AUSTRALIAN RESUSCITATION COUNCIL™

NEW ZEALAND Resuscitation Council WHAKAHAUORA AOTEAROA

DIABETES FACT SHEET FOR FIRST AIDERS

Diabetes is a disorder of regulation and use of sugar. It is due to a lack of insulin production or resistance of the body to insulin, one of the hormones that controls the use of glucose (a simple sugar used by the body to provide energy for various functions). Untreated, the absolute or relative lack of insulin will lead to a high blood glucose level. There are two main types of diabetes. 'Type 1 diabetes' is an auto-immune disease (the body attacks and destroys part of itself) that often develops in childhood, and requires lifelong treatment with insulin. 'Type 2 diabetes' is more commonly recognised in adulthood, and requires a treatment combination of diet, exercise, medication, and sometimes insulin. Less commonly, 'gestational diabetes' may develop in pregnancy, and diabetes can also occur as a consequence of another disease or as a side effect of medication.

Normally the body tightly controls its blood glucose level within a 'normal' range. Having diabetes interferes with this control system, and people living with diabetes need to manage their own blood glucose levels by monitoring what they eat, adjusting their insulin or medication doses, and frequently testing their own blood glucose levels.

The reasoning behind the practice of assuming hypoglycaemia for a diabetic unwell due to the diabetes is based on the CoSTR (consensus on science and treatment recommendations) published in 2018[1] which made the following recommendations:

- We recommend the use of oral glucose (swallowed) for individuals with suspected hypoglycemia who are conscious and able to swallow (strong recommendation, very low certainty of evidence).
- We suggest against buccal glucose administration compared with oral glucose administration for individuals with suspected hypoglycemia who are conscious and able to swallow (weak recommendation, very low certainty of evidence).
- If oral glucose (e.g. tablet) is not immediately available, we suggest a combined oral + buccal glucose (e.g. glucose gel) administration for individuals with suspected hypoglycemia who are conscious and able to swallow (weak recommendation, very low certainty of evidence).
- We suggest the use of sublingual glucose administration for suspected hypoglycaemia for children who may be uncooperative with the oral (swallowed) glucose administration route (weak recommendation, very low certainty of evidence).

The problem is that most first aiders do not have a glucometer and are not trained in the use of one.

If a diabetic is unwell due to the diabetes, there are 2 possibilities, hypoglycaemia or hyperglycaemia. If oral glucose or glucagon is given to an unwell diabetic person with:

- hypoglycaemia and able to swallow, they will improve.
- hyperglycaemia, they will not get much worse in the short term

If oral glucose or glucagon is withheld from an unwell diabetic person with:

- hypoglycaemia, they will continue to deteriorate rapidly and may not be in a position to swallow safely in a short time
- hyperglycaemia, they will continue to deteriorate slowly till IV rehydration and insulin administration.

Thus there is no short term problems with giving oral glucose or glucagon to a person with diabetic emergency, but major problems if glucose or glucagon is withheld from some persons with a diabetic emergency. Hence ANZCOR recommends that first aiders treat an unwell person with diabetes for hypoglaemia.

Reference:

1. Borra V, Carlson JN, De Buck E, Djärv T, Singletary EM, Zideman D, Bendall J, Berry DC, Cassan P, Chang WT, Charlton NP, Hood NA, Meyran D, Woodin JA, Swain J. Glucose administration routes for first aid in case of symptomatic hypoglycemia. Consensus on Science and Treatment Recommendations [Internet] Brussels, Belgium: International Liaison Committee on Resuscitation (ILCOR) First Aid Task Force, 2018 Aug 27. Available from: http://ilcor.org