




# Faculty of Pain Medicine

# Founding bodies

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- RACS
- RACP
- RANZCP
- AFRM
- ANZCA
- ◆ Representatives from these on the current elected Board

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- ◆ Training
  - ◆ Education
  - ◆ Fellowship affairs
  - ◆ Examination
- 
- ◆ Recognised by the AMC as a Medical Specialty in 2005

# Tell your trainees

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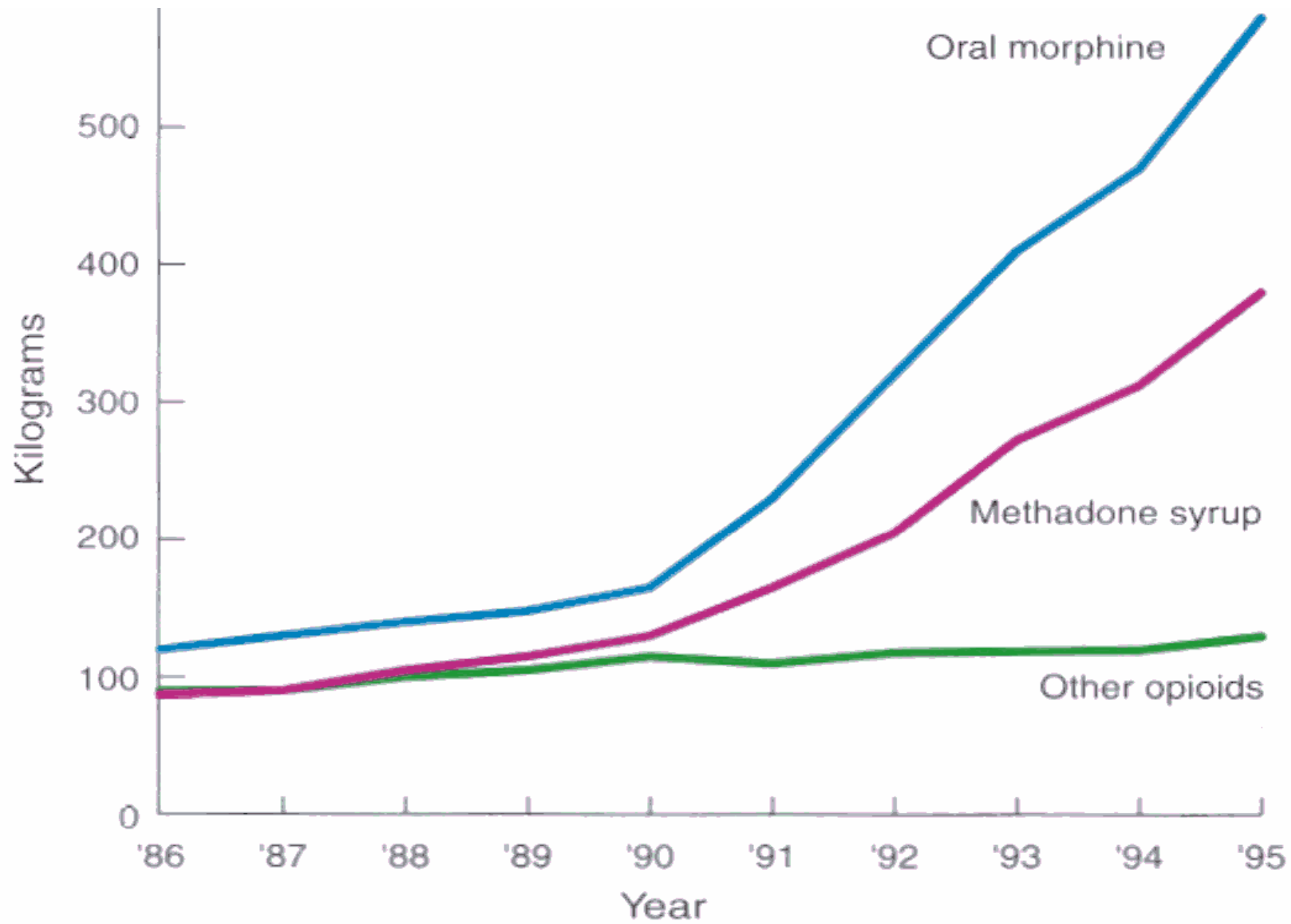
- ◆ One year in a Faculty Accredited Pain Centre
- ◆ One further year - some of which can be accredited concurrently with primary specialty training
- ◆ Case report/thesis
- ◆ ITA
- ◆ Examination

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- ◆ All doctors should have a good knowledge of pain medicine
  - ◆ Focus on undergraduate and PGY 1 & 2
  - ◆ Specialty Colleges



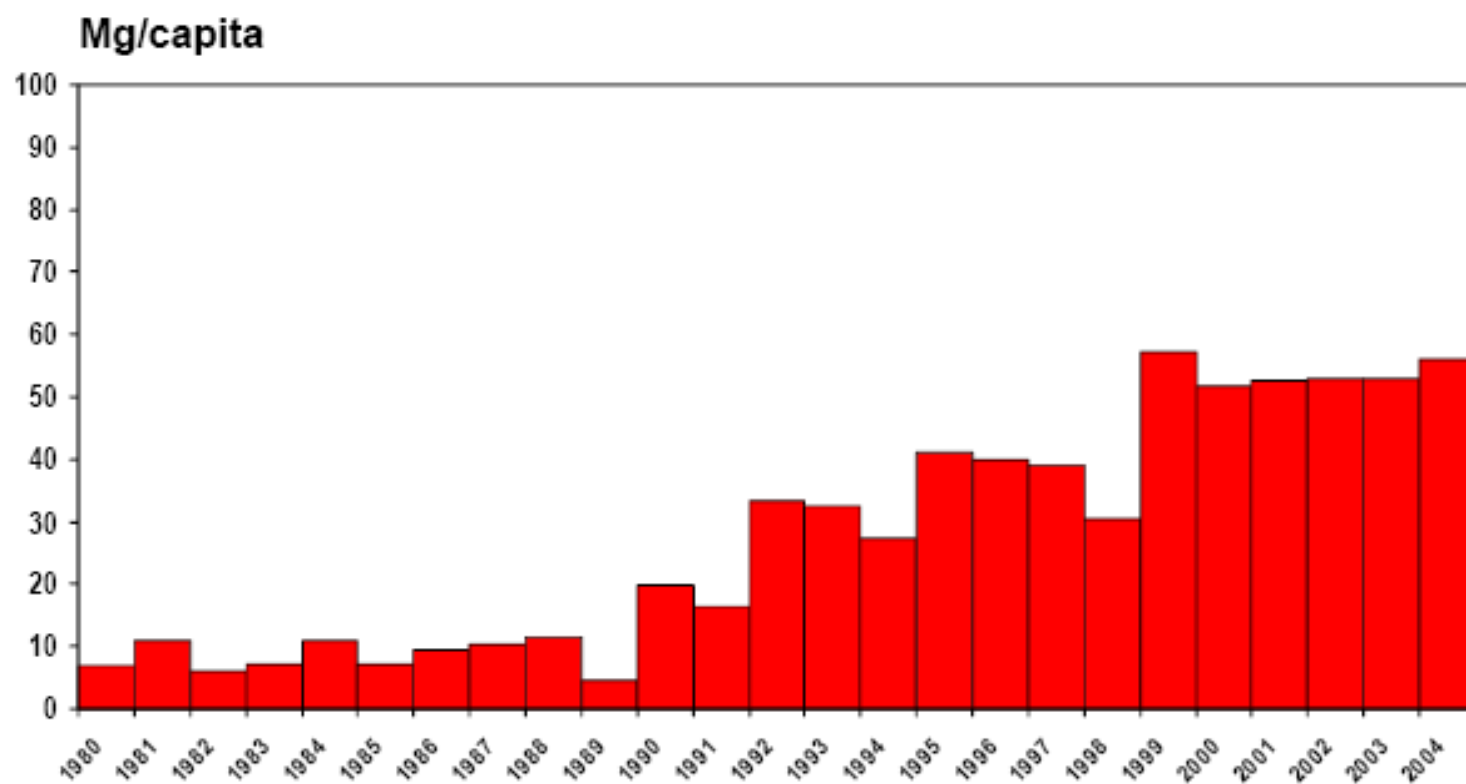
# OPIOIDS IN PERSISTENT PAIN: THE EVIDENCE

