

Surname.....
 First name.....
 Date of birth.....
 Hospital number.....
Affix patient label

Adult Insulin Prescription Chart

Ward.....

Consultant.....

Tick if the patient is also on an oral anti-diabetes medication (prescribed on the main chart)	
Chart Number	of

IMPORTANT NOTES

- Prescribe insulin by BRAND- use the full name; always prescribe in UNITS. Never abbreviate.
- **Cross-reference insulin on the inpatient drug chart by indicating: 'insulin as per chart'**
- Indicate the device the patient usually uses e.g. disposable pen, vial, pen cartridge.
- Humalog, Novorapid and analogue mixes (Humalog mix 25 etc) should be given WITH MEALS & NOT given at bedtime. Lantus and Levemir should be given at the same time of day irrespective of meals.
- Confirm any single dose of intermediate/long acting insulin over 50 units and any dose over 25 units of short acting insulin and document.
- Some patients may be able to self administer insulin as an inpatient. Refer to the Medicines Management Policy and Diabetes intranet page for more information.
- Never discharge patients on insulin until you are sure that the patient/carer understands the regimen, type of insulin and injection device.
- On discharge ensure all equipment is provided together with an insulin passport and information leaflet. Communicate changes to the patient/carer/community nurse.

HYPOGLYCAEMIA (in adults with diabetes who have a blood glucose of <4mmol/l)

<u>MILD</u>	<u>MODERATE</u>	<u>SEVERE</u>
Patient conscious and able to swallow	Patient conscious but confused or aggressive but able to swallow	Patient is unconscious fitting or aggressive
Give 15 - 20g of quick acting carbohydrate eg 100mls of lucozade original Test blood glucose after 10 minutes, repeat three times if necessary If still < 4 mmol/l, give 150 – 200 ml IV glucose 10% over 15 minutes.	Give 15-20g of quick acting carbohydrate eg 100mls of lucozade original Test blood glucose after 10minutes, repeat three times if necessary If not cooperative, 1mg glucagon IM (once only) If still < 4 mmol/l, give 150 – 200 ml IV glucose 10% over 15 minutes	Check ABC STOP any IV insulin FAST BLEEP DOCTOR DO NOT give anything by mouth Give either: IV 150 – 200ml 10% glucose over 15 mins 1mg glucagon IM (once only) If remains unconscious TREAT AGAIN - REPEAT up to three times if needed Continue to test glucose every 10 minutes until > 4 mmol/l

Once blood glucose > 4 mmol/l give long acting carbohydrate e.g. two biscuits, sandwich/one slice of toast
 Next meal if due must contain carbohydrate

Give double amount of carbohydrate if glucagon was used to treat hypoglycaemia

IF NIL BY MOUTH (e.g perioperative or parenteral feeding):

NG/PEG fed, give 100mls Fortijuce, via feed tube, flush with water and restart Enteral feed.

If no NG/PEG, give 150 – 200 ml IV glucose 10% over 15 minutes. Then consider 10% glucose at 100 ml/hr

Do not omit subsequent doses of insulin but consider dose reduction and review dose of sulphonylureas e.g. Gliclazide. Monitor blood glucose every four hours for 24-48 hours.
 Refer to diabetes specialist nurse for further advice.

**Rapid acting
(usually tds, meal times)**

Humalog (insulin lispro)
Novorapid
Apidra (Glulisine)

**SHORT ACTING
Soluble (usually prn)**

Actrapid
Humulin S

**BIPHASIC
(usually bd)**

Humalog Mix 50 or Mix 25
Humulin M3
Novomix 30

**INTERMEDIATE ACTING
Isophane/Zinc
(usually od/bd)**

Humulin I
Insulatard

**LONG ACTING
(usually od/bd)**

Lantus (Glargine)
Levemir (Detemir)

DOCTORS

Enter all details and sign. Changes to doses must be recorded by deleting 'Dose 1' and entering the new dose in the 'Change 1' column. Further changes should be recorded in 'Change 2' column. All changes must be dated and initialed.

When prescribing insulin, cross reference on the in patient prescription chart eg insulin as per chart.

Prescription for Regular Subcutaneous Insulin – valid for 14 days only

Humalog, Novorapid and analogue mixes (Humalog mix 25 etc) should be given WITH MEALS & are NOT given at bedtime. Lantus and Levemir should be given at the same time of day irrespective of meals.

Time	Date	Insulin Name	Device Vial/Pen Cartridge	Dose 1	Dr's signature stamp and bleep number	Change 1	Initials and date	Change 2	Initials and date	Additional instructions
										Pharmacy
BREAKFAST				units		units		units		
				units		units		units		
LUNCH				units		units		units		
				units		units		units		
EVENING MEAL				units		units		units		
				units		units		units		
BEDTIME				units		units		units		
				units		units		units		

As Required Insulin

Insulin Name				Date												
units	Start date	Route	Max. freq	Time												
Signature/Stamp		Additional Instructions		Dose	units	units	units	units	units	units	units	units	units	units	units	units
		Pharmacy		Given by												

Once Only Prescriptions

Date	Time	Insulin Name	Dose	Route	Doctor's signature/stamp & bleep	Given by			Pharmacy
						Date	Time	Initials	
			units	SC					
			units	SC					
			units	SC					

When using insulin

- Always use an insulin syringe. Never use an iv syringe to administer insulin.
- Do not re-sheath or remove a pen injection device needle. Use a disposable syringe and a 10 ml vial of insulin to reduce the risk of a needle stick injury if patient is unable to use pen. Obtain advice from Diabetes Centre if necessary.
- Insulin should not be withdrawn from a pen cartridge.

