

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.

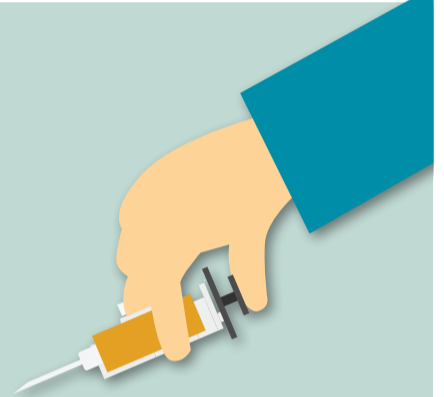


One study compared the effectiveness of over-the-counter and prescription pain meds.

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