Roger Goucke  
PERTH



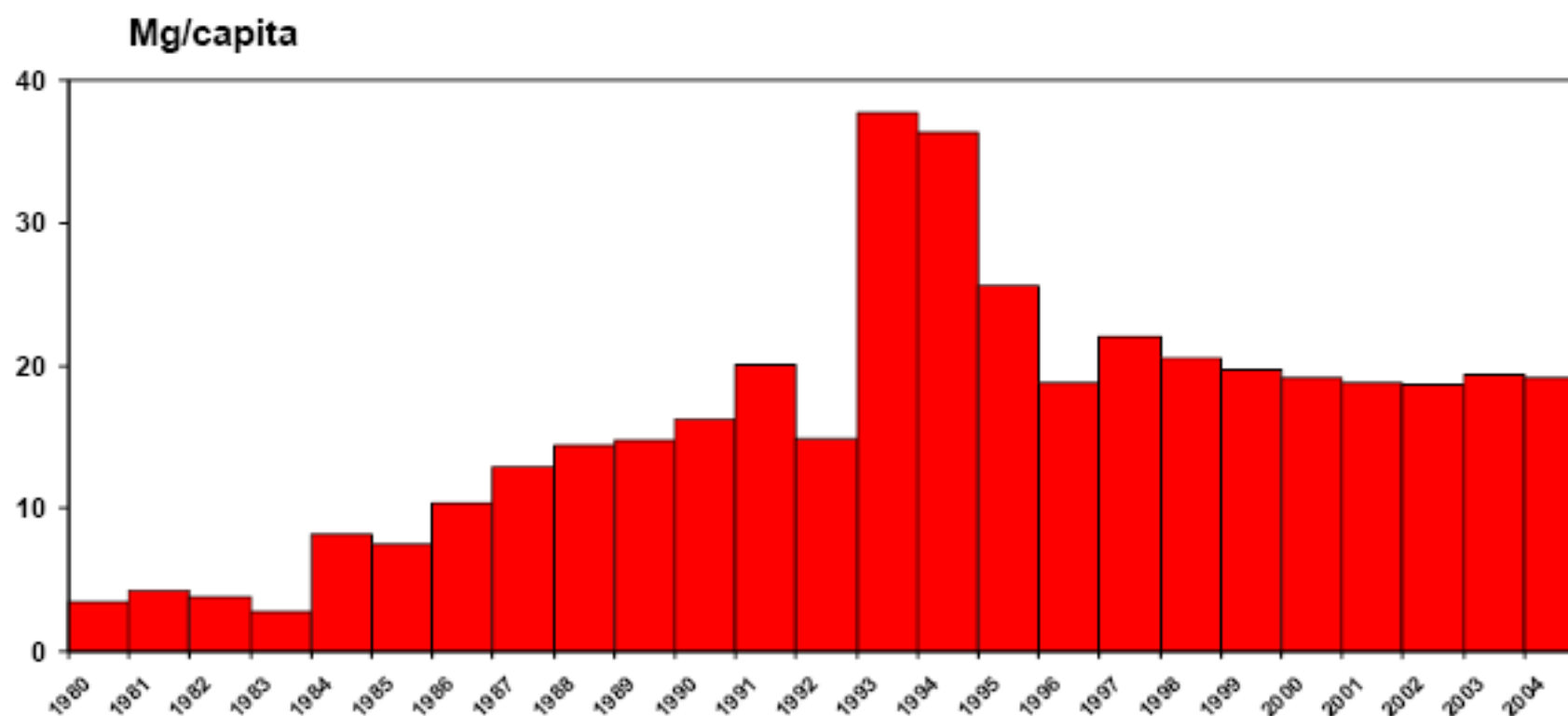
*Australian consumption of opioids, 1986-1995.*

