



Diabetes and swimming

This fact sheet covers how you are able to participate in swimming and other disciplines, if you are living with diabetes.

What is diabetes?

Having diabetes means blood glucose (also known as blood sugar) levels are too high. There are several types of diabetes. This fact sheet will focus on type 1, type 2 and gestational diabetes.

Type 1 diabetes is an autoimmune condition which means the body's own immune system attacks and destroys the cells in the pancreas which make insulin. We don't know the exact cause of this immune attack, but researchers are working hard to find out. Insulin is a hormone that moves sugar from your blood into your cells where it is used for energy. In type 2 diabetes, your pancreas either doesn't make enough insulin, or the insulin it does make can't work properly (you have insulin resistance).

People with type 1 diabetes have to treat their condition by replacing insulin via injections or an insulin pump. A healthy diet and lifestyle also help to reduce the risk of long term complications associated with diabetes such as heart disease, nerve damage, sight loss and kidney disease. People with type 2 diabetes may treat their condition with a healthy diet and lifestyle, but many also require medication that can include tablets, injectable medications and insulin.

Gestational diabetes is a type of diabetes that affects pregnant women, usually in their second or third trimester. It happens because the hormones produced during pregnancy can make it difficult for your body to use insulin properly, increasing the risk of insulin resistance. Sometimes during pregnancy the body isn't able to make

enough insulin to overcome this resistance. Gestational diabetes can be treated with diet and lifestyle, tablets or insulin.

What you need to know about diabetes and swimming

- Swimming is great for people living with diabetes. It can reduce your risk of cardiovascular disease, help manage blood sugar levels in type 2 and gestational diabetes, it increases insulin sensitivity and can contribute to weight loss or maintaining a healthy weight. Having diabetes shouldn't stop you from swimming, there are just a few things to keep in mind.

Testing blood glucose levels

- Many people with diabetes will be asked to test their blood sugar levels at home, especially if you treat your condition with insulin or certain other medications (like sulphonylureas) that can cause hypos (low blood sugar levels).
- When you're doing exercise, testing blood sugar levels can help you understand the effect it has.

Diabetes medications

- If you treat your diabetes with insulin or medications that can increase risk of hypos (like sulphonylureas), swimming can also cause blood sugar levels to be lower than normal. You should talk to your healthcare team before you start any new type of exercise, they can help you with concerns like hypos.
- Additionally insulin sensitivity can be increased for several hours (24-48 hours) after exercise, meaning people who treat their condition with insulin are at higher risk of hypos (low blood sugar levels) during this time. Insulin sensitivity is how well your body is using insulin to get your blood sugar levels down. People with high sensitivity need less insulin than those with low sensitivity.
- You may need to adjust the dose of your basal (long acting) or bolus (short acting) insulin when you swim. For example the closer to your swim your last meal or snack was, the more likely you will need to reduce your bolus (or meal time) insulin dose. These changes may be needed for pens or insulin pumps. This is very individual and your diabetes healthcare team can advise you on an individual plan.

Diabetes kit

- For people who use an insulin pump, manufacturers will be able to advise on how water resistant your particular model is. Your diabetes healthcare team can give individual advice as you may be able to disconnect for up to an hour at a time.
- Manufacturers will also have information on whether kit like continuous glucose monitors or flash glucose monitors are water resistant. Each model is different so it's best to check with the manufacturer of the monitor.

Hypo and hyperglycaemia

- The effect exercise has on your blood sugar levels is very individual but it can cause your levels to be lower or higher than normal depending on the type of exercise and how intense it was.
- You may not be able to spot the symptoms of a hypo when you are swimming or taking part in other types of exercise. This is because exerting yourself, and having a hypo can feel similar.
- Your diabetes healthcare team should talk to you about the

blood sugar levels to aim for before and after exercise to ensure you exercise safely.

Diabetes complications

- If you have a complication of diabetes it's always best to speak to your diabetes healthcare team before starting a new form of exercise.
- Check your feet daily, continuing to do this after swimming can help to prevent any problems.
- If you have retinopathy, get advice about whether you are safe to dive. This doesn't mean you can't go swimming. Retinopathy is a type of eye disease that people with diabetes are more at risk of getting. It happens when blood vessels supplying the retina become damaged.

Tips for swimming with diabetes

Do:

- speak to your diabetes healthcare team if swimming is a new type of exercise for you. If you treat your diabetes with insulin ask them about the best way to manage your insulin around exercise
- check your blood sugar levels if you normally test them, check at least half an hour before swimming and take action depending on your level. Treat hypos as usual, but you may also need an additional snack before you swim if your level is between 4-7mmol/l
- carry hypo treatments with you if you use insulin or medications that can increase risk of hypos (like sulphonylureas). Keep these poolside and inform the lifeguard that you have diabetes
- test your blood sugar during your swim if you normally test. It's helpful to see the effect swimming has on your blood sugar level. This information can help you and your diabetes healthcare team to work out the best plan for managing blood sugar during exercise
- check for any cuts or grazes after you swim that you could have from the side of the pool and make sure they heal properly. Seek help from your diabetes healthcare team if you have any concerns or you are not healing
- wear flip flops or similar footwear around the pool to avoid injuries and reduce the chance of things like verrucas
- carry your diabetes ID and make sure someone you're with or perhaps supervising the pool knows you have diabetes.

Don't:

- worry if you haven't been asked to regularly check your blood sugar levels, it might not be necessary for you. Go ahead and enjoy your swim, but speak to your diabetes healthcare team if you have any questions or concerns when starting swimming.

Avoid:

- swimming if you have had a severe hypo in the last 24 hours. You should also discuss a plan with your diabetes healthcare team about what to do if blood sugar levels are high. If your blood sugar levels are above 13mmol/l, you should test your blood or urine for ketones and may need to think more about the type of activity you are planning to do. You may be advised not to do any exercise in this case.

Remember:

- increased insulin sensitivity can last for several hours after exercise. So you will need to continue to test your blood sugar after you swim and especially before bed.

Specific tips for other disciplines with diabetes

Open water swimming:

- **Do:** think about the temperature of the water. Really cold water can make you more likely to have hypos and it might be harder to treat if you are out in open water.
- **Do:** wear appropriate footwear at all times before getting in the water. This will protect your feet from temperature and sharp objects.

If swimming abroad:

- **Do:** make sure you take a copy of your prescription and take extra medication and supplies than you would normally need, in case any get lost or stolen.
- **Do:** take a letter from your diabetes healthcare team with you.
- **Do:** test your blood sugar more often as changes in temperature can affect blood sugar levels.
- **Do:** ensure your insulin and diabetes kit are always stored at the appropriate temperature.

Additional advice

For more information about diabetes, please visit the following websites.

Diabetes UK:

diabetes.org.uk/guide-to-diabetes/managing-your-diabetes/exercise/swimming-diabetes

diabetes.org.uk/diabetes-the-basics

diabetes.org.uk/guide-to-diabetes/life-with-diabetes/travel

Run Sweet (advanced): runsweet.com/diabetes-and-sport/swimming/