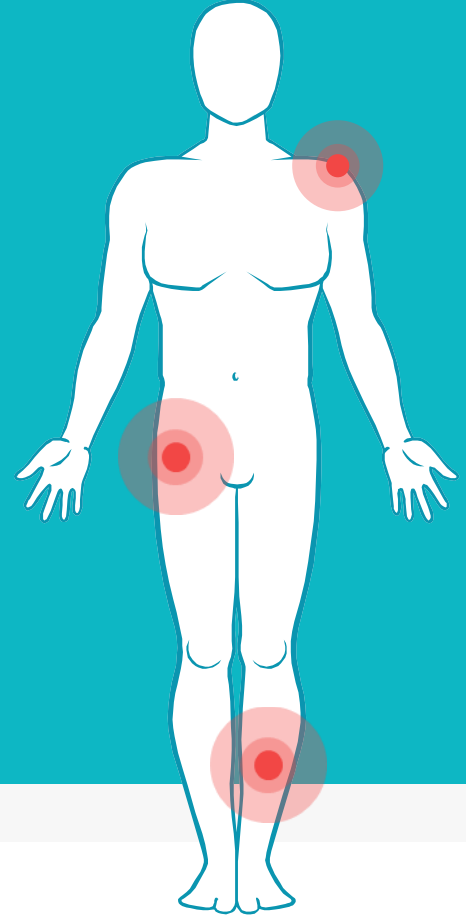


# Pain in the challenging trauma patient.



Dr Ben Rippin F.R.C.A.  
Consultant Anaesthetist L.G.I.

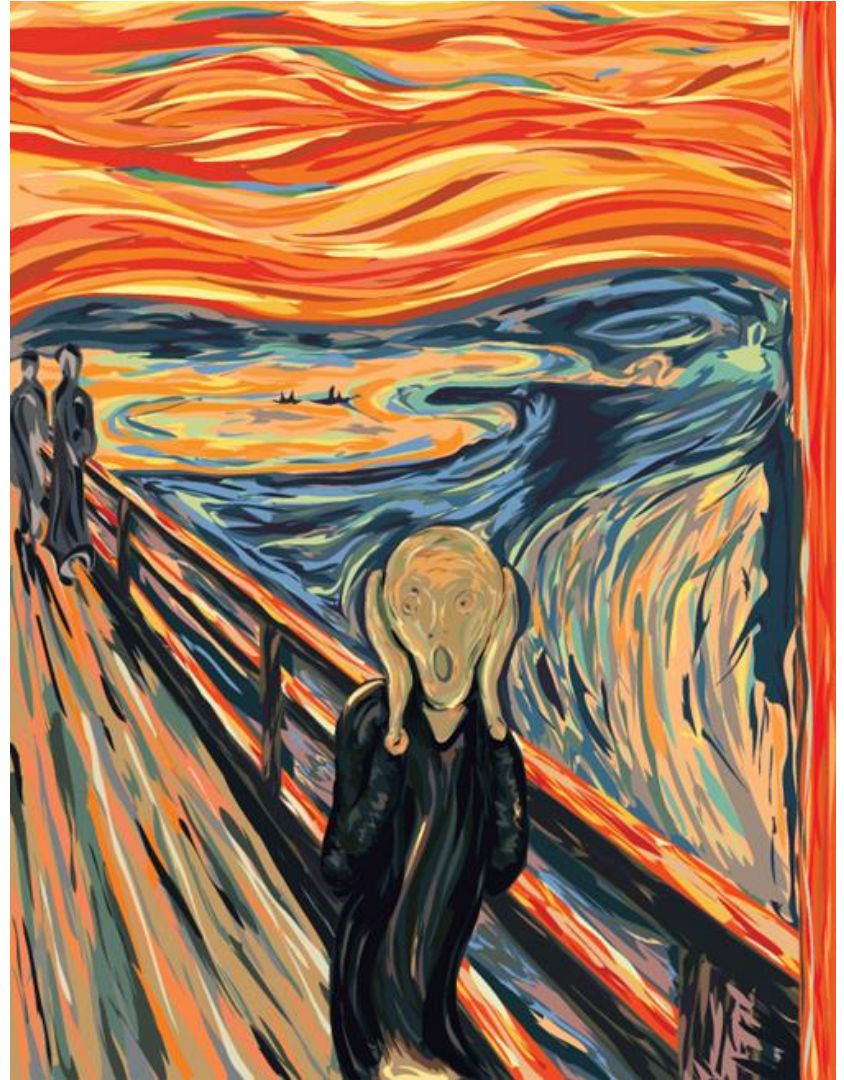
*“The relief of suffering is a great good. The curing of illness and disease - these are great human goods. This is the mission of medicine”*

*Michael Sandel*

”

# The Drugs don't work.....

- ▷ Genetic subgroups
- ▷ Non-opioid Naive.
- ▷ Opioid Non-responders.