# Mg/capita Consumption of Morphine, Australia, 1980-2004



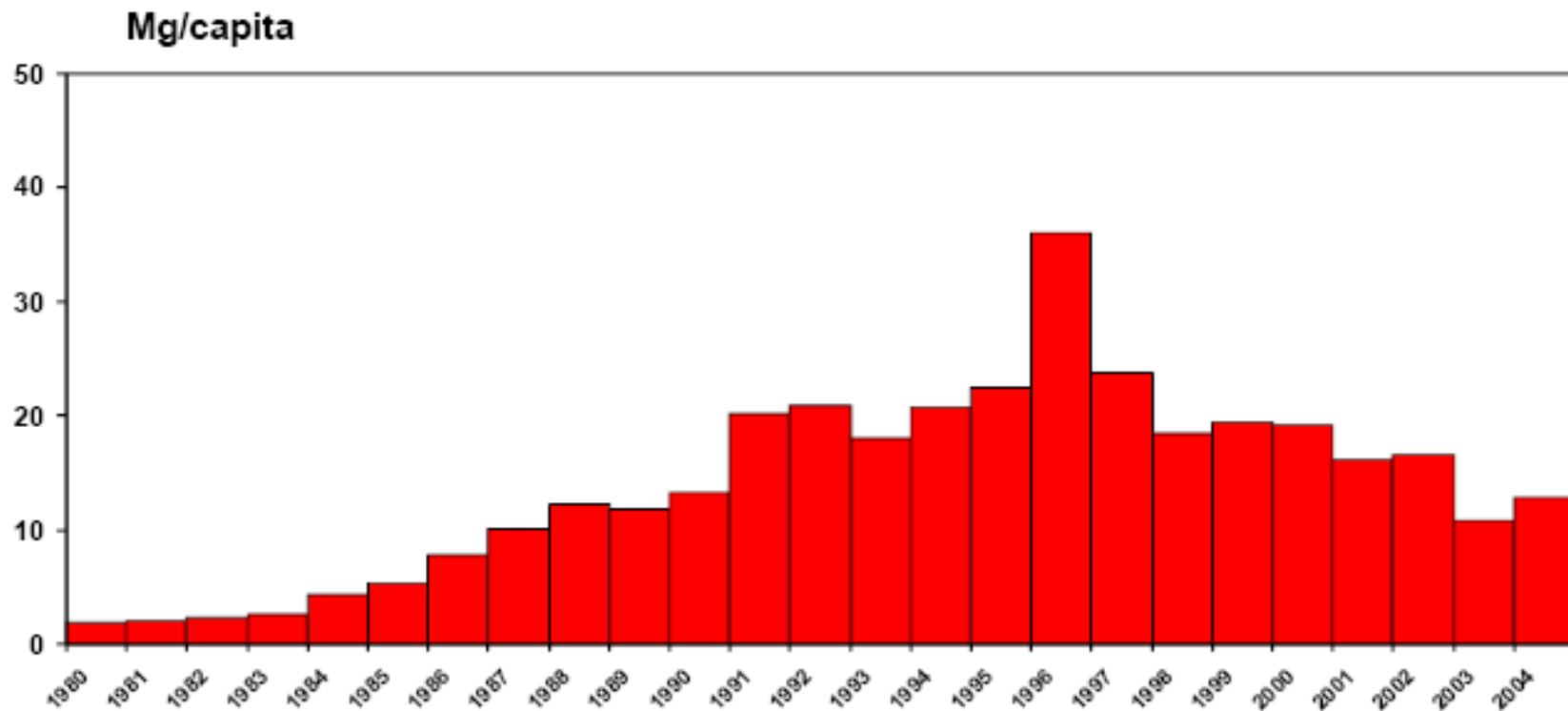
Source: International Narcotics Control Board; United Nations Demographic Yearbook  
By: Pain & Policy Studies Group, University of Wisconsin/WHO Collaborating Center, 2008

# Mg/capita Consumption of Morphine, United Kingdom, 1980-2004



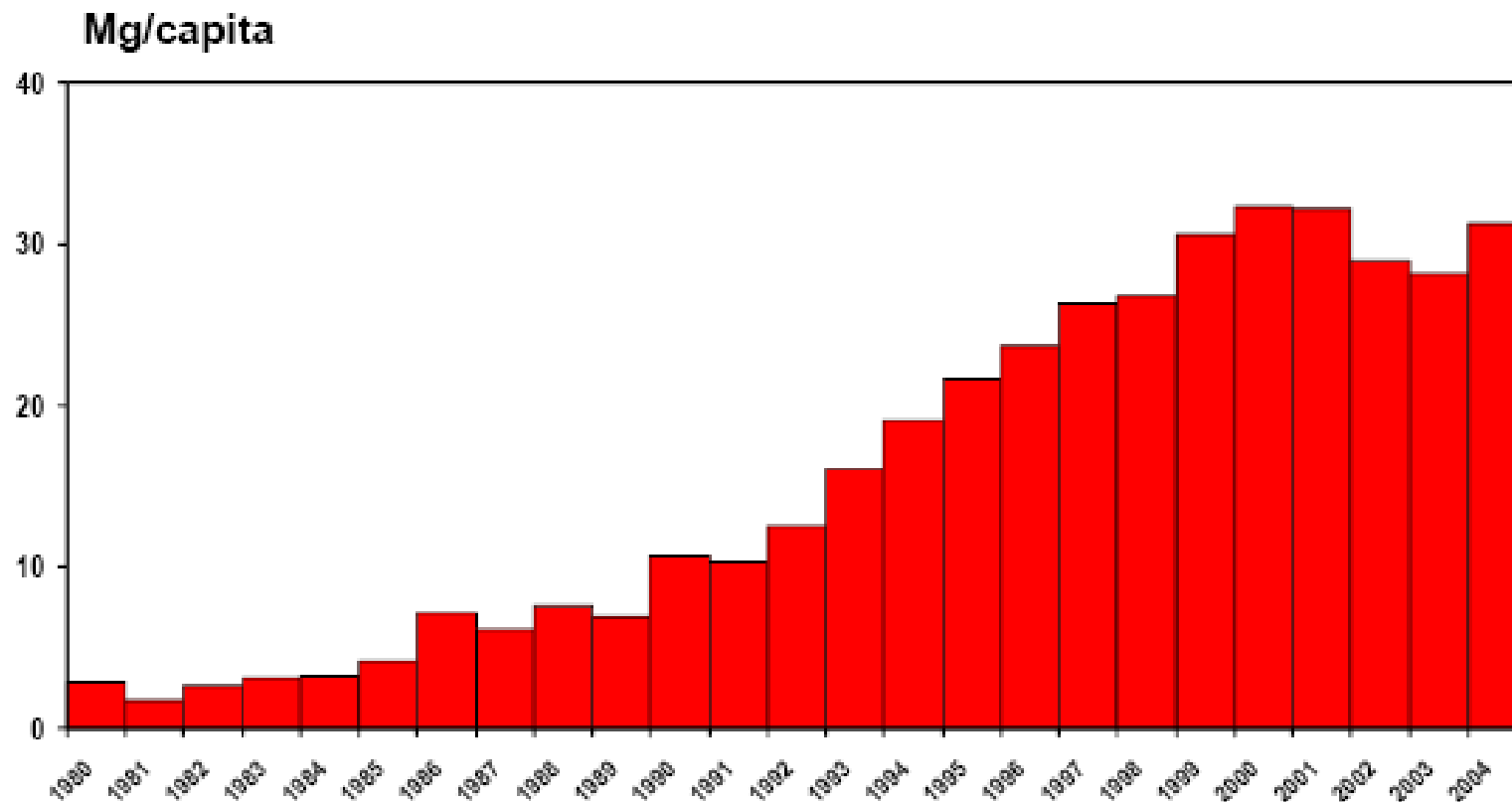
Source: International Narcotics Control Board; United Nations Demographic Yearbook  
By: Pain & Policy Studies Group, University of Wisconsin/WHO Collaborating Center, 2006

