TYPE 1 DIABETES & PHYSICAL ACTIVITY

RIO TINTO CHILDREN'S DIABETES CENTRE Global Centre of Excellence Perth Children's Hospital RioTinto JDRF UNE UNING KIDS

TYPE 1 DIABETES (T1D)

is one of the most common chronic childhood conditions. The exact cause of T1D is unknown and there are currently no known ways of preventing or curing this condition.

T1D is an autoimmune condition where the body's immune system attacks and destroys the cells that make insulin. Insulin is used by the body to breakdown foods and allow glucose to enter cells where it can be turned into energy.

This means people living with T1D need to administer insulin through insulin pumps or injections. People living with T1D must balance their insulin dose with their food intake and physical activity to optimise their blood glucose levels.

SIGNS & SYMPTOMS

HYPOGLYCAEMIA LOW BLOOD GLUCOSE (<3.9 mmol/L)

EFFECT OF EXERCISE ON BLOOD GLUCOSE LEVELS

AEROBIC ACTIVITIES

Aerobic activity examples:



When performing these activities without food, blood glucose can:





Hypoglycaemia should be treated quickly with players preferred quick acting glucose treatments (e.g. glucose tablets, gels or similar).

HYPERGLYCAEMIA HIGH BLOOD GLUCOSE (>10 mmol/L)



Hyperglycaemia is treated with insulin. Coaches should not initiate this but support the player where possible.

Immediately During exercise after exercise Hours after exercise

PUMPS, DEVICES & EQUIPMENT

Players may be wearing diabetes devices to administer insulin or monitor glucose levels during sport.

They will let you know any considerations that may be needed e.g. breaks to check or fix equipment, support to carry devices.

GLUCOSE MONITORING



CONTINUOUS



INTERMITTENT **<u>GLUCOSE MONITOR</u>**

BLOOD

INSULIN DELIVERY



MULTIPLE DAILY



INSULIN PUMP

GLUCOSE MONITORING

GLUCOSE MONITORING

INJECTIONS

SUMMARY GUIDE OF **PRECAUTIONARY MEASURES DURING SPORT**

BEFORE STARTING TO COACH SOMEONE LIVING WITH TYPE 1 DIABETES

- ✓ Talk to them about their Type 1 diabetes management plan (i.e. symptoms, preferred hypoglycaemia treatment) and what support they may need
- ✓ Details of emergency contacts

BEFORE TRAINING SESSIONS/GAMES

- ✓ Player must have access to their hypoglycaemia kit
- ✓ Players may supply coach/club with backup glucose for hypoglycaemia treatment (e.g. glucose tablets, glucose gels or player's preference)
- ✓ Details of emergency contacts
- \checkmark Allow player time to make any adjustments

DURING TRAINING SESSIONS/GAMES

- \checkmark Allow player time to make any adjustments or to have breaks if needed
- ✓ Player must have access to their hypoglycaemia kit
- ✓ Support player to:
- Monitor glucose levels regularly
- Regular fluid intake
- Treat low blood glucose immediately as per management plan

AFTER TRAINING **SESSIONS/GAMES**

- ✓ Support player to:
- Check post-exercise glucose levels
- Treat low blood glucose immediately as per management plan
- ✓ Do not let player leave unaccompanied if hypoglycaemic
- ✓ Check player has glucose for hypoglycaemia treatment for the trip home

To learn more about managing Type 1 diabetes during sport and exercise, scan the QR code.



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