# Genetic variance.

## Genetics

- ▷ Weak opioids are PROdrugs.
- ▷ Require acetylsation.
- ▷ P450 sub groups.
- ▷ Non-responders.
- ▷ Some respond +++.



Non Opiod “Naive”.

I.V.D.U.

#1  
BEGBIE#2  
DIANE#3  
SICK BOY#4  
SPUD#5  
RENTON

# Trainspotting

18

From the makers of  
Shallow Grave



From: Molecular Mechanisms of Opioid Receptor-dependent Signaling and Behavior  
Anesthesiology. 2011;115(6):1363-1381. doi:10.1097/ALN.0b013e318238bba6

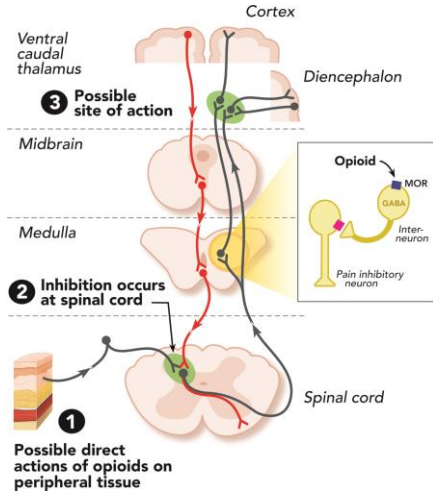


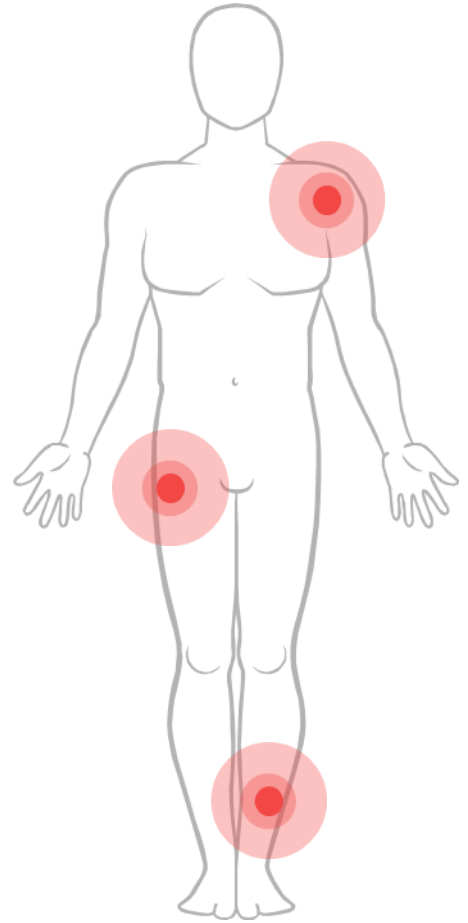
Figure Legend:

Fig. 1. Sites of action of opioid analgesics. The gray pathway shows the sites of action on the pain transmission pathway from periphery to central nervous system. The red pathway shows the actions on pain-modulating neurons in the midbrain and medulla. GABA =  $\gamma$ -aminobutyric acid; MOR =  $\mu$  opioid receptor.