# Mg/capita Consumption of Morphine, Ireland, 1980-2004



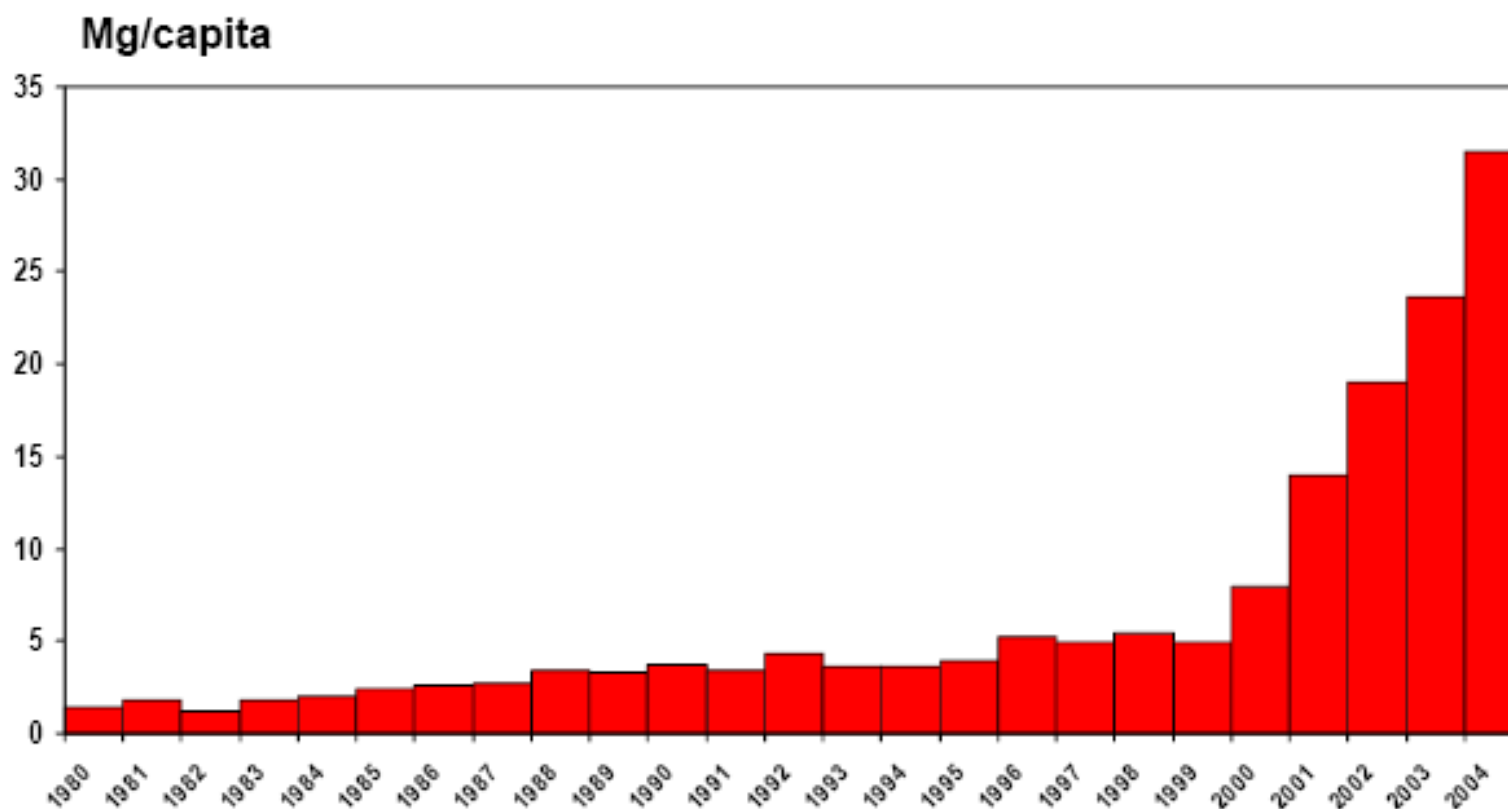
Source: International Narcotics Control Board; United Nations Demographic Yearbook  
By: Pain & Policy Studies Group, University of Wisconsin/WHO Collaborating Center, 2006

# Mg/capita Consumption of Methadone, Australia, 1980-2004



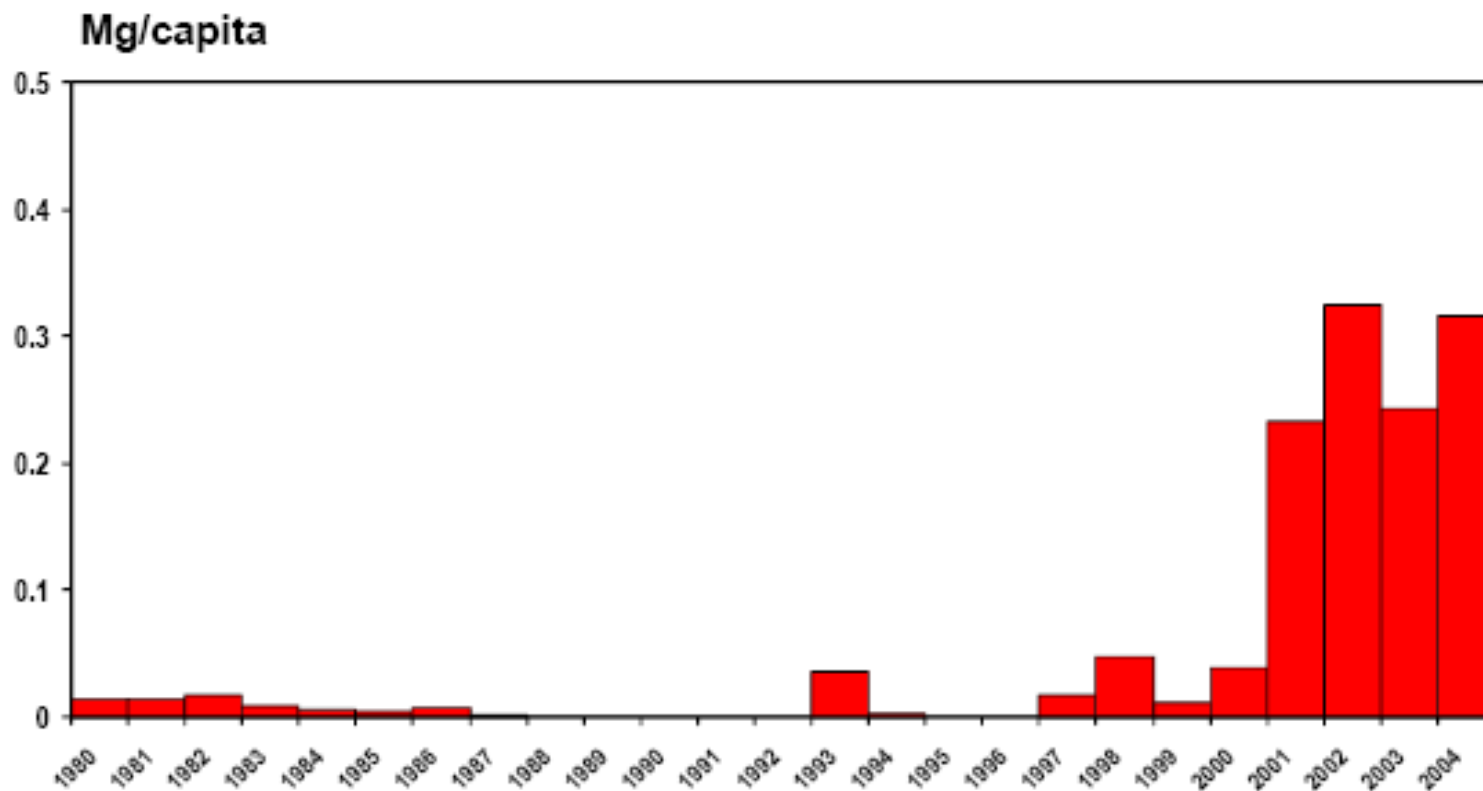
Source: International Narcotics Control Board; United Nations Demographic Yearbook  
By: Pain & Policy Studies Group, University of Wisconsin/WHO Collaborating Center, 2006

