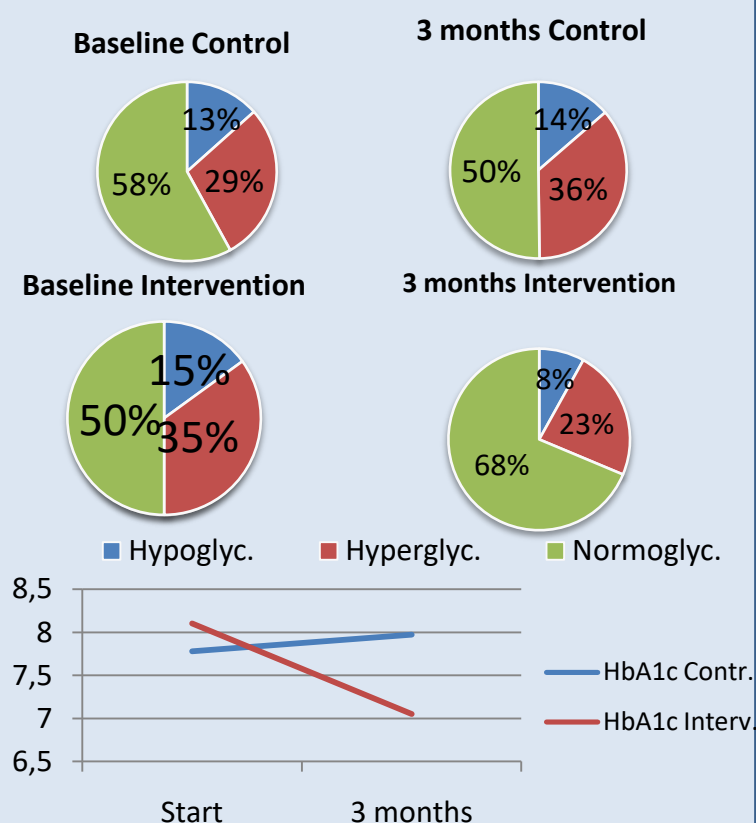
## Introduction

Euglyca is a mobile application we developed specifically for patients with diabetes. It calculates the amount of carbohydrates and lipids that a patient consumes during a meal and proposes the required bolus dose of insulin by taking into consideration eight more parameters (*pre-meal blood glucose, targeted blood glucose, insulin/carbs ratio, insulin/lipids ratio, insulin sensitivity, active insulin, physical activity, illness*).



## Results

- In the control group there was an elevation of hypoglycemia and hyperglycemia by 0.2% and 5.5% respectively, while normoglycemic episodes fall by 5%.
- In the target group, hypoglycemia and hyperglycemia dropped by 6,7% and 12% ( $P<0.05$ ) respectively, while normoglycemia increased by 18% ( $P<0.05$ ).
- In the target group HbA1c declined by 1% while in the control group there was a 0.25% increase ( $P<0.05$ ).



## Materials and Methods

36 children and adolescents with T1DM were included in the study.

- 18 of them used the application for three months
- 18 were matched controls.

Percentages of hypoglycemic, hyperglycemic, normoglycemic episodes and HbA1c were determined at the baseline and 3 months later.

## Conclusions

Preliminary studies show that mobile application “Euglyca” improves the glycemic control of children and adolescents with T1DM. However, further research is needed to draw final conclusions.

## References

Deiss D, Bolinder J, Riveline JP, et al. Improved glycemic control in poorly controlled patients with type 1 diabetes using real-time continuous glucose monitoring. *Diabetes Care* 2006;29:2730–2732.

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