NURSES

Sign for drug administration in line with the prescription. Dates should go consecutively across the page. State the dose given by the number only eg 11. Never write U. If a dose is not given enter code as noted below:

- a)** Absent **b)** On leave **c)** Not available (obtain ASAP or see substitution list on Staffnet) **d)** refused
e) Self administered **f)** Unable to (inform Dr) **g)** vomiting **h)** withheld (enter reason in Kardex)

Nurse Administration Record

		Date	Date	Date	Date	Date	Date	Date	Date	Date	Date	Date	Date	Date
FAST	Time													
	Dose													
	Initials													
BREAK	Time													
	Dose													
	Initials													
MEAL	Time													
	Dose													
	Initials													
LUNCH	Time													
	Dose													
	Initials													
MEAL	Time													
	Dose													
	Initials													
EVENING	Time													
	Dose													
	Initials													
BED TIME	Time													
	Dose													
	Initials													

Hypoglycaemia Management

Glucagon				Date							
Date	Dose	Freq (max 1mg in 24hrs)	Route	Time							
	1mg	prn	i/m								
Signature/Stamp			Pharm	Given by							

Storing Insulin

- Insulins in use should be stored in the patient's locker with the date of opening stated.
- Unopened insulins should be stored in the fridge.
- All pens and devices should be clearly labeled with an addressograph.
- Remove any unwanted insulin from the fridge regularly. Always transfer with the patient.

Variable rate intravenous insulin infusion prescription (VRIII)

To be used for fasted patients with diabetes or in the peri-operative period with anticipated long starvation period (2 or more missed meals) irrespective of whether treated with diet, tablets or insulin
This prescription is not for patients with Diabetes ketoacidosis (DKA) or Hyperglycaemic Hyperosmolar states (HHS, previously known as HONK). There are separate guidelines for these conditions

Use an insulin syringe to draw up 50 units of Actrapid. Add to 49.5ml 0.9% sodium chloride in 50ml syringe (resulting in 1unit/ml)

Continue Lantus or Levemir prescriptions alongside VRIII

Infuse insulin via syringe driver according to the table below

If blood glucose out of range for >2 consecutive measurements, consider prescribing alternative rate:

Blood glucose (mmol/l)	Insulin infusion rate (units /hour)	1 st alternative rate	2 nd alternative rate
< 4.0	0 and refer to hypoglycaemia guideline		
4.0 – 5.9	1		
6 – 7.9	2		
8 – 9.9	3		
10 – 14.9	4		
≥ 15.0	5 and inform doctor		
Dr sig, stamp and bleep:			
Date:			

Date:																				
Time																				
Blood glucose level																				
Infusion rate (ml/hr)																				
Initials																				
Date:																				
Time																				
Blood glucose level																				
Infusion rate (ml/hr)																				
Initials																				

Prepare fresh solution every 24 hours

Intravenous fluid recommendations

Rate of infusion must be adjusted according to clinical requirements; Infuse via volumetric pump

* When **blood glucose <15mmol/l**, infuse 1000ml of 5% glucose with 20mmol potassium chloride at 1ml/kg/hour (maximum 100ml/hour)

* When **blood glucose ≥15mmol/l**, infuse 1000ml of 0.9% sodium chloride with 20mmol potassium chloride at 1ml/kg/hour (maximum 100ml/hour)

Additional hydration fluids may be required alongside above

Patients receiving parenteral feeds - Refer to enteral feeding guidelines on the intranet

Patients with CKD stage 5/eGFR<15ml/min/receiving dialysis

- Discuss IV fluid regimen with Renal Consultant or SpR and give fluids with potassium only if serum potassium <3.5mmol/l.
- Check electrolytes 4 hourly.
- In anuric dialysis dependent patients, omit IV fluids and give insulin infusion only (unless Renal Consultant states otherwise)

Monitoring blood glucose

- Check blood glucose every hour then 2 hourly if stable, aiming for blood glucose of 6-10mmol/l (4-12mmol/l is acceptable).
- If blood glucose out of range for > 2 consecutive measurements consider adjusting hourly rate.
- Check serum electrolytes every 12 hours.

Setting up:

The insulin administration set **MUST** have anti-reflux and anti-syphon valves

Connect IV fluids to the Y connector of the insulin administration set

Do not give other IV drugs through the peripheral cannula without discussing with pharmacist first

Transporting Patients: When transporting patients, continue both insulin and IV fluid infusion pumps. If either pump fails, stop both infusions temporarily, but restart as a matter of urgency

Discontinuation of IV insulin infusion once patient is eating & drinking - If the patient is managed on:

- diet alone: stop any time and continue to monitor blood glucose pre-meal & before bed
- tablets alone: give usual diabetes tablets when due & stop infusions ½ hour later
- twice daily insulin, give usual dose of insulin at the usual time, stop infusions ½ hour later
- four or five times daily insulin, give usual dose of insulin at that mealtime, stop infusions ½ hour later

For advice, contact the Diabetes team on Extension 85889 (Worthing) or 3740 (St. Richards)