

A BRIEF GUIDE TO DRUGS FOR THE SYRINGE DRIVER

There is **ONE** indication for using a syringe driver and that is the patient's inability to take oral medication. The commonest reasons for this are severe dysphagia, vomiting or reduced conscious level.

Inadequate pain control indicates a need for pain management review, if necessary seeking additional help or advice.

Diazepam, Chlorpromazine and Prochlorperazine are too irritant to be given subcutaneously.

Drug	Dose (sc)	Comments
FOR PAIN		
Diamorphine	If NO oral morphine 10-20mg/24 hours. Otherwise, total oral morphine given in mg over last 24 hours and divide by 3.	Prescribe 1/6 of total 24 hour dose prn for breakthrough pain. Increase 24 hour dose by 1/3 if pain persists.
Hyoscine butyl bromide (buscopan)	60-120mg/24 hours.	Antispasmodic; for bowel or ureteric colic.
FOR VOMITING		
Cyclizine ¹ ¹ Dilute diamorphine as much as possible BEFORE Cyclizine is added, to avoid concentration dependant crystallisation.	75-150mg/24 hours. Stable with Diamorphine concentrations up to 20mg/ml (approximates to 200mg Diamorphine/24 hours). May precipitate at higher concentrations.	For vomiting of intestinal obstruction, hepatomegaly or raised intracranial pressure. May cause drowsiness and anticholinergic side effects.
Haloperidol	2.5-10mg/24 hours.	For vomiting due to opiates (<i>rarely</i> need more than 3mg/24 hours), uraemia, hypercalcaemia and intestinal obstruction (starting dose 5mg/24 hours). Non-sedating. Dyskinetic side effects rare at these doses.
Metoclopramide	30-60mg/24 hours.	For vomiting secondary to gastric stasis or gastric compression by ascites, hepatomegaly or intra-abdominal tumour mass.
Levomopromazine (Methotrimeprazine)	6.25-100mg/24 hours.	Second-line antiemetic for vomiting of intestinal obstruction or in a very agitated patient, or where other antiemetics have failed. Very sedating at higher doses.
FOR TERMINAL AGITATION/CONFUSION after excluding untreated pain, full bladder or full rectum		
Haloperidol	10-30mg/24 hours. Give 5-10mg hourly s/c and set up 10-30mg/24 hours according to response.	Antipsychotic. For confusion with evidence of hallucinations. Risk of dyskinetic side effects above 10mg/24 hours - avoid higher doses if possible.
Midazolam	20-100mg/24 hours. Give 5-10mg s/c stat while setting up infusion.	Water soluble benzodiazepine. For agitation where there is no evidence of hallucinations. Also used as an anticonvulsant.
Hyoscine hydrobromide (Scopolamine)	1.6-2.4mg/24 hours.	Sedative. Antispasmodic. Antiemetic.
FOR EXCESS RESPIRATORY SECRETIONS		
Hyoscine hydrobromide (Scopolamine)	1.6-2.4mg/24 hours.	Reduces secretions (give early to prevent build up of secretions). Paradoxical agitation particularly in the elderly.
Glycopyrrrolate	0.6-1.2mg/24 hours.	0.2mg stat dose. 2.5 times potency of hyoscine. No central side effects.

- A syringe driver takes 3-4 hours to establish a steady state drug level in plasma. If the patient is in pain, vomiting or very agitated give a stat s/c injection of appropriate medication while setting the syringe driver up.
- Water is the preferred diluent.
- The subcutaneous administration of these drugs in various combinations is common practice in palliative care.
- However, prescribers should be aware that this use falls outside the product licence.