Procjena i farmakoterapija bola

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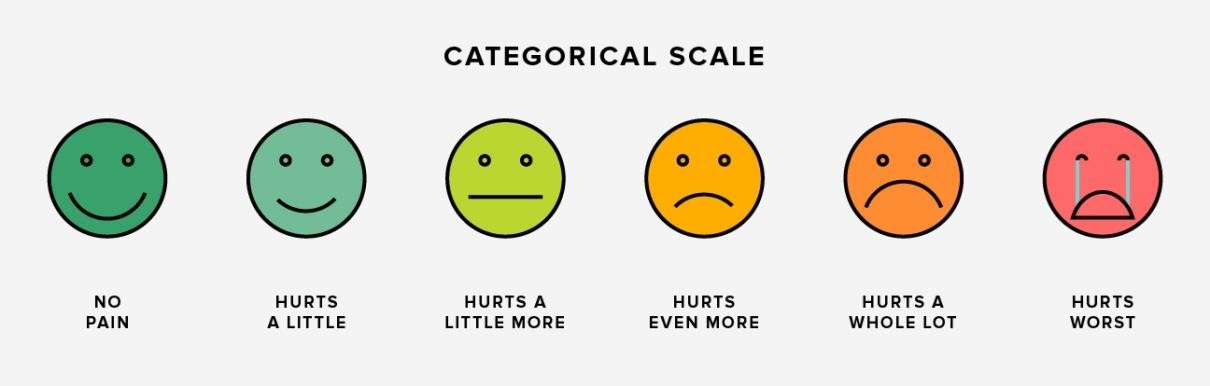
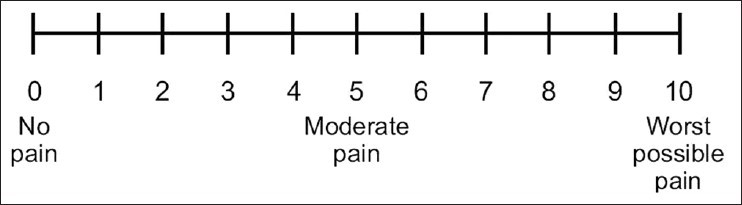
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Gradiška, 26.06.2020.

# OPIJATI PODJELA



PRIRODNI

POLUSINTETSKI

SINTETSKI

MORFIN

CODEIN

PAPAVERIN

HEROIN

HIDROMORFIN

HIDROKODEIN

BUPRENORFIN

BUTORFANOL

TRAMADOL

METADON

PENTAZOCIN

FENTANYL

SUFENTANYL

ALFENTANYL



**Receptori spregnuti sa proteinom G** pons, amigdale, olfaktorni bulbus, kora, PNS**delta (δ1 i δ2), DOP, OP1 enkefalin**

**40% homologni receptorima za somatostatin** analgezija, antidepresija, zavisnost **endorfin**

## **Receptori za endogene opioide: kapa (κ1, κ2, κ3), KOP, OP2 dinorfin**

**Endorfin, dinorfin, enkefalin, endomorfin,** hipotalamus, periakvaduktna siva masa

**nociceptin** analgezija, sedacija, disforija, mioza

**mi (μ1, μ2, μ3), MOP, OP3 morfin**

MS, MO, kora, talamus, periakvaduktna siva

masa, PNS, GIT **β endorfin**

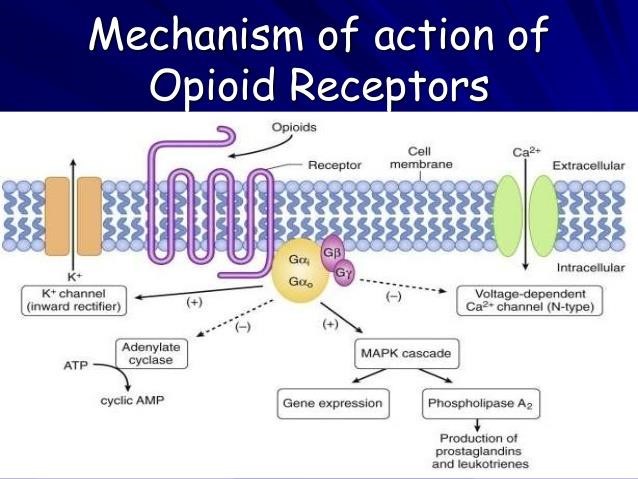
**μ1** analgezija, zavisnost **endomorfin**