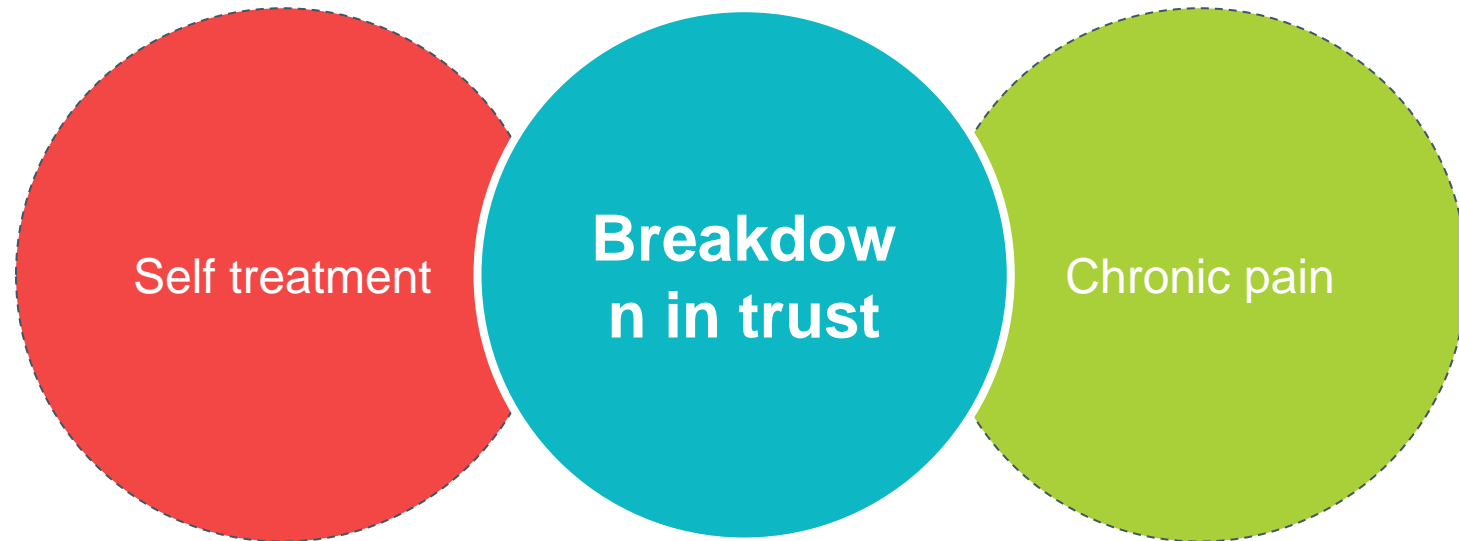


## “Myths” surrounding IVDUs

- ▶ They CAN benefit from opioid therapy for moderate/severe acute pain.
- ▶ Maintenance methadone or buprenorphine will NOT provide analgesia.
- ▶ HYPER algesia may be present.



## Consequences of poor analgesia.



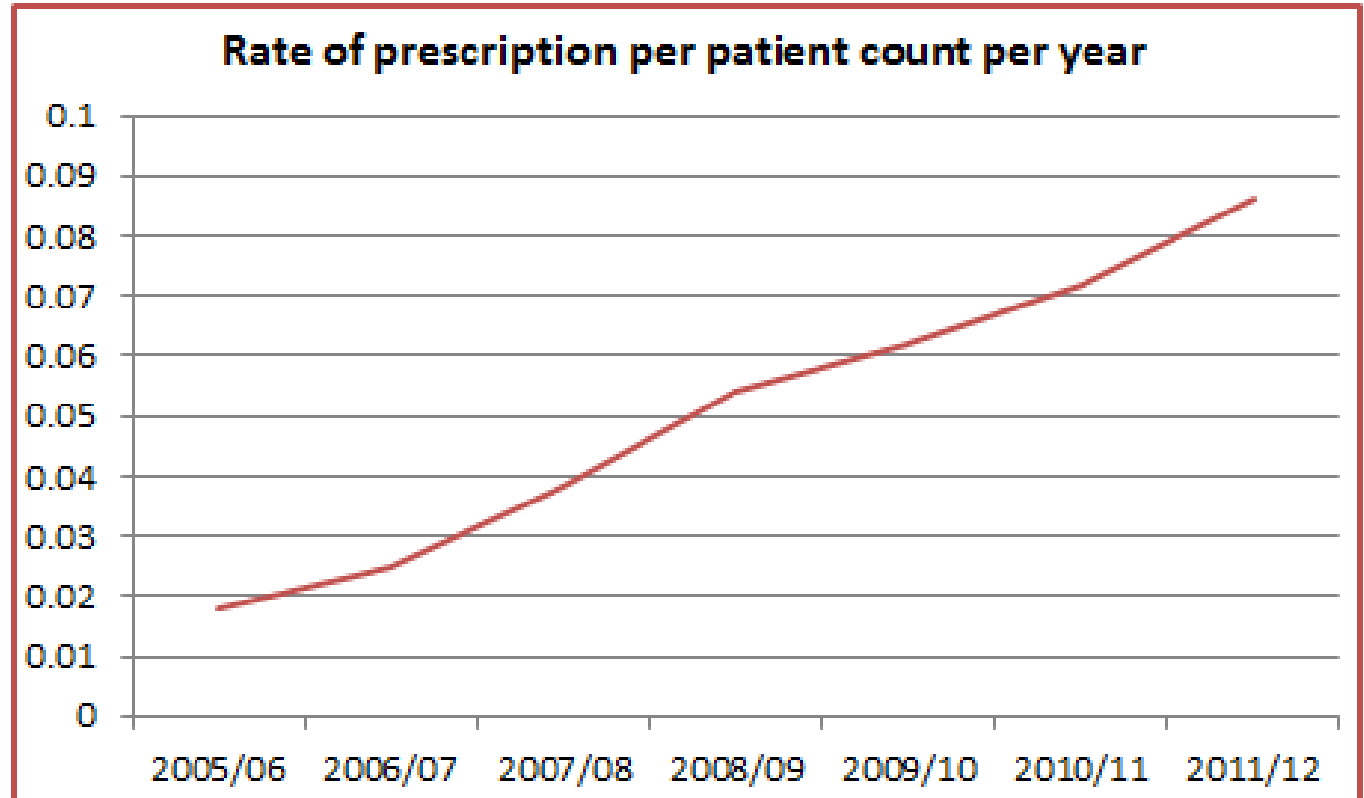
Non opioid Naive.