# Mg/capita Consumption of Oxycodone, Australia, 1980-2004



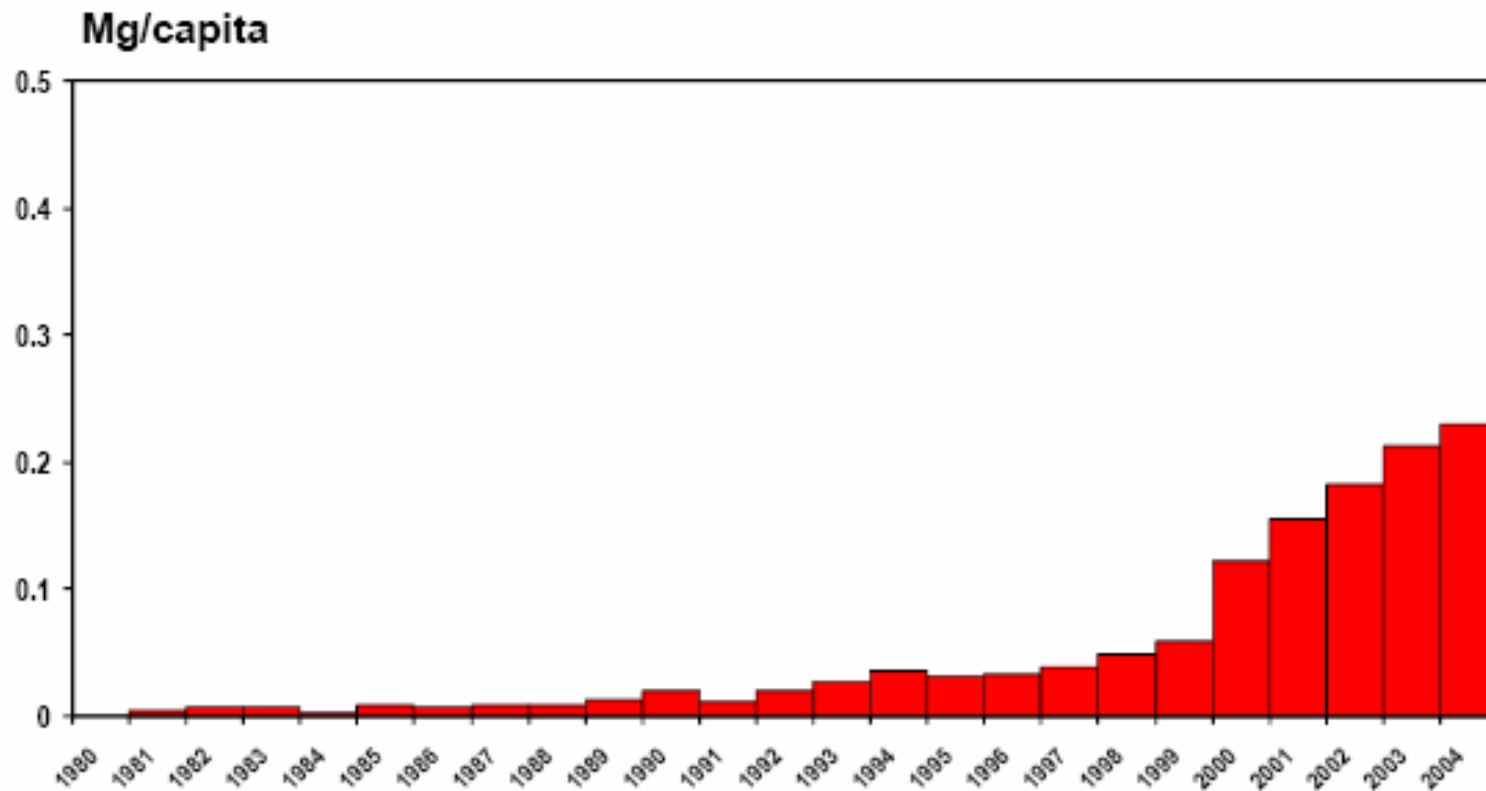
Source: International Narcotics Control Board; United Nations Demographic Yearbook  
By: Pain & Policy Studies Group, University of Wisconsin/WHO Collaborating Center, 2006

