

PERIOPERATIVE MANAGEMENT OF CO-MORBIDITIES

INSULIN ADMINISTRATION DURING & AFTER ELECTIVE GYNAECOLOGICAL SURGERY FOR WOMEN WITH TYPE 1 & TYPE 2 DIABETES

1. Book the woman **first** on the morning theatre list on any normal working day. Inform the theatre staff of the woman's diabetes, type & management.
2. If a day case, obtain authorisation from the Consultant Anaesthetist.
3. Notify the anaesthetist of the woman's:
 - type of diabetes
 - usual diabetes medication. (Insulin +/- oral hypoglycaemic agents)
4. On the evening prior to surgery:
 - Obtain blood glucose level (BGL) pre dinner & 2 hours post prandial.
 - Administer usual pre dinner dose of (short acting) insulin e.g. Actrapid®
 - Reduce the night time insulin dose by 50%. This is usually insulin detemir (Levemir®) or insulin glargine (Lantus®) and less commonly humanised isophane insulin(Protophane® or Humulin NPH ®).
5. On the morning of surgery:
 - Review the fasting blood glucose level
 - omit the pre breakfast dose of subcutaneous insulin OR oral hypoglycaemic agent (OHA)

Type 2 diabetes, if all BGL's are below 8mmol/L insulin may not be needed whilst fasting and oral hypoglycaemic agents should be recommenced with the first meal.

Type 1 diabetes, once fasting, women require IV access. (The preferred option is that the evening RMO establishes the IV, to avoid surgery delays in am.)

- If the fasting BGL > 8, on the morning of surgery notify the Anaesthetist as they may consider peri-operative insulin depending on the type of surgery.
- Commence an IV infusion of 10% glucose at 100mL/ hour via an infusion pump at approximately 0800 (The IV glucose rate is not altered unless ordered).
- Using a 50mL syringe pump, commence a solution of 50 units of a short-acting insulin in 50mL of Sodium Chloride 0.9% (i.e. 1 unit/mL). Titrate the insulin dosage to the BGL as shown in the tables overleaf.

Note: Alternative to Sodium Chloride 0.9%: 50units Actrapid® in 500mL Haemaccel® (1unit / 10mL)

Women who manage diabetes with their own insulin pumps (CSII – Continuous Subcutaneous Insulin Infusion) should have an individual plan discussed and documented in conjunction with the physician.

PRE AND PERI OPERATIVE INSULIN GUIDELINES

Blood Glucose Level (mmol/L)	Rate of Insulin Infusion - NS	Measure BGL in:	Rate of Insulin Infusion- Haemacell
Less than 5	Withhold insulin OR decrease by 50% if in progress	One hour	Withhold insulin decrease by 50% if in progress
5 to 8	1mL/ hour (i.e.1unit/hour)	Two hours OR post op four hours	10mL/ hour (i.e.1unit/ hour)
Over 8	2mL/ hour (i.e. 2units/hour)	One hour	20mL/ hour (i.e. 2units/hour)
Over 15	Bolus 2units Call anaesthetist 2mL/hour	One hour	
Over 20	Call anaesthetist for instructions	One hour	

POST OPERATIVE MANAGEMENT

Consult the Physician on call if there are any problems.

TYPE 2 DIABETES

Once diet is resumed, if all BGL's are below 8mmol/L monitor BGL's fasting and two hours post prandial (4 point profile).

Oral hypoglycaemic agents should be recommenced with the first meal.

TYPE 1 DIABETES

The woman should recommence her subcutaneous insulin therapy with the first meal (not snack) as ordered, similar to her pre operative doses. In addition, both the insulin and glucose infusions are ceased at this time. (**Never cease IV insulin without commencing subcutaneous insulin**).

The woman's knowledge of self insulin adjustment should be assessed, and if required education arranged.

Type 1 and Type 2 Diabetes. A summary letter is sent to the Physician or Clinic previously caring for the woman or, a referral is made to the Diabetes or Medical Clinic at the woman's nearest hospital with a diabetes clinic.

REFERENCES (STANDARDS)	
National Standards – 1 Clinical Care is Guided by Current Best Practice Legislation - Nil Related Policies - Nil Other related documents – Nil	
RESPONSIBILITY	
Policy Sponsor	Diabetes Service
Initial Endorsement	October 2008
Last Reviewed	August 2015
Last Amended	
Review date	August 2018

**Do not keep printed versions of guidelines as currency of information cannot be guaranteed.
Access the current version from the WNHS website.**