Basic Physical Activity









Sample For Reference Only
Copyright Protected
Not For Use With Patients

ndr
nutrition & diet resources uk

Exercise is good for your child and should be encouraged. School sports, swimming and dancing are just a few of the activities that children enjoy. There is no exercise that a child with diabetes cannot do.

Children should be active for at least one hour a day for at least five days a week.

Physical activity and sport help your child to:

- feel good
- socialise with friends
- control their weight
- have improved circulation
- have a healthy heart
- have lowered blood fats
- have improved insulin sensitivity/effectiveness.

What is important during activity?

Your child uses more energy when they are active. Muscles use glucose as fuel. Insulin is needed to move glucose from the blood to the muscles.

Your child may need extra carbohydrate and/or reduce their insulin to stop their blood glucose dropping. However, if their blood glucose level is high before exercise, they need more insulin.

- If there is not enough insulin in the blood, glucose can't move into the muscles and blood glucose will rise.
- Aim to check your child's blood glucose before exercise.
  - Test for ketones if your child's blood glucose is more than 14mmol/l.
  - Always treat ketones and high blood glucose before starting any activity.
- Follow your diabetes team's advice if ketones are more than _____ mmol/l.

Sample For Reference Only
Copyright Protected
Not For Use With Patients

Adjusting food and insulin with activity

Children's activity varies. It can be a planned weekly sports club, or spontaneous and unpredictable play at school, a party or a club. The type of activity, its intensity and how long it lasts all affect your child's blood glucose. Everyone's reaction to exercise is different, so test your child's blood glucose before, during and after their activity to spot trends and understand how it affects them. Keeping a record of these tests will help you identify how to adjust your child's food and/or insulin for different activities.

How to adjust insulin and carbohydrate depends on many things — individual differences, the type of activity, how active your child is, when your child last ate or when they had their bolus.

Use your child's blood glucose and treatment diary to guide you on what works for them during their activities. Discuss the diary with your diabetes team and plan what action you are going to take.

Action plan pointers:

- Make sure your child carries extra carbohydrate snacks or drinks to help manage unplanned exercise or play.
- If a lot of time is spent standing around listening to instructions or waiting turn, your child's energy levels may be the same as normal and not need any adjustments. The excitement of taking part in events like dance shows or sports day affects everyone differently. You may find that your child's blood glucose rises or falls in these situations, so check their blood glucose level to monitor the effect of these events.
- During strenuous or long activities such as football training, a dance class or a round of golf, extra carbohydrate is usually needed. The amount needed varies, but 30g of carbohydrate per hour is a good starting point.
- If it's been two or more hours since your child's last meal they may need to take a small carbohydrate snack before the activity.
- Working muscles can make insulin work faster. If your child is going to exercise soon after a bolus, use an injection site that is as far as possible from the muscles they will be using for that exercise, for example when running or swimming inject into their tummy and avoid injecting into their leg.
- Reducing your child's meal bolus before planned activities can help prevent their blood glucose level becoming low. How much to reduce it depends on:
  - the length of the activity
  - when the bolus was taken
  - when the activity starts.

Ask your diabetes team for further advice.

Sample For Reference Only
Copyright Protected
Not For Use With Patients

After exercise

Blood glucose levels can fall for up to 24 hours after exercise. It is often a good idea to have an extra snack or carbohydrate drink straight after exercise, particularly strenuous exercise or activities that last more than 30 minutes. To prevent hypos, give your child an additional snack or carbohydrate drink when they finish.

Remember, checking blood glucose levels is the only way to know if what you have given is too much or too little.

Carbohydrate drinks and snacks for activities

Use the suggestions below to help meet your child's extra carbohydrate needs during activity.

- Isotonic drinks like Powerade and Lucozade Sport – approximately 6g of carbohydrate per 100ml.
- A tea biscuit – approximately 5g of carbohydrate.
- A Jaffa cake – approximately 8g of carbohydrate.
- A small banana – approximately 15g of carbohydrate.
- A cereal bar – approximately 20g of carbohydrate (always check the label as carbohydrate varies).

Tips for safe activities

- Make sure that your child and their coach/teacher always have fast-acting carbohydrate with them, for example Dextro Energy tablets, Glucotabs, Lucozade, GlucoGel.
- Tell the supervising person that your child has diabetes and make sure they can identify and treat hypos.
- Encourage and support your child and supervising adults to always respond to any signs of hypos straight away – do not to wait until the end of the activity.
- Have your child wear medical alert identification.
- Isotonic drinks cannot treat a hypo quickly – use your child's normal hypo treatment.
- Exercising in warm weather can increase the risk of hypos – closely monitor your child's blood glucose and think about making adjustments to avoid this.
- It is important that your child drinks plenty of water to stop them from becoming dehydrated during physical activity.

Sample For Reference Only
Copyright Protected
Not For Use With Patients

Supporting patient care nationwide

This information was produced for Nutrition and Diet Resources UK (NDR-UK) with the kind support of dietitians and related health and care professionals. At the time of publication the information contained within the resource was, to the best of our knowledge, correct and up-to-date. Always consult a suitably qualified dietitian and/or your GP on health problems. NDR-UK cannot be held responsible for how clients/patients interpret and use the information within this resource. Visit www.ndr-uk.org for more information and to contact the team on the development and evidence supporting this resource.

© NDR-UK Ref 9413, First published: 07/15
Next review: 07/18
To re-order visit www.ndr-uk.org and follow instructions

Part funded by the Scottish Government. NDR-UK – the UK's practitioner-led nutrition and diet resource provider.
Registered charity number SC041043, company number SC364677.