

Guideline for perioperative adjustment of non-insulin hypoglycaemic medication:

Tablets / GLP-1 analogues	Day prior to admission	Day of surgery		If variable rate IV insulin infusion (VRIII) is being used
		Patient for am surgery	Patient for pm surgery	
<i>Drugs that require omission when fasting owing to risk of hypoglycaemia</i>				
Meglitinides (eg repaglinide, nateglinide)	Take as normal	Omit morning dose if nil by mouth	Give morning dose if eating	Stop once VRIII commenced, do not recommence until eating and drinking normally
Sulphonylureas (eg gliclazide, glimepiride, glibenclamide)		Omit morning dose (whether taking once or twice a day)	Omit on day of surgery	Stop once VRIII commenced, do not recommence until eating & drinking normally. Be prepared to withhold or reduce sulphonylureas if the food intake is likely to be reduced
<i>Drugs that require omission when fasting owing to risk of ketoacidosis</i>				
SGLT2 inhibitors (eg dapagliflozin, canagliflozin, empagliflozin)	Take as normal	Omit on day of surgery	Omit on day of surgery	Stop once VRIII commenced, & do not recommence until eating and drinking normally
<i>Drugs that may be continued when fasting</i>				
Acarbose	Take as normal	Omit morning dose if nil by mouth	Give morning dose if eating	Stop once VRIII commenced, do not recommence until eating and drinking normally
DPP4 inhibitors (eg sitagliptin, alogliptin, linagliptin, saxagliptin)		Take as normal	Take as normal	
Metformin** (eGFR > 60ml/min & procedure not requiring use of contrast media - see below)**		If taken once or twice a day (OM & teatime) - take as normal If taken three times a day (omit lunchtime dose)	If taken once or twice a day (OM & teatime) - take as normal If taken three times a day (omit lunchtime dose)	
Pioglitazone		Take as normal	Take as normal	
GLP-1 analogues (eg exenatide, lixisenatide, liraglutide, dulaglutide)		Take as normal	Take as normal	Take as normal

**If contrast medium is to be used & eGFR < 60ml/min/1.73m², metformin should be omitted on the day of the procedure & for the following 48 hours, or until U&E check is satisfactory post surgery

Guideline for perioperative adjustment of insulin:

Insulins	Day prior to admission	Day of surgery		If VRIII is being used*
		Patient for am surgery	Patient for pm surgery	
Once daily intermediate (eg Pork Isophane insulin, Humulin I, Insulatard or Insuman basal) / long acting (evening) (eg insulin glargine 100units/ml (Lantus & Abasaglar), Levemir, Toujeo, Tresiba 100units & 200units/ml)	80% of usual dose	Check blood glucose on admission Leave the evening meal dose unchanged if eating & drinking again by then	Check blood glucose on admission Leave the evening meal dose unchanged if eating & drinking again by then	Continue at 80% of the usual dose while on VRIII
Once daily intermediate / long acting (morning) (see insulins above)	80% of usual dose	80% of usual dose Check blood glucose on admission	80% of usual dose Check blood glucose on admission	Continue at 80% of the usual dose while on VRIII
Twice daily intermediate / long acting insulin (morning and evening) (see insulins above)	80% of usual morning & evening dose***	80% of usual morning dose. Leave the evening dose unchanged if eating and drinking again by then	80% of usual morning dose. Leave the evening dose unchanged if eating and drinking again by then	Continue at 80% of the usual dose while on VRIII***
Twice daily biphasic insulin (eg Novomix 30, Humulin M3, Humalog Mix 25, Humalog Mix 50, Insuman Comb 25, Insuman Comb 50)	No dose change	50% of usual morning dose. Check blood glucose on admission. Leave the evening meal dose unchanged if eating & drinking again by then	50% of usual morning dose. Check blood glucose on admission. Leave the evening meal dose unchanged if eating & drinking again by then	Stop until eating and drinking normally
Three times a day biphasic insulin (eg Novomix 30, Humulin M3, Humalog Mix 25, Humalog Mix 50, Insuman Comb 25, Insuman Comb 50)	No dose change	50% of usual morning dose Check blood glucose on admission Omit lunchtime dose. Leave the evening meal dose unchanged if eating & drinking again by then	Take usual morning insulin dose(s). Omit lunchtime dose. Check blood glucose on admission. Leave the evening dose unchanged if eating & drinking again by then	Stop until eating and drinking normally
Twice daily - separate injections of rapid / short acting and intermediate acting insulin (eg Pork Isophane insulin, Humulin I, Insulatard, Insuman basal)	No dose change	Give 80% of usual dose of intermediate acting insulin only in the morning*** Check blood glucose on admission Leave evening meal dose unchanged if eating and drinking again by then	Give 80% of usual dose of intermediate acting insulin only in the morning*** Check blood glucose on admission Leave evening meal dose unchanged if eating and drinking again by then	Continue intermediate acting insulin at 80% of the usual dose while on VRIII***
Basal bolus regimen 4 or 5 injections daily (eg 3 meal time injections of rapid / short acting insulin & once or twice daily intermediate / long acting insulin)	No dose change	Basal bolus regimens: Omit the morning & lunchtime rapid / short acting insulins. If intermediate / long acting insulin injected in the morning give 80% of usual dose. Check blood glucose on admission Leave evening doses unchanged if eating and drinking again by then	Take usual morning rapid /short acting insulin dose & omit lunchtime dose. If intermediate / long acting insulin injected in the morning give 80% of usual dose. Check blood glucose on admission Leave evening doses unchanged if eating and drinking again by then	Continue intermediate / long acting insulin at 80% of the usual dose while on VRIII***
Continuous subcutaneous insulin infusion pump (CSII) / 'Insulin Pump' e.g. Medtronic, Roche, Animas, Omnipod. Advice must be sought from the diabetes team for patients on a CSII pump	No dose change	No change in basal rate In certain circumstances, patients may reduce rate to temporary basal rate of 80%***	No change in basal rate In certain circumstances, patients may reduce rate to temporary basal rate of 80%***	No change in basal rate

* If the patient requires an ongoing VRIII then the intermediate / long acting background insulin should be continued but at 80% of the usual dose the patient usually takes when they are well. Normal insulin doses should be recommenced when the patient is eating and drinking normally. Warn the patient that their blood glucose control may be erratic for a few days after the procedure ***adapted from JBDS surgical guidelines. The dosage reduction recommended is felt to be more practical and safer for patients and use in pre-assessment clinic.