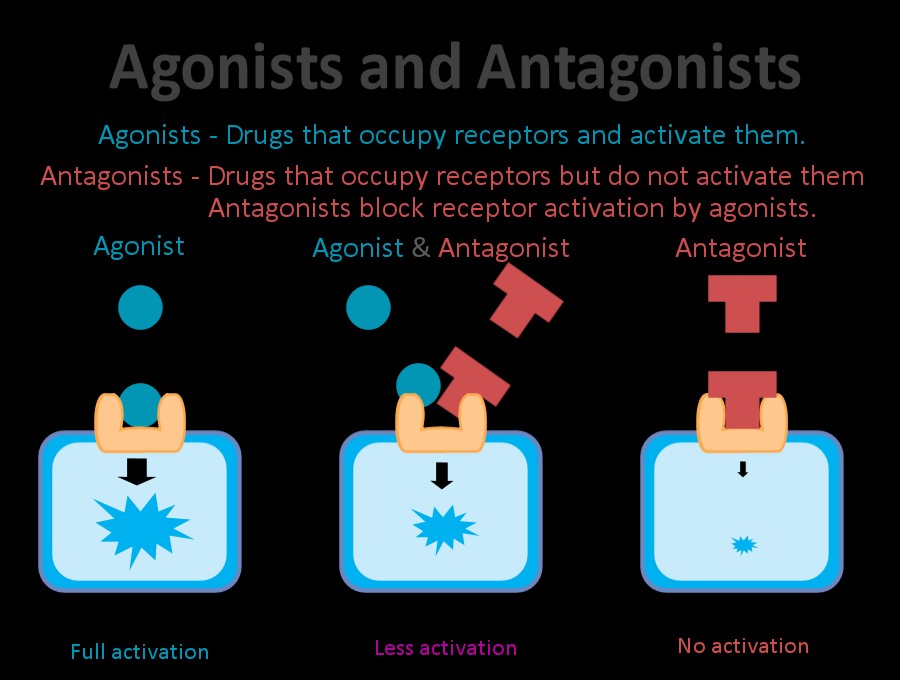
**μ2** euforija, zavisnost, mioza **enkefalin μ3** nepoznata **dinorfin**

**receptori za nociceptin (ORL1), NOP, OP4**

**Nociceptin** kora, hipotalamus, hipokampus, amigdale, MS,

**(orphanin FQ)** anksioznost, depresija, apetit…



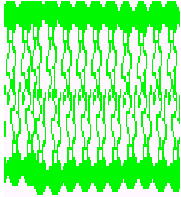
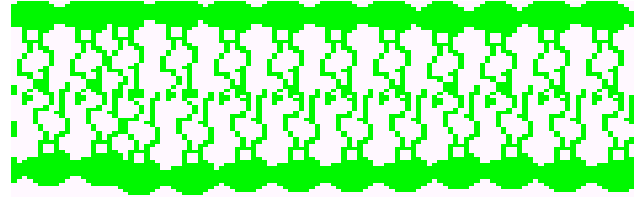
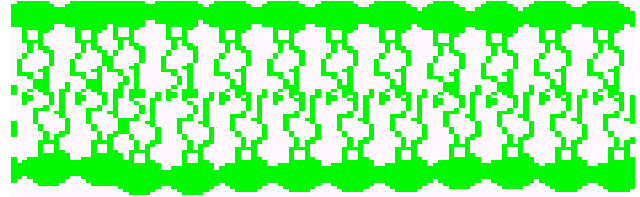
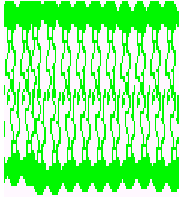


