Exercise and Type 1

How does exercise affect you if you have diabetes?

- If you've taken insulin for food in the last 2-3 hours, how exercise affects you depends on the type and duration of activity along with starting blood glucose and the rate of change during exercise
- See the diagrams below to see how each type of exercise affects your blood glucose levels and how to manage it

Figure 1

Exercise intensity and mode	After food, sustained, continuous, low stress hormone response	Mixed activity: Individual and team	Fasted overnight, burst, explosive, competitive anaerobic, high stress hormone response
			
Average glucose response to exercise	↓ ↘	→	↗ ↑
Exogenous insulin requirements around exercise	↓ ↘	→	↗ ↑
Carbohydrate intake requirements around exercise	↑ ↗	→	↘ ↓

Figure 2

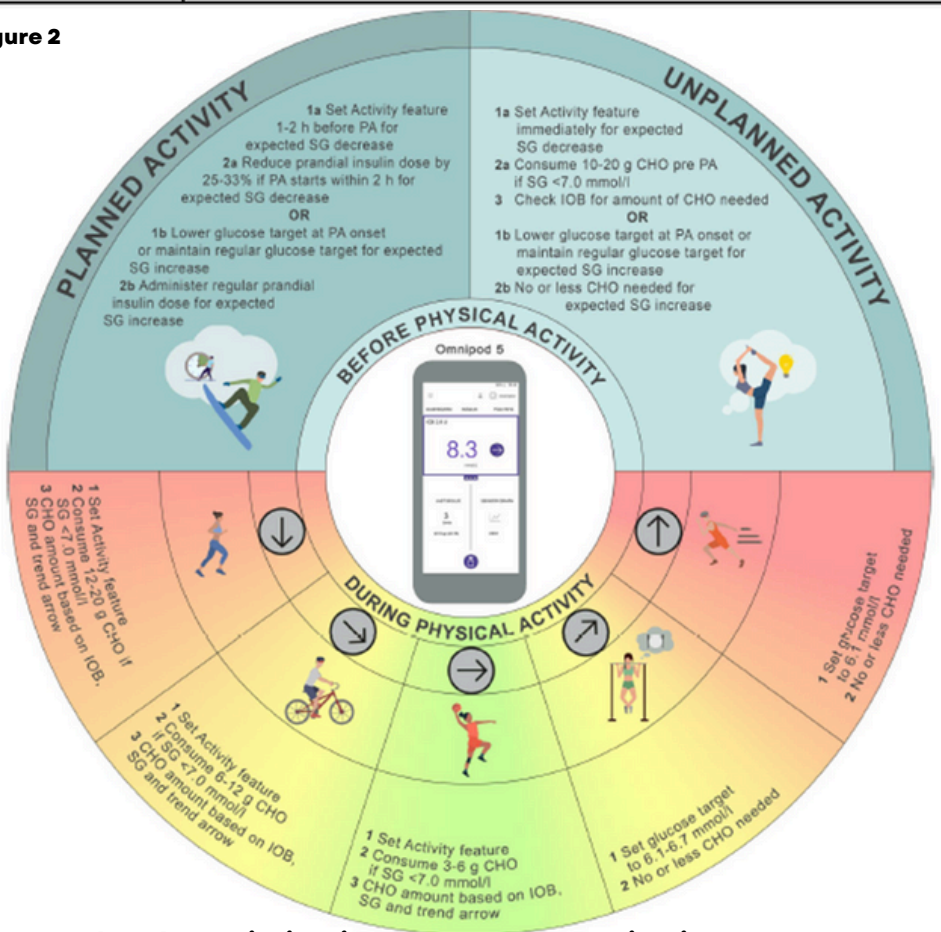

Figure 1: Adolfsson, P. et al (2022). ***Exercise in children and adolescents with diabetes.*** **ISPAD**

Figure 2: Moser, O. et sl (2025). ***The use of automated insulin delivery around physical activity and exercise in type 1 diabetes: a position statement of the European Association for the Study of Diabetes (EASD) and the International Society for Pediatric and Adolescent Diabetes (ISPAD).*** **Diabetologia. Feb; 68(2):255-280.**

My plan:

Before activity

During activity

After activity

	Before Exercise		During Exercise	After exercise	
Plan Execution	Activity Target	Meal insulin	Carbohydrate	Activity Target	Post exercise meal insulin
>15mmol/L using starting plan	Off	No reduction	<7mmol/L carbohydrates 3-20g per 30mins	Off	No reduction
Starting plan	On	-25%		Off	-25%
<5mmol/L using starting plan	On	-50%		On for 6 hours	-50%