# Mg/capita Consumption of Hydromorphone, Australia, 1980-2004



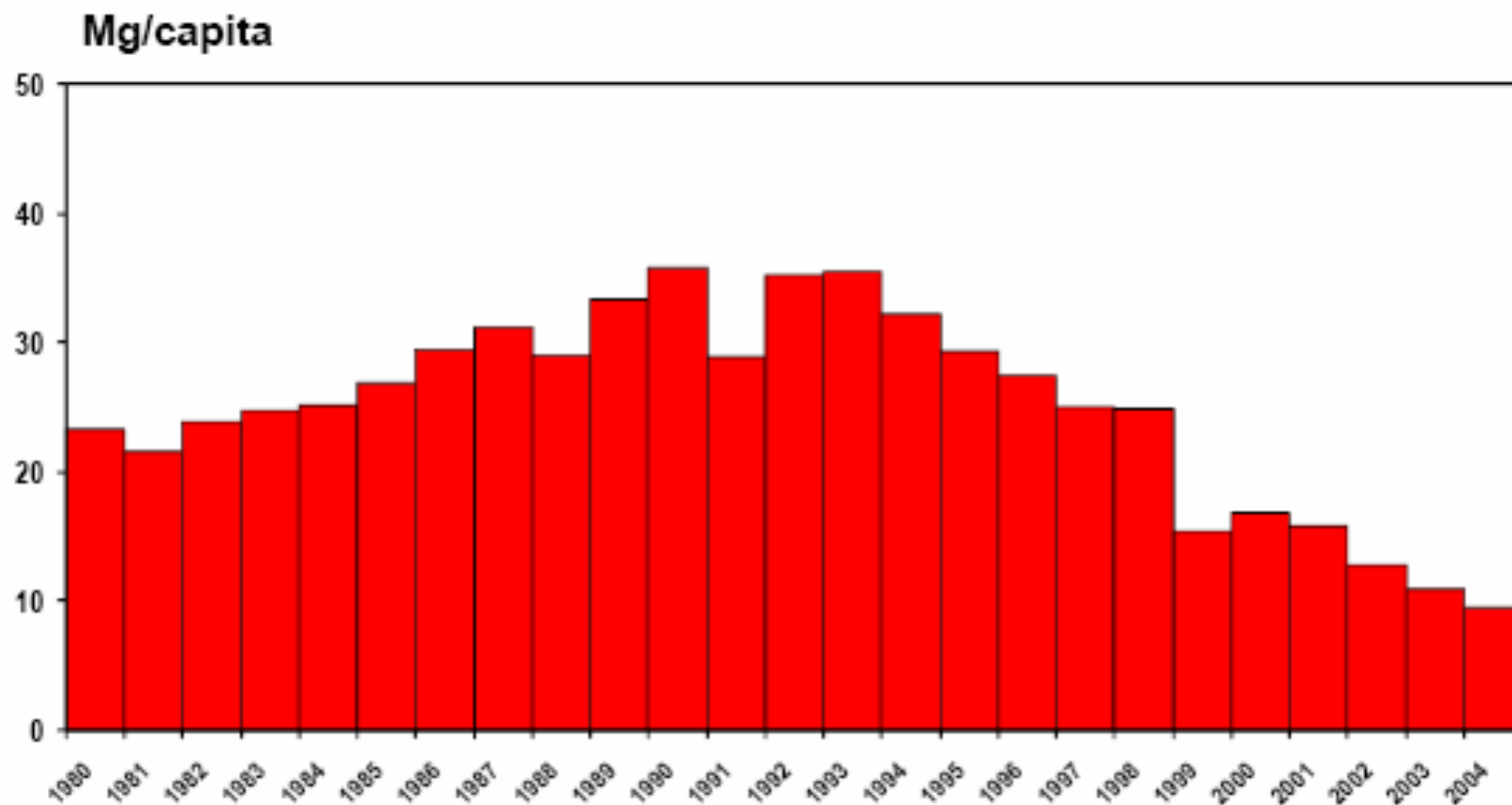
Source: International Narcotics Control Board; United Nations Demographic Yearbook  
By: Pain & Policy Studies Group, University of Wisconsin/WHO Collaborating Center, 2006

# Mg/capita Consumption of Fentanyl, Australia, 1980-2004



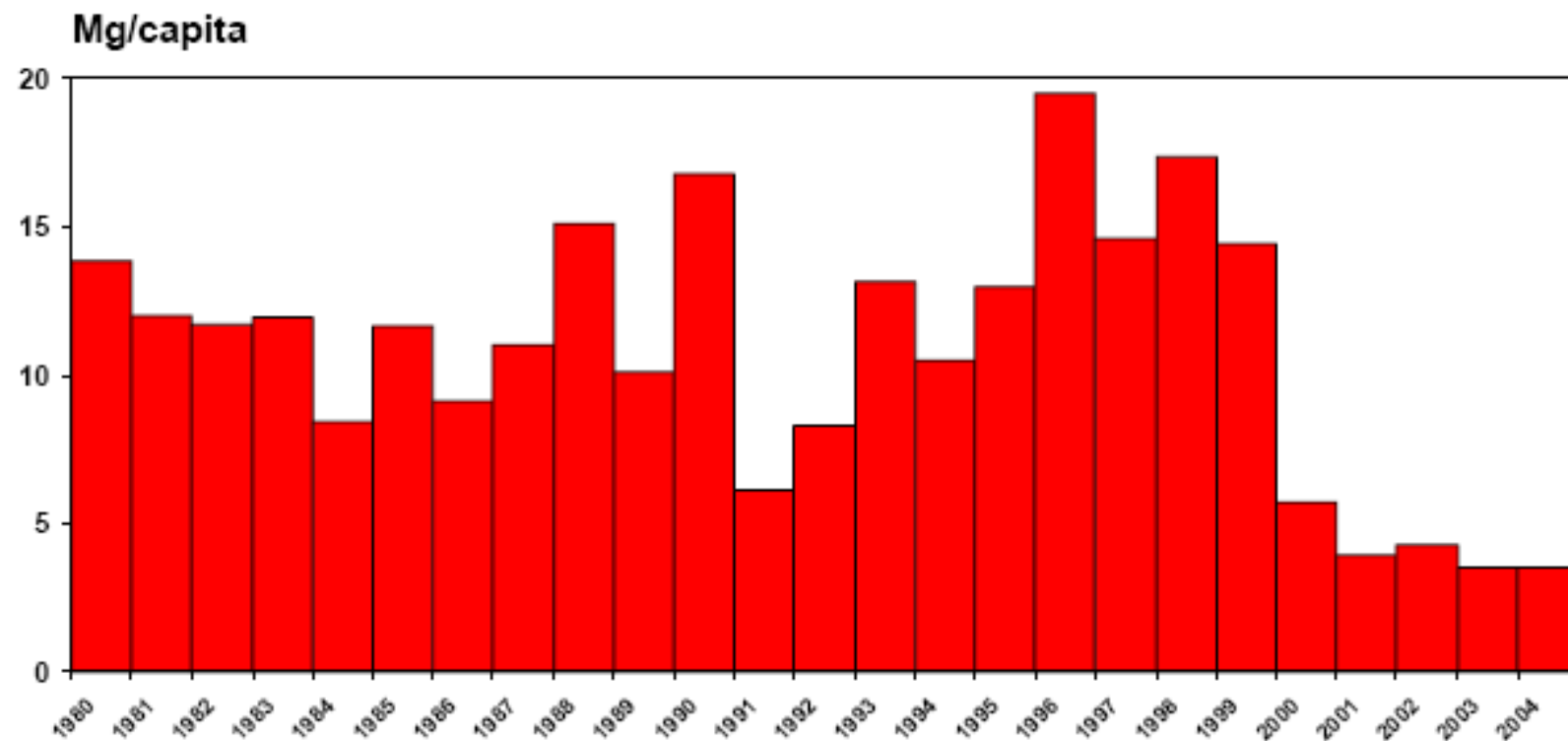
Source: International Narcotics Control Board; United Nations Demographic Yearbook  
By: Pain & Policy Studies Group, University of Wisconsin/WHO Collaborating Center, 2006

# Mg/capita Consumption of Pethidine, Australia, 1980-2004



Source: International Narcotics Control Board; United Nations Demographic Yearbook  
By: Pain & Policy Studies Group, University of Wisconsin/WHO Collaborating Center, 2006

# Mg/capita Consumption of Pethidine, Ireland, 1980-2004




Source: International Narcotics Control Board; United Nations Demographic Yearbook  
By: Pain & Policy Studies Group, University of Wisconsin/WHO Collaborating Center, 2006