Iatrogenic opioid use.



## Strong opioid prescriptions (Foy 2015)

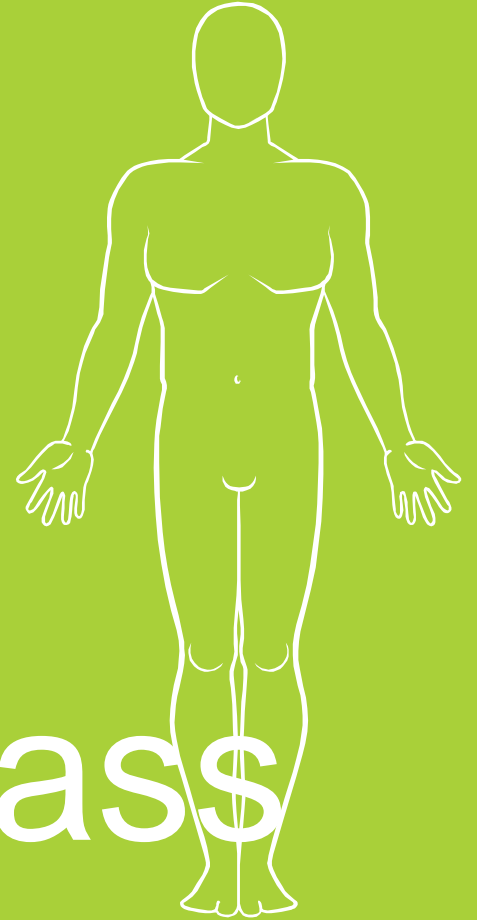
GPs in  
Leeds and  
Bradford.



**£289.8 million**  
2013. Cost of opioid prescriptions.

**94,358**  
Prescriptions for non cancer pain

**Lower SE class**  
More prevalent.



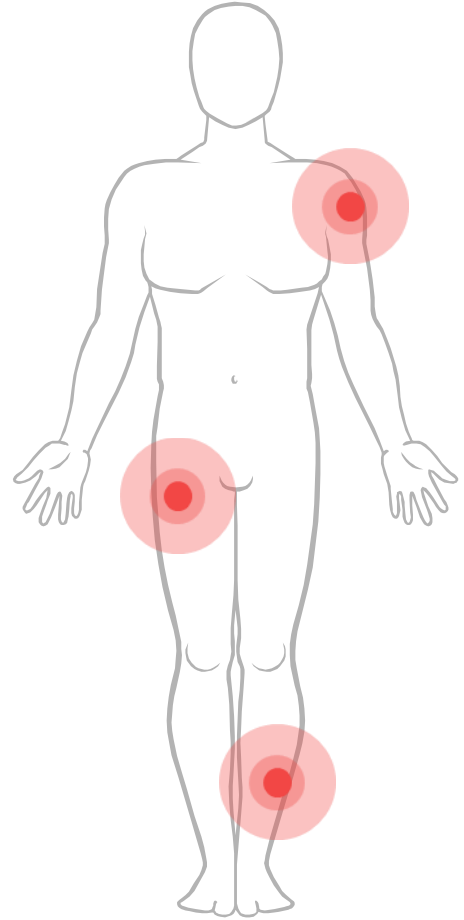
## Whose responsibility?

