

**AL-Ayen University**  
**College of Health and Medical Technology**  
**Department of Anesthesia**



# Patient Control Analgesia (PCA)

**Lecture (7) theoretical**  
**Basics of Anesthetic Equipment (1)**  
**2nd Stage**  
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PCA  
pump

Button

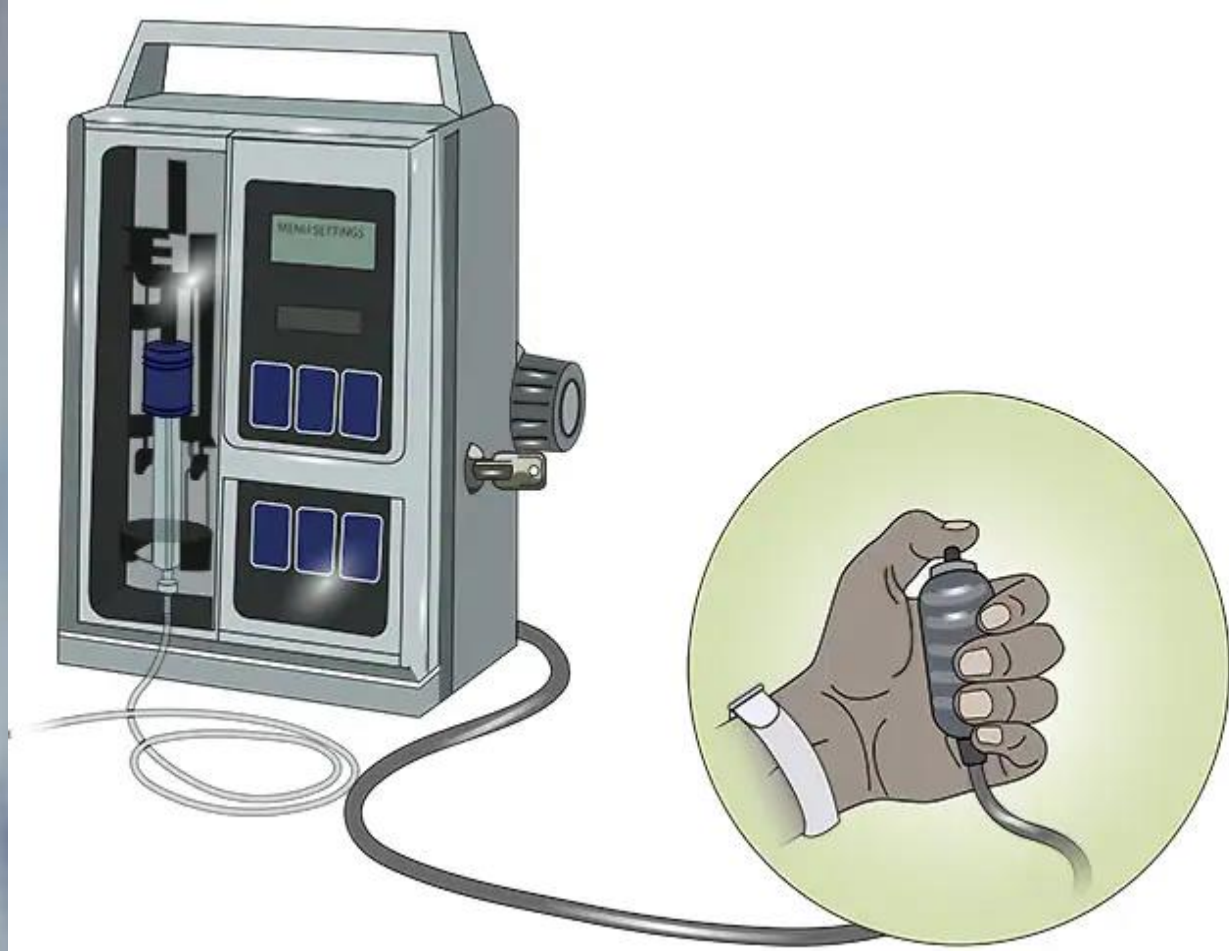
Patient Controlled Analgesia Pump

## ❖ Patient-controlled analgesia:

**Definition:** A patient-controlled analgesia (PCA) pump is a safe way for people in pain To give themselves intravenous (IV) pain medicine (analgesia) when they need it.

- The PCA pump holds a container that's filled with your pain medicine. Using a PCA pump gives you the ability to control your pain. It can also Help you feel less anxious and less worried about your pain.
- You may also Be able to use less medicine. That means you'll be able to move around More and feel more alert. And it may also help you avoid other side effects of pain medicine.