**Table 5.5: Community prescriptions for nervous system drugs, Australia, 1999 to 2001**

Type of nervous system drug	Number of prescriptions			Defined daily dose		
	1999	2000	2001	1999	2000	2001
		(m)			(DDD <sup>(a)</sup> )	
<b>Analgesics</b>						
Opioid	6.5	6.7	7.5	9.6	9.8	11.2
Non-opioid	6.5	6.4	6.3	12.4	12.3	12.0
<i>Total analgesics</i>	<i>12.9</i>	<i>13.0</i>	<i>13.8</i>	<i>21.9</i>	<i>22.0</i>	<i>23.2</i>
<b>Psycholeptics</b>						
Major tranquillisers <sup>(b)</sup>	2.5	2.6	2.7	6.2	6.7	7.4
Anxiolytics, hypnotics and sedatives <sup>(c)</sup>	8.8	8.7	8.7	25.3	24.3	24.1
<i>Total psycholeptics</i>	<i>11.4</i>	<i>11.4</i>	<i>11.3</i>	<i>31.5</i>	<i>31.0</i>	<i>31.5</i>
Antidepressants	9.1	10.0	10.9	41.0	46.6	51.5
Other nervous system drugs <sup>(d)</sup>	0.8	0.9	0.7	2.4	1.6	4.1
<b>Total nervous system drugs</b>	<b>21.2</b>	<b>22.3</b>	<b>23.0</b>	<b>96.8</b>	<b>101.2</b>	<b>110.3</b>

(a) Defined daily dose and DDD equivalent per day

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- ◆ There are a lot of legal opioids around
  - ◆ We are prescribing them – liberally
  - ◆ So what is the evidence
    - Chronic non cancer pain



Pain 112 (2004) 372–380

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**PAIN**

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[www.elsevier.com/locate/pain](http://www.elsevier.com/locate/pain)

## Opioids in chronic non-cancer pain: systematic review of efficacy and safety


Eija Kalso<sup>a,\*</sup>, Jayne E. Edwards<sup>b</sup>, R. Andrew Moore<sup>b</sup>, Henry J. McQuay<sup>b</sup>


<sup>a</sup>*Pain Clinic, Department of Anaesthesia and Intensive Care Medicine, Helsinki University Central Hospital, P.O. Box 340, FIN 00029 HUS, Finland*

<sup>b</sup>*Pain Research and Nuffield Department of Anaesthetics, University of Oxford, Oxford Radcliffe Hospital, The Churchill, Headington, Oxford OX3 7LJ, UK*

Received 19 April 2004; received in revised form 9 September 2004; accepted 14 September 2004

15 randomised controlled trials  
Nociceptive and neuropathic pain  
Mean decrease in pain of 30%  
4 studies on iv opioids  
11 studies 1025 patients oral  
opioids vs placebo 4 days to eight weeks

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- ◆ fentanyl, hydromorphone, methadone, morphine, oxycodone and oxymorphone.
  - ◆ mean daily doses varied from 30 -120 mg of morphine, 20 - 45 mg of oxycodone, and 15 mg of methadone.
  - ◆ function and quality of life studies were not evaluated in all

- 
- ◆ This Kalso review suggests that opioids used in the short term (8 weeks) can decrease pain intensity by 30% for both nociceptive and neuropathic pain.

# Efficacy and Safety of Opioid Agonists in the Treatment of Neuropathic Pain of Nonmalignant Origin

Systematic Review and Meta-analysis

of Randomized Controlled Trials JAMA 2005;293:3043-3052

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Elon Eisenberg, MD

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Ewan D. McNicol, RPh

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Daniel B. Carr, MD

**Context** In the United States, an estimated 2 million persons have neuropathic pain that is often resistant to therapy. The use of opioids for neuropathic pain remains controversial, in part because studies have been small, have yielded equivocal results, and have not established the long-term risk-benefit ratio of this treatment.

22 articles looking at short term <24 hours n = 14  
and intermediate term - median 28 days (8-56) n=8

Short term trials contradictory results

# Eisenberg

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- ◆ oral, rectal, transdermal, intravenous, intramuscular or subcutaneous
- ◆ short term group morphine, fentanyl, alfentanil, meperidine (pethidine) or codeine

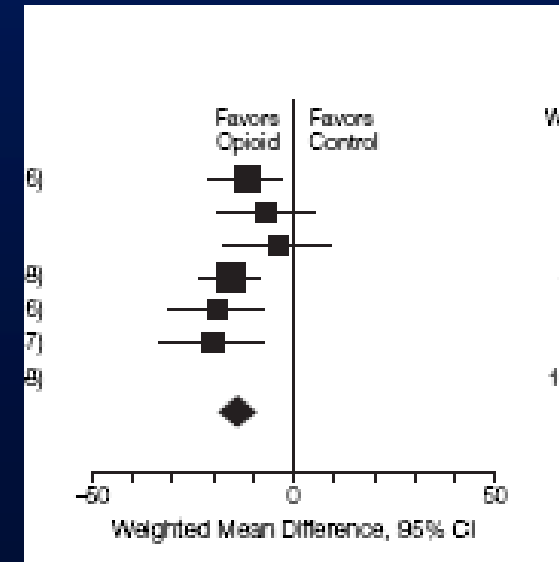
# Eisenberg - Intermediate trials

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- ◆ morphine, oxycodone, methadone and levorphanol were included, placebo was used in 7 of the 8 trials.
- ◆ doses ranged from morphine 20 - 300 mg per day, oxycodone 20 -120 mg per day, methadone 10 - 80 mg per day and levorphanol means of 2.7 - 8.9 mg per day.

# Eisenberg - Intermediate trials

- ◆ This meta analysis found overall mean pain intensity to be 14 points (95% CI -18 to -10) lower in the opioid treated patients.
- ◆ The authors had difficulty commenting on functional or quality of life



# REVIEW

## **Opioids for chronic noncancer pain: a meta-analysis of effectiveness and side effects**

Andrea D. Furlan, Juan A. Sandoval, Angela Mailis-Gagnon, Eldon Tunks

**CMAJ 2006:174;1589-1594**

# Furlan

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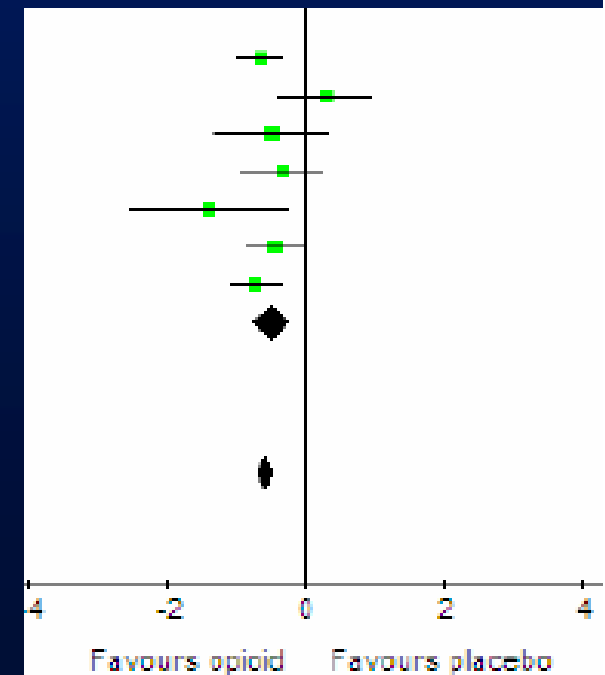
- ◆ 41 RCTs
- ◆ 6019 patients
- ◆ 80% nociceptive
- ◆ 12% neuropathic
- ◆ Methodology good (87%)
- ◆ Tramadol (218mg), propoxyphene (180mg), codeine (300mg), morphine (80mg), oxycodone (40mg)