- ▷ 10% Still on strong opioids 12 months.
- ▷ Rate of Dependency around 10%
- ▷ ERAS programmes/ Bed pressures
- ▷ MUST have plan in place for review on discharge

# Opioid Non responders



“More is better right?”



## Common problems

- ▷ nausea. (NNH: 4.2)
- ▷ constipation. (NNH: 4.2)
- ▷ drowsiness. (NNH: 6.2)
- ▷ dizziness. (NNH: 7.1)

## Escalating opioids

### Non responders

- ▷ Neuropathic pain.
- ▷ Cancer .
- ▷ Burns.

### Consequences high doses

- ▷ High rate GI bleeds.
- ▷ High rate MIs.
- ▷ Immunosuppression.
- ▷ Hyperalgesia.

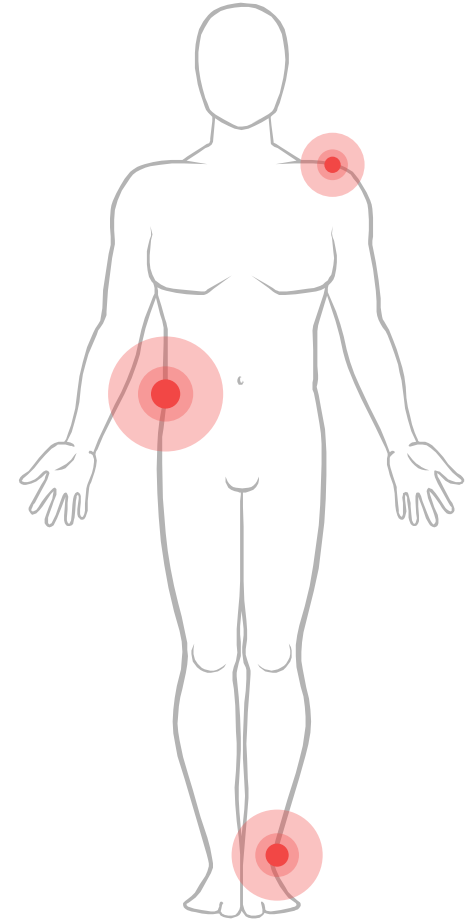
▷ *The risk of harm increases with doses equivalent to 120mg Oral morphine day, but there is no increased benefit.*

▷ *If the patient is using opioids but is still in pain, they should be discontinued even if no other treatment is available*



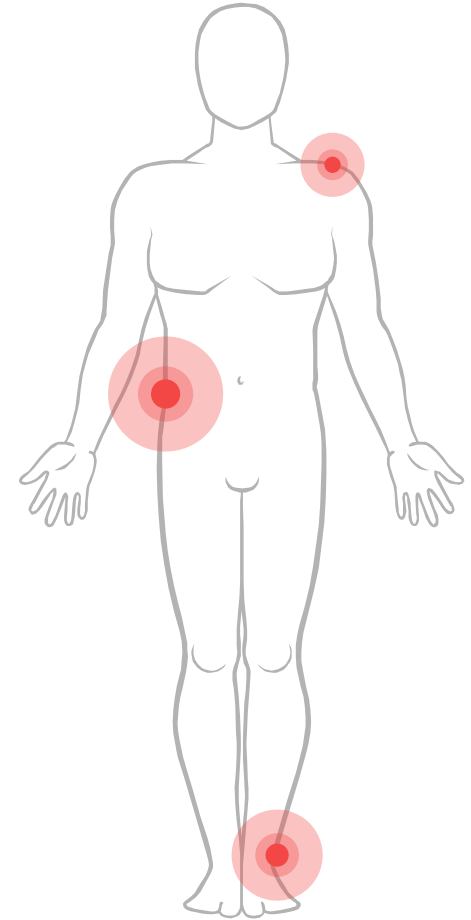
## Opioid equivalency

	Relative Potency	Equivalent to 10mg oral morphine	Maximum dose
Dihydrocodeine	<b>0.1</b>	<b>100mg</b>	<b>1.2G</b>
Morphine	<b>1</b>	<b>10mg</b>	<b>120mg</b>
Oxycodone	<b>2</b>	<b>5mg</b>	<b>60mg</b>



## Opioid equivalency

	Oral Morphine 24hrs
Buprenorphine (52mcg/hr)	<b>126 mg</b>
Fentanyl (50mcg/hr)	<b>180 mg</b>



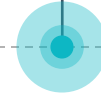
# Management options.

