


# Intravenous therapy and medication

ELCT Health Department  
Quality Assurance 2007



# Intravenous therapy and medication

- the procedure is absolutely sterile, everything should be handled remaining sterility as strictly as possible
- use as small cannula as possible e.g. G 20 is appropriate for adults
- clean the site first by 60 - 70 % alcohol
- the iv. infusion after preparing it ( bag or bottle ) should not hang more than 24 hrs
- the sterile dressing must be changed daily or whenever unclean and the site should be cleaned by 2 % savlon or 60-70 % alcohol
- resiting the peripheric cannula is recommended after 48 – 72 hours or when signs of infection

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- **fix the iv. cannula** well at the first time so you don't have to stick again
  - if iv. cannula is blocked **you can only aspirate** it, but don't never flush it !!!!!!!!!!!!!!!!!!!!!!!
  - insert to less used hand, try to avoid the veins in the legs because of high trombosis risk
  - removal of intravenous device or cannula is also an aseptic procedure
  - main reasons to start **an iv.line**:
    - » to give nutrients for the patient, when not possible or enough to use enteral way and NGT
    - » maintain the fluid balance in the body
    - » to maintain electrolyte balance
    - » emergencies: shock, bleeding, severe burns, trauma cases, vomiting, diarrhea, cardiac problems
    - » adminisration of medicines
    - » administration of anaesthetic agents

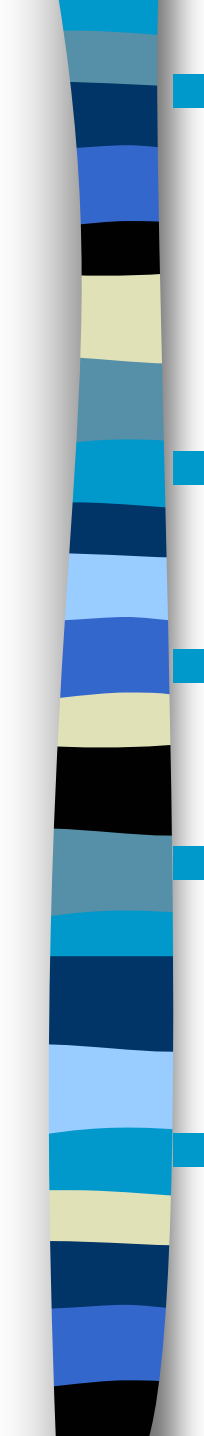


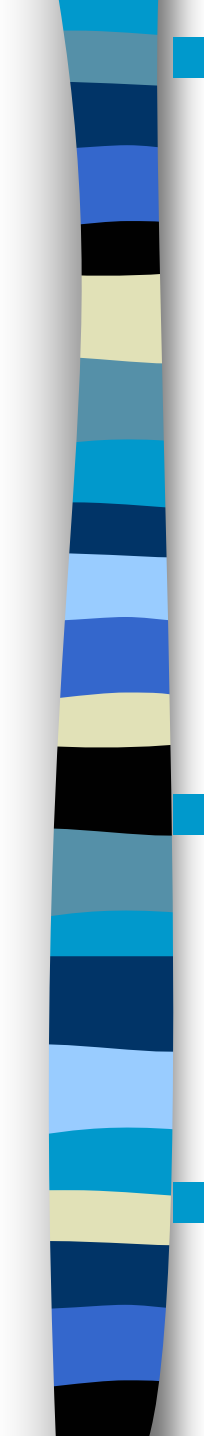
- advantages to use **intravenous route**:

- » an immediate therapeutic effect is achieved
- » pain and irritation caused by some substances when given intramuscularly or subcutaneously are avoided
- » some drugs can't be absorbed by any other route
- » for the patients who can't tolerate fluids or drugs by gastrointestinal route
- » iv.route offers a better control over the rate of administration medicines

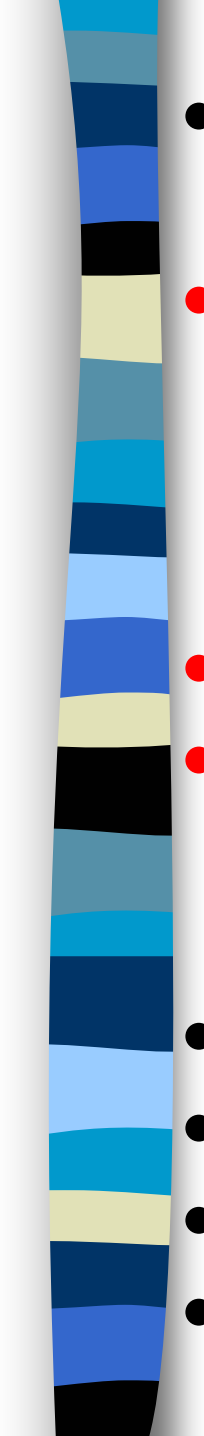
- **intravenous drugs must be injected slowly** such as pethidine, diazepam and antibiotics

- » **bolus** = few drugs can be given straight as atropine
- » **stosis** = give carefully over 15 – 20 minutes such as aminophylline and antibiotics diluted in 10 –20 ml
- » **intermittent infusion**: flagyl, antibiotics preferably always in this way and diluted to 100 ml normal saline or ringer lactate
- » **continuous infusion**: quinine

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- **fluid balance chart** should be used for all patients receiving intravenous fluids, careful documentation of input and output with dates and exact times
  - **don't disconnect** iv.set never from the iv.bottle only to change the bottle
  - use **three-way tap** if you have to give drug infusion in addition of maintenance infusion
  - rapid, uncontrolled administration of drugs will result in vein irritation, toxic concentration, side effects, anafylactic shock → death
  - iv. line is a dangerous way to give medicines - inability to recall the drug and reverse the action of it

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- **extra care** required with infants and young children, the elderly, cardiovascular cases, kidney problems, lung disorders, sepsis patients, different kinds of shocks, postoperative and post-trauma cases, patients receiving multiple medications whose status may change rapidly, critically ill patients
  - all medications given intravenously should be **diluted** to NaCl 0,9 %, there are only some exceptions e.g. quinine because the medicine causes hypoglycemia
  - record **vital signs and** other observations include e.g. weight and oedema



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- after blood transfusion and administering antibiotics it is advised to change the iv.set
  - **infection** is the commonest problem of intravenous cannula, may be localized as thrombophlebitis or may progress to septicaemia
  - **don't put** anything to the patient bed
  - **only one addition** should be made to each bag or bottle and definitely only one medicine in one syringe
  - pediatric iv. set
  - make **exact calculations** and ask advice
  - infusion controllers
  - electronic pumps

Hospitals have habit to keep iv.cannula many days like this which practice must be stopped!! It is a source of infection. Cannula is blocked even in the first day in first hour!!

