

Mathematics of Pain Relief

Healthcare providers wrote **>259 MILLION** prescriptions for **OPIOID PAINKILLERS** in 2012.

Rx _____



Drug overdose – mostly from painkillers – now kill more people than car crashes.

Overdose vs. Auto fatalities



Over the counter or prescription: What's most effective?

The most effective pain relief combination: **200mg** of ibuprofen + **500mg** of acetaminophen

Opioid painkillers may not always be the best way to treat acute pain.

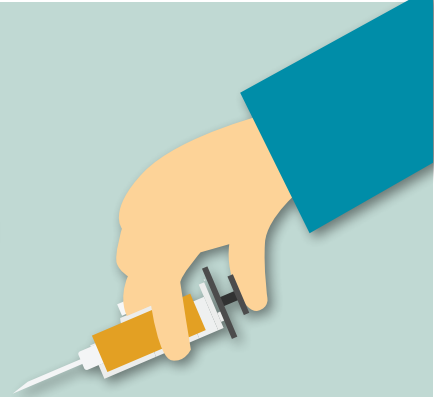


One study **compared** the effectiveness of **over-the-counter and prescription pain meds**.

You need to add:

1000 mg acetaminophen + **10 mg** oxycodone

to make oxycodone AS EFFECTIVE AS







provides as much pain relief as a 10 mg morphine shot

Getting better pain relief

When people get **half their pain reduced**, they start **feeling better** and **can do more**.

We can tell how effective medication is based on how many people taking it feel better. This metric is called **Number Needed to Treat (NNT)**.

A low NNT means the medicine is more effective.

| Ibuprofen + acetaminophen | Oxycodone |
|--|--|
| NNT score of 1.5 | NNT score of 4.6 |
| Got Relief  | Got Relief  |
| Did Not Get Pain Relief  | Did Not Get Pain Relief  |

| HOW EFFECTIVE IS YOUR PAIN MEDICATION? | NNT SCORE |
|--|-----------|
| Ibuprofen 200mg + Acetaminophen 500mg | 1.5 |
| Diclofenac 200mg | 1.7 |
| Ibuprofen 200mg | 2.5 |
| Morphine 10mg IM | 2.7 |
| Oxycodone 10mg + Acetaminophen 1000mg | 2.7 |
| Acetaminophen 500mg | 3.5 |
| Oxycodone 15mg | 4.6 |

What can you do?



Explore alternatives to opioid painkillers

Use the smallest amount of opioid painkillers for the **fewest number of days**



Download the white paper: nsc.org/painmevidence