**Uglavnom agonisti μ receptora, ali djeluju i na druge receptore Agonist na κ receptore,**

⊕

⊕

⊕



**Morphine sa djelimičnom antagonist. djelov.**

**Heroin na μ receptore Codeine Pentazocine**

**Fentanyl**

**μ opioidni κ opioidni** 

**receptor receptor opioidni**

**Analgezija Analgezija Analgezijareceptor**

**Respiratorna depresija Sedacija**

**Euforija/sedacija Mioza**

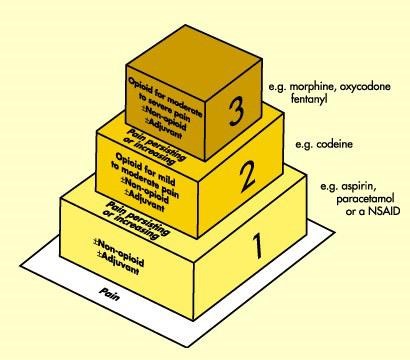
**Psihička zavisnost**

**Smanjnje GI motiliteta Antagonist djeluje na μ, κ,**  **receptore**

**Mioza Naloxone Naltrexone**

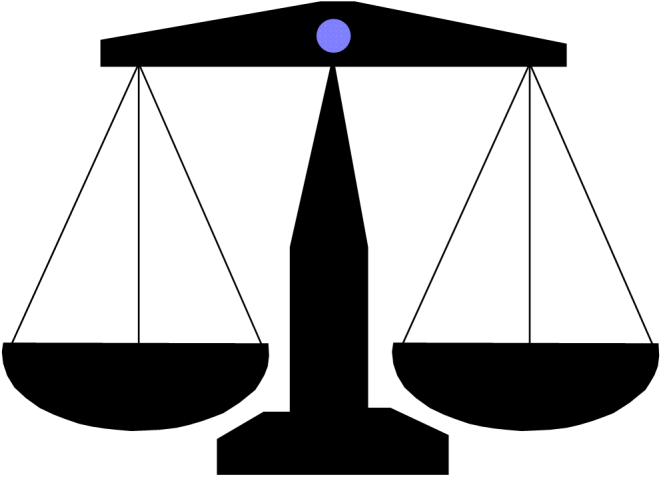
|  |  |
| --- | --- |
| VRLO JAKI OPIOIDI0,05-0,09 | JAČINA |
| Sufentanyl | 1000 |
| Remifentanyl | 200 |
| Fentanyl | 100-300 |
| Alfentanyl | 40-50 |
| Buprenorfin | 10-40 |
| JAKI OPIOIDI |  |
| Butorfanol | 8-11 |
| Hidromofon | 7-10 |
| Metadon | 1,5 |
| Morfin | 1 |
| SLABI |  |
| Kodein | 0,3 |
| Petidin | 0,2 |
| VEOMA SLABI  Project number: 585927-EPP-1-2017-1-RS | -EPPKA2-CBHE-JP (2017 – 3109 / 001 – 001) |
| Tramadol  *"This project has been funded with support from the European Commission. This publication reflects the views only of the auth* | 0,05-0,09 *or,* |

*and the Commission cannot*



# Analgesia – Side effect

●The harder we “push” with single mode analgesia, the greater the degree of side-effects



Acute pain

# Acute pain presents most often with a clear cause, rela Acute pain is often accompanied by observable objecti increased pulse rate increased blood pressure

Non-verbal signs and symptoms such as facial expressions and

## Pain assesment

Initial Pain Assessment should include:

Location(s)

Intensity

Sensory quality

Alleviating and aggravating factors

# Any new onset of pain requires a new comprehensive p

PAIN REASSAMENT

# Every 8 hours minimally Following the administration of pain medications to de

IV within 15 mins of administration

PO/IM/SC within 1 hour of administration

MULTIMODAL ANALGESIA

# This term describes the use of multiple modalities that

Decreased dependence on single modality agents decreases the

May include

Pharmacological (opioids, NSAIDS, gabapentanoids)

Relaxation techniques (biofeedback, deep breathing) Regional analgesia (nerve blocks, epidural catheters)

Prescribing Responsible Opioid

# Assess risk for opioid abuse or diversion prior to prescr Risk factors for misuse or abuse of opioids include the

Males between 18 and 45.

A personal history of substance abuse

A family history of substance abuse

A personal history of preadolescent sexual abuse

A personal history of psychological disease (depression, anxiet

## OPIOID SELECTION

Use the lowest effective dose

Prescribe short durations for acute pain

Use immediate release when starting

World Health Organization (WHO)

●3- Step Ladder approach to pain management

Step 1- Mild Pain (1-3/10)

Nonopioid

Add adjuvant analgesic agent

(i.e.) Ice, heat

## WHO

Step 2 Mild to moderate pain (4-7/10)

This step builds on step 1

Treat with opioid combination drug

(hydrocodone/acetaminophen)

Watch ceiling effect of adjuvant drug Peds are dosed by weight

Watch special needs patients/elderlyProject number: 585927-EPP-1-2017-1-RS-EPPKA2-CBHE-JP (2017 –

## WHO

Step 3- Severe pain (8-10/10)

Use opioids

Add adjuvant (i.e.)anti-anxiety,anti-emetics, muscle relax

Start with short acting opioids to determine pain relief, bre

Switch to long acting use equianalgesic dosing chart for c

## POINT TO REMEMBER

The pain intensity determines the step at which to begin. Opioids are the only group of analgesics with no ceiling o Most opioid side effects resolve within a few days.

d

Exception>>>>Constipation-- need to write for this imme Commonly used first line opioids

Codeine

Morphine

Hydromorphone

Oxycodone

Share the following characteristics

Half-life of immediate release preparations is 2 to 4 hou

Duration of analgesic effect between 4 to 5 hours when

Sustained release formulations have duration of analge

## MORPHYNE

Onset: 15 to 60 minutes

Peak Effect: 30 minutes to 1 hr

Half Life: 1.5 to 2 hr

IV: 0.05 to 0.1 mg/kg

5 minutes prior to procedure; max: 15 mg/dose

