

# tramadol lesson

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# Make sure you have the following before we start:

An open mind

Understanding of when opioids should be used

Allergy to writing prn RX's for chronic use



# Objectives

1

Understand the risks of tramadol

2

Do not reflexively RX tramadol as a "safer" agent



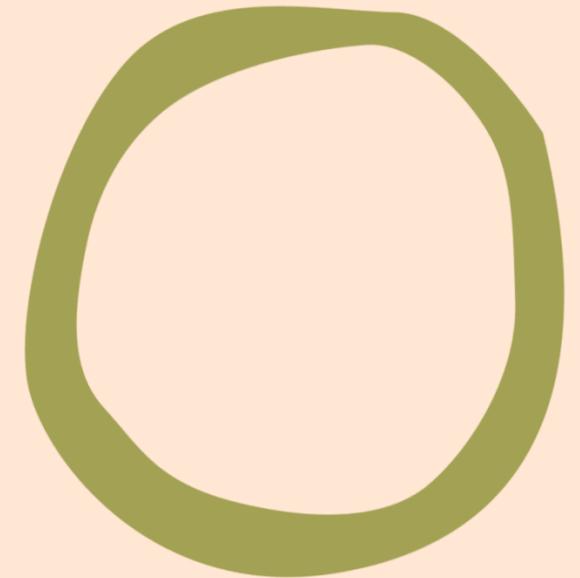
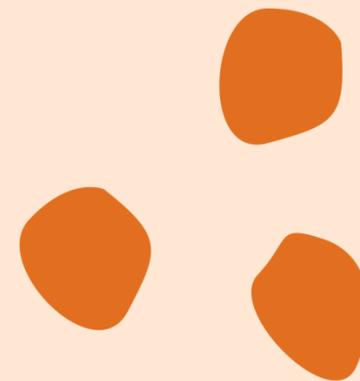
What is  
Tramadol?

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A synthetic opioid with dual mechanism of action Approved in U.S. = 1995 as a **NON-CONTROLLED** centrally-acting, oral analgesic (pain drug) that contains an opioid (narcotic).

Rescheduled to **Class IV** in 2014 - related to growing concern of abuse, misuse, addiction and overdose of opioid analgesics.



# Highly Polymorphic

PRO-DRUG

SNRI

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1ST PASS

CYP2D6

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2ND  
COMPOUND

M1  
OPIOID

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**Fast, slow, ultra metabolizer???**

# Highly unpredictable response

1

## Too fast

Increased opioid activity  
can cause respiratory  
depression and death

2

## Too slow

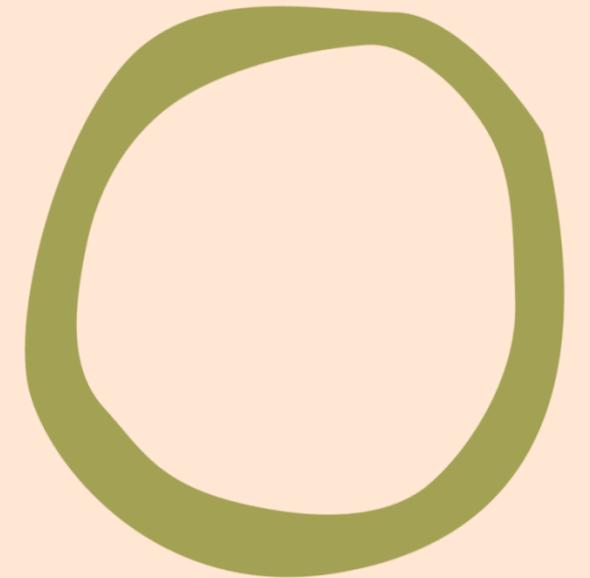
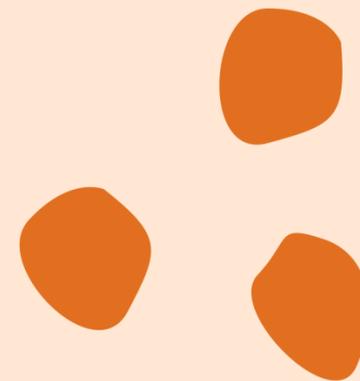
Increased SNRI and risk for  
serotonin syndrome; limited  
opioid effect

3

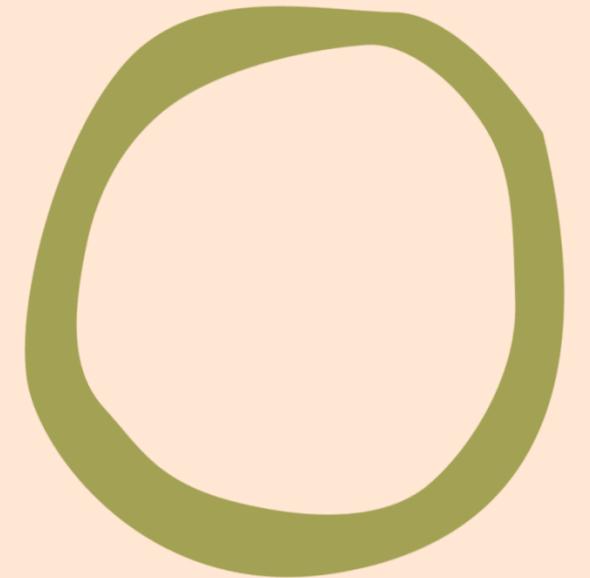
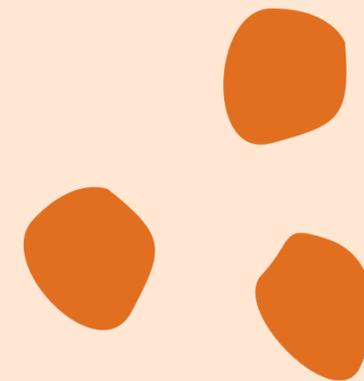
## MANY DRUG INTERACTIONS

CYP450 major pathway  
for psych drugs  
especially

**Tramadol is known to interact with drugs that are affected by cytochrome P450 (CYP450) enzymes. Specifically it can interact with drugs that affect the 3A4 and 2D6 enzymes, and interactions may occur when starting or stopping drugs. Increased blood levels of tramadol or the active metabolite M1 may occur and be dangerous or fatal.**



Serious side effects including seizures and serotonin syndrome may also occur due to drug interactions. Examples of drug classes where this might occur include the serotonin reuptake inhibitors (SSRIs, SNRIs), TCAs and MAOI inhibitors (like phenelzine or linezolid) -- all types of antidepressants. In fact, tramadol should never be used with an MAOI inhibitor or within 14 days of taking an MAOI. Taking tramadol with drugs that already have a seizure risk may worsen that risk.





## Why particularly bad in elderly?

- all the usual opioid risks (BLAH!)

AND

- increases seizure risk
- can cause hypoglycemia
- renally excreted
- HIGH risk for drug interactions





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# Summary of Class about Tramadol

**NOT A “SAFER” OPIOID (ALL SAME RISKS)**

**UNPREDICTABLE METABOLISM INCREASES RISK FOR DEATH OR INEFFECTIVENESS**

**SERIOUS DRUG INTERACTIONS, ESPECIALLY WITH PSYCH DRUGS**

**WORRISOME SIDE EFFECTS – ESPECIALLY IN ELDERLY (SEIZURES, HYPOGLYCEMIA)**