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Example of Screen Display

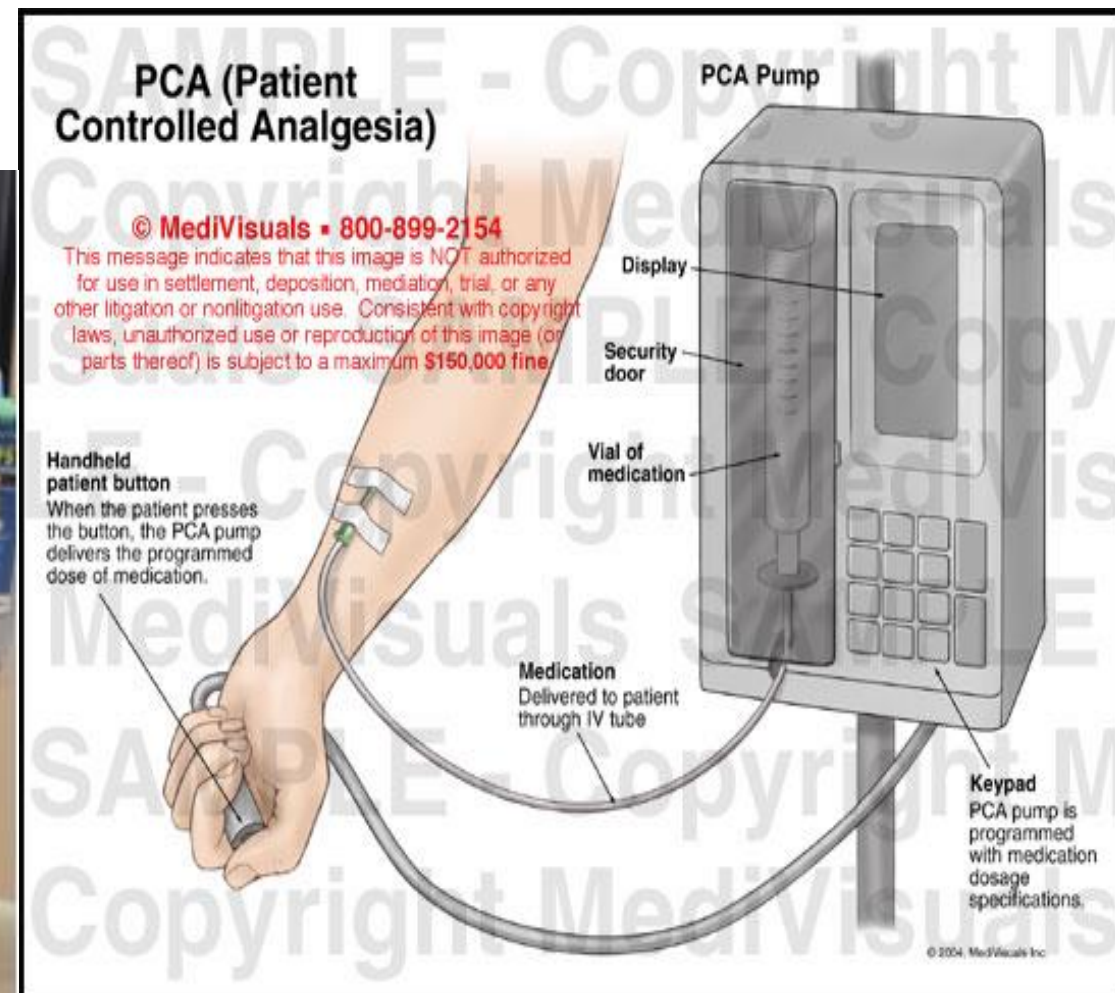
## ❖ How the PCA pump works:

1. Your doctor or nurse sets the pump to release the right dose of medicine.
2. The pain medicine flows from the pump into the tubing that goes into your vein.
3. When you feel your pain starting, you press a button that you can hold in your hand.
4. After you press the button, pain medicine is released from the pump. Your doctor or Nurse will have set the pump to make sure that you don't give yourself too much Medicine
5. Common pain medicines used in PCA pumps include hydromorphone and morphine.
6. When the pump is empty, an alarm lets the nursing staff know.



## ❖ When is a PCA pump used?

1. PCA can be used in the hospital to Ease pain after Surgery.
2. It can be used for painful conditions like pancreatitis or Sickle cell disease.
3. It also works well for people who can't take medicines By mouth.
4. PCA can also be used at home by people who are in Hospice or who have moderate to severe pain caused by Cancer.



## ❖ Risks of Patients control analgesia:

PCA is safe and effective. The main risk is having a reaction to the opioid medicine.

Side effects from opioids include :

1- Allergic reaction

2- Nausea and vomiting

3- Low blood pressure

4- Sleepiness

5- Constipation

6. Trouble breathing (respiratory depression),This is the biggest danger



❖ should be watched carefully for respiratory depression if you:

- 1- Are an older adult
- 2- Have asthma or other lung problems
- 3- Are obese
- 4- Have sleep apnea
5. Are not used to opioids
- 6- Need high doses of opioids for pain relief

## ❖ The Advantages of PCA Pumps:

- 1- More consistent pain management
- 2- Less anxiety and depression
- 3- Decreased need for injections
- 4- Active recovery participation

## ❖ Can you give yourself too much pain medicine?

It would be hard to give yourself too much pain medicine. Your doctor or nurse will set controls on the pump that limit the amount of pain medicine you get. Even if you press the button, the pump won't give you more medicine if it isn't time for your next dose.



## ❖ Safety Monitoring During PCA Use:

- Frequent monitoring by your nurse is needed while you are using the PCA pump. The nurse may need to wake you up in order to check for breathing problems and other side effects.
- Family and friends staying with you during recovery should report any concerns of breathing problems or other side effects to the nurse right away