## Non-opioid naïve.

**History + Agree  
Limits**



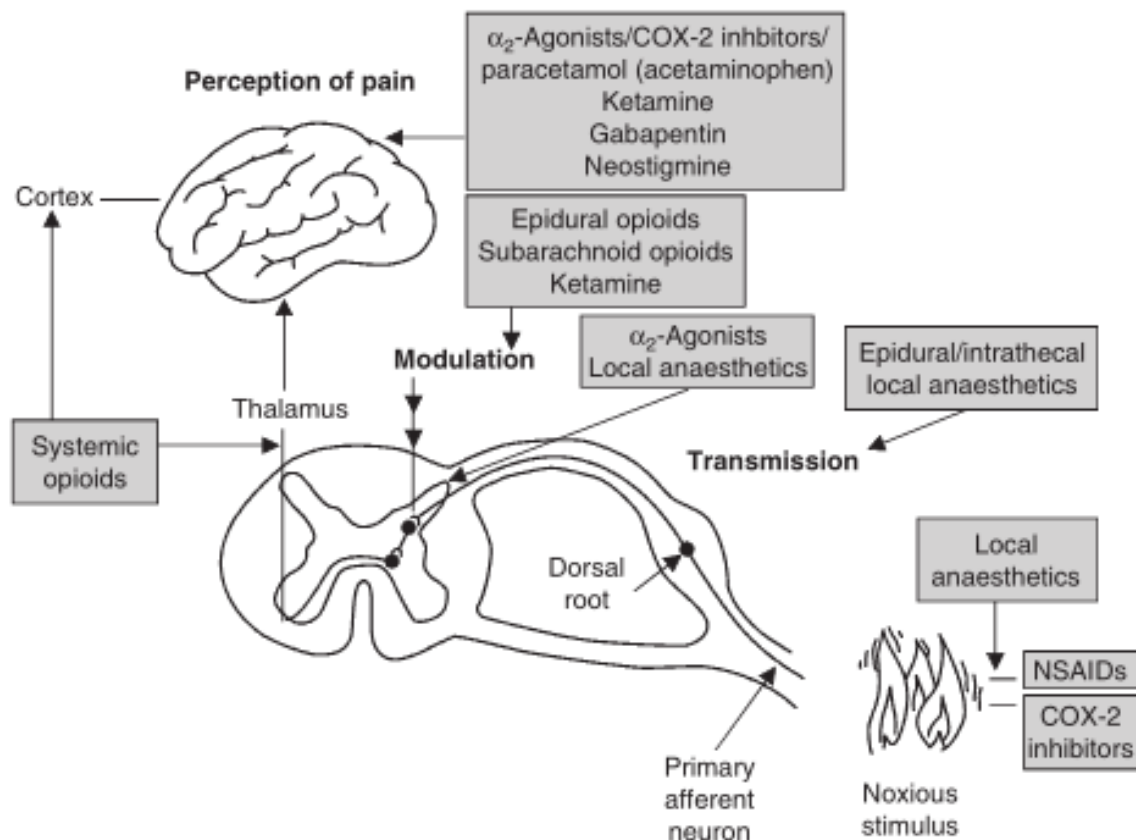
**Use of non-opioid  
analgesics.**



**Maintenance opioids,  
plus “extra” for  
acute pain.**

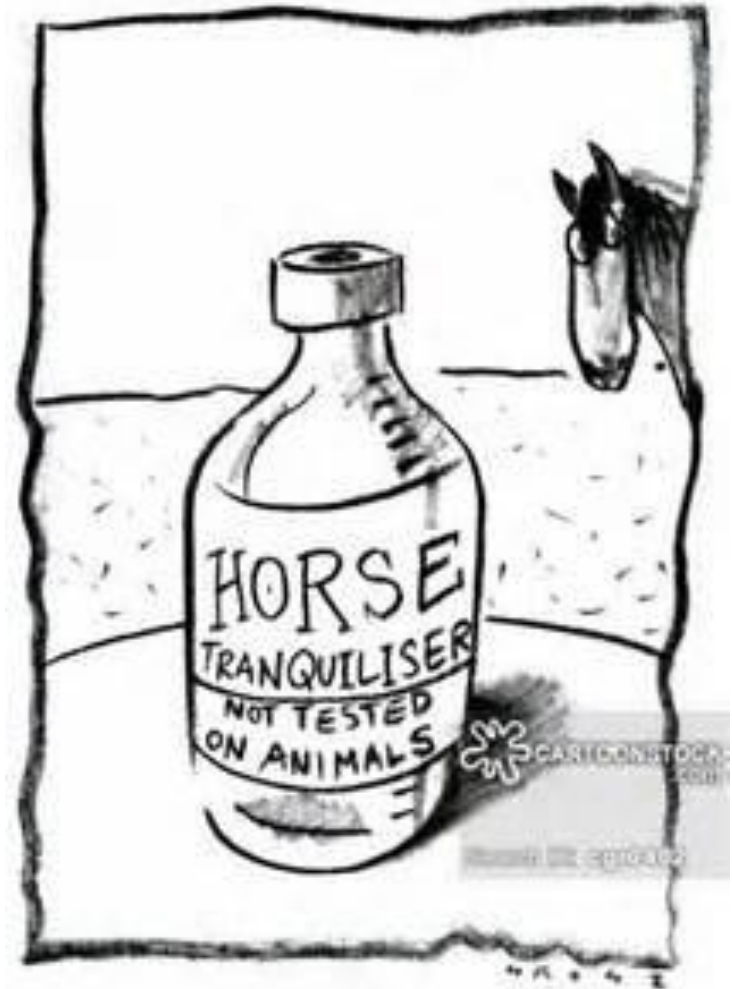






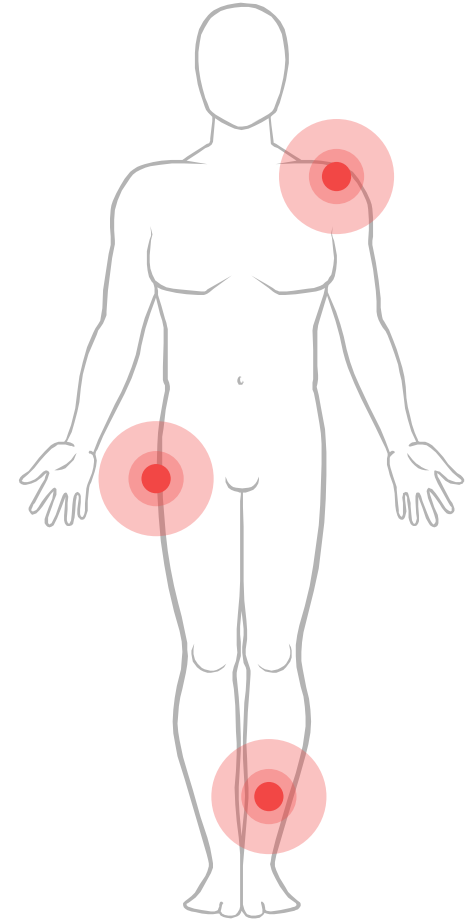
## Ketamine.

- ▶ Low dose = Analgesic.
- ▶ NMDA and opiod receptors.
- ▶ Hallucinations, anaesthesia.
- ▶ Infusions / PCA (H.D.U.)
- ▶ 0.25mg/kg QDS orally.



## Clonidine

- ▷ Alpha 2 agonist.
- ▷ Sedation and analgesia.
- ▷ Excellent in withdrawal.
- ▷ Can be given as IV Infusions (HDU)
- ▷ Oral dose 25 mcg TDS
- ▷ Hypotension, Bradycardia.



## NICE recommendations for Neuropathic pain

### **TCA**

- ▷ Amitriptyline
- ▷ 10-150mg

### **Antiepileptics**

- ▷ Gabapentin  
300mg TDS
- ▷ Pregabalin  
50mg TDS

▷ Capsacin  
cream.

▷ LA infusions

# Summary

Weak opioids unpredictable

Opioid use not just IVDUs

Pain pathway is plastic.

High dose opioids not the answer

Hx and rapport key.

Alternate agents



# THANK YOU!

## Any questions?

You can find me at

- ▶ [B.rippin@nhs.net](mailto:B.rippin@nhs.net)
- ▶ (or Costa)