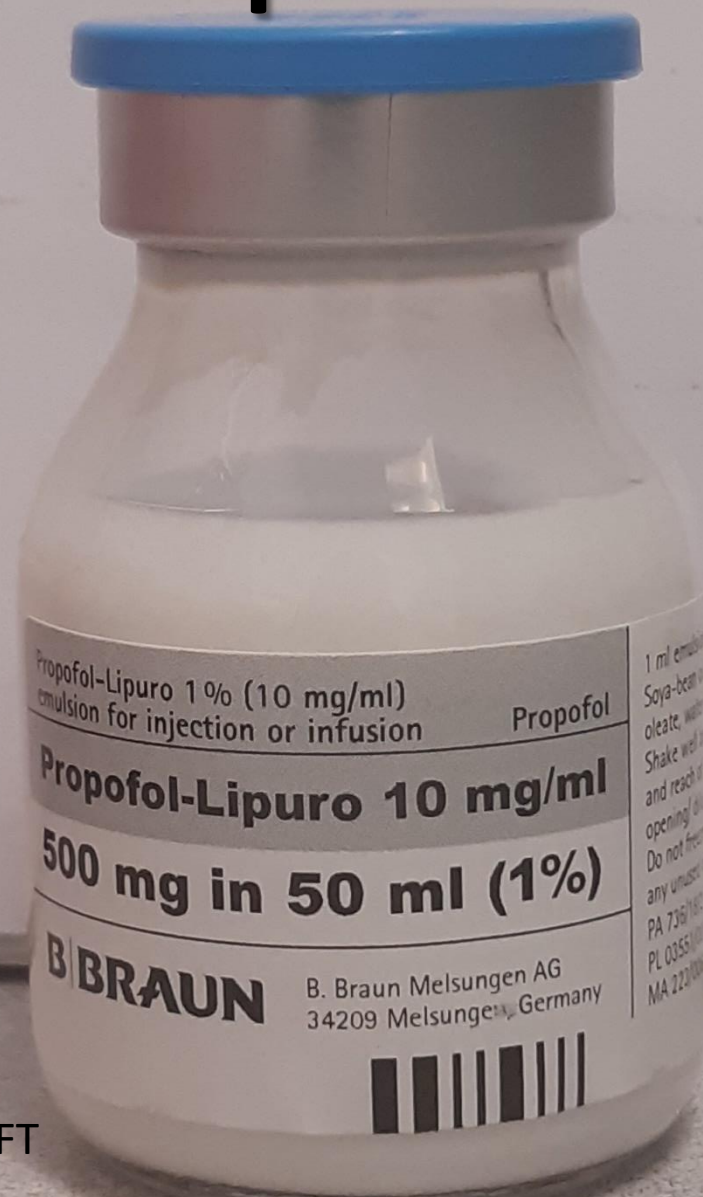


Propofol



What is it?

- Propofol is a sedative agent, that in higher doses acts as an anaesthetic.
- It works on receptors in the brain called GABA receptors.
- It's dissolved in a white lipid (fat) solution that contains calories. The same fat used in TPN.
- In the ICU we use a 1% solution, 500mg/50mls.
- The usual dose ranges from 0-20ml/hr. depending on what the patient requires. We may give boluses of 1-2ml. The doctors can give larger doses to sedate patients for intubation or other procedures.

Why do we use it?

- Propofol is a good sedative agent,
- When we change the rate or give a bolus, it works quickly. (You will see the full effect of a rate change in about 20 mins).
- It does not tend to accumulate in the blood even if liver and kidney not working. It does not have active metabolites so patients should wake within an hour or so of stopping it.
- This makes it the most common sedative drug used in the ICU.
- It is an anticonvulsant and this may be helpful

How do we give it?

- We tend to give it via a central line or peripheral cannula as an infusion at between 5ml and usually 25mls/hour.
- We can give a bolus of 1 to 2 ml of the drug to control agitation, this may decrease blood pressure or depress breathing. *If we give a bolus IT IS VERY IMPORTANT we record this on the observation chart.*
- We also commonly give a small bolus when first increasing the rate of infusion.
- If the patient becomes unexpectedly agitated it's important to check they are getting the drug- check each connection and the cannula site.
- We normally use 50ml bottles via an infusion pump but it can be given in a 50ml syringe via a syringe pump.
- The doctors may give the drug as a bolus via a 10 or 20ml syringe, for intubation, around 3-5ml of the drug is commonly given.

What are the problems with it?

- It's an anaesthetic so too much will stop the patient breathing and cause the blood pressure to drop a lot- it killed Michael Jackson!
- When patients are recovering the residual effects of the drug may contribute to delirium.
- Because it's short acting, if we allow the bottle to run out or we don't connect it correctly the patient may start to wake up or become very agitated quickly before we can work out what's going on or be ready to restart the infusion
- Some patients often young or alcoholic, may need large doses. If over 4mg/kg/hr, you can get called 'Propofol infusion syndrome' where muscles are broken down to release toxins into the blood, kidneys and other organs then fail. It's rare but if patients are difficult to sedate, we may add midazolam.

What are the problems with it?

- A few patients are allergic to the drug, care if have nut or milk or soya allergies
- The lipid may accumulate, and cause high fat levels in the blood- we measure these in routine bloods.
- The lipid contains calories and we have to account for these in calculating the rate of feed. 1ml of propofol contains 1 kcal, therefore if running at 20mls/hr plus boluses~ 550 kcals- SAME as big MAC
- Sometimes the anaesthetists use 2% so when patients come from theatre we should check that the syringe contains 1% Propofol.

What should we look out for?

- Check level of sedation
- For bolus doses check breathing and blood pressure observations
- Check that when the rate changes we are adjusting the rates of feed
- The medical staff need to check the bloods for lipid levels and abnormal liver function or CK levels
- Urine may turn a GREEN colour