# Furlan

- ◆ Average 5 weeks (1 – 16)
- ◆ 33% drop out rate in the opioid group
- ◆ 38% in placebo group
- ◆ 90% funded by or at least 1 author affiliated with a pharma
- ◆ Benefit in favour of opioids

SMD 0.6

(SMD = standardised mean difference)




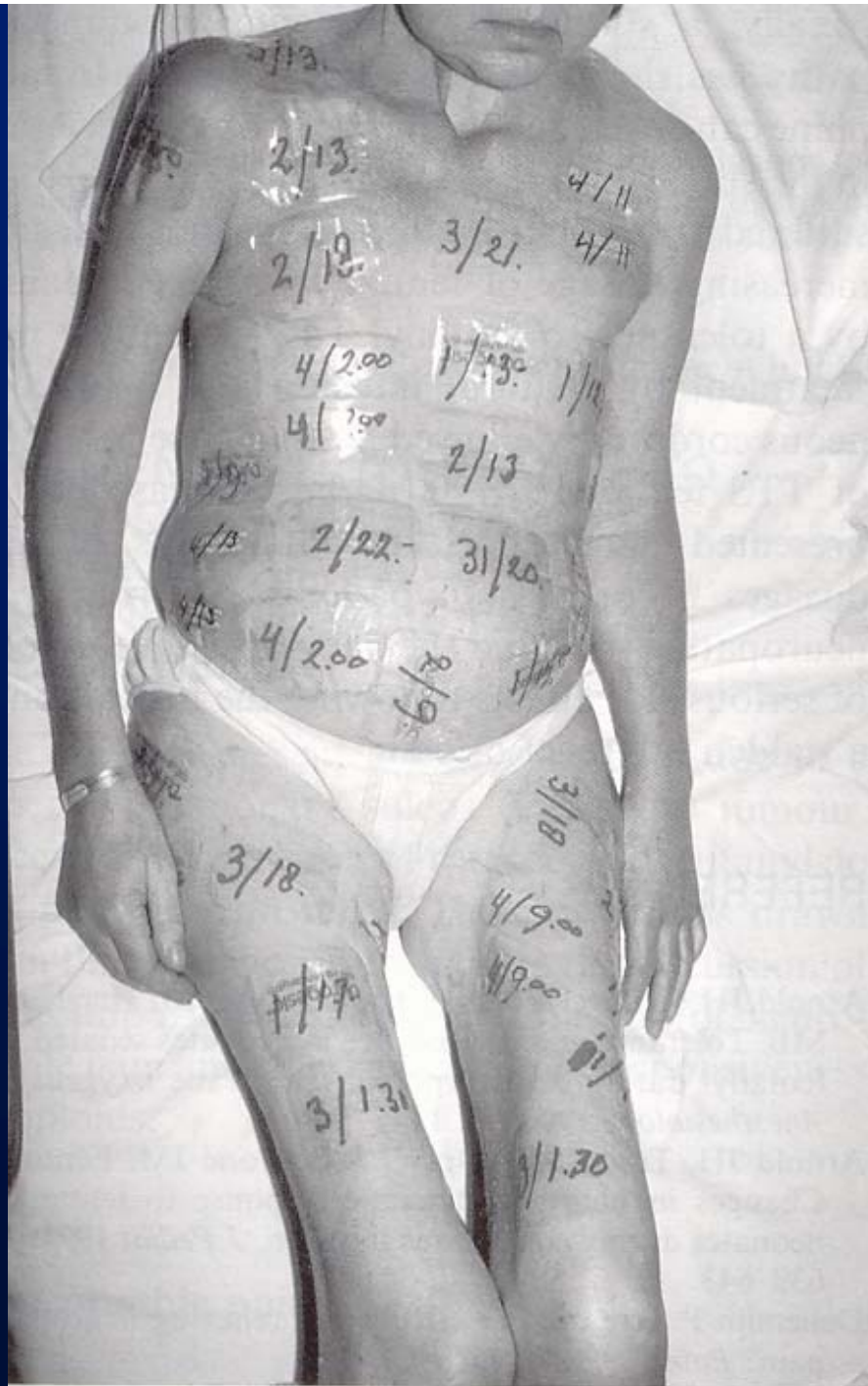
# Summarise

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- ◆ No RCTs have tested opioids for the treatment of CNCP in doses greater than 300 mg morphine (equivalent) per day (or methadone 80 mg per day), for more than 16 weeks.
- ◆ It was difficult to determine the effects of opioids on functional or quality of life outcomes.

- ◆ There was a significant placebo effect
- ◆ The mean decrease in pain intensity was 30% (15-30% for placebo).
- ◆ The mean decrease in Visual Analogue Scale (VAS) pain score was 15/100
- ◆ 5-10% of patients withdrew due to lack of opioid efficacy (20% for placebo).
- ◆ 50-80% of patients developed at least one opioid-adverse effect (30-60% for placebo).

- 
- ◆ 20-30% of patients withdrew due to opioid-adverse effects (5-15% for placebo).
  - ◆ Only 30% of RCT patients remained on 'long-term' opioid therapy for the management of chronic pain.



2/13.

2/13.

4/11

2/13.

3/21.

4/11

4/2.00

1/13.

1/13.

4/1.00

2/13

4/13

2/22.

3/20.

4/15

4/2.00

3/9

3/18.

3/18

4/9.00

~~3/13~~

4/9.00

3/13.

3/1.30

# Transdermal route compared to oral route

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- Extends dosing interval
- No first-pass liver metabolism of the drug
- Possibly less effect on the gastrointestinal system
- Patient preference
- Permits administration
  - In the presence of nausea / vomiting
  - For patients unable to swallow

# Trans Dermal Fentanyl

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- low molecular weight
- lipid/water solubility
- high analgesic potency
- lack of topical irritation
- No active metabolites
- Renal failure preferred

# Transdermal Fentanyl for Improvement of Pain and Functioning in Osteoarthritis

A Randomized, Placebo-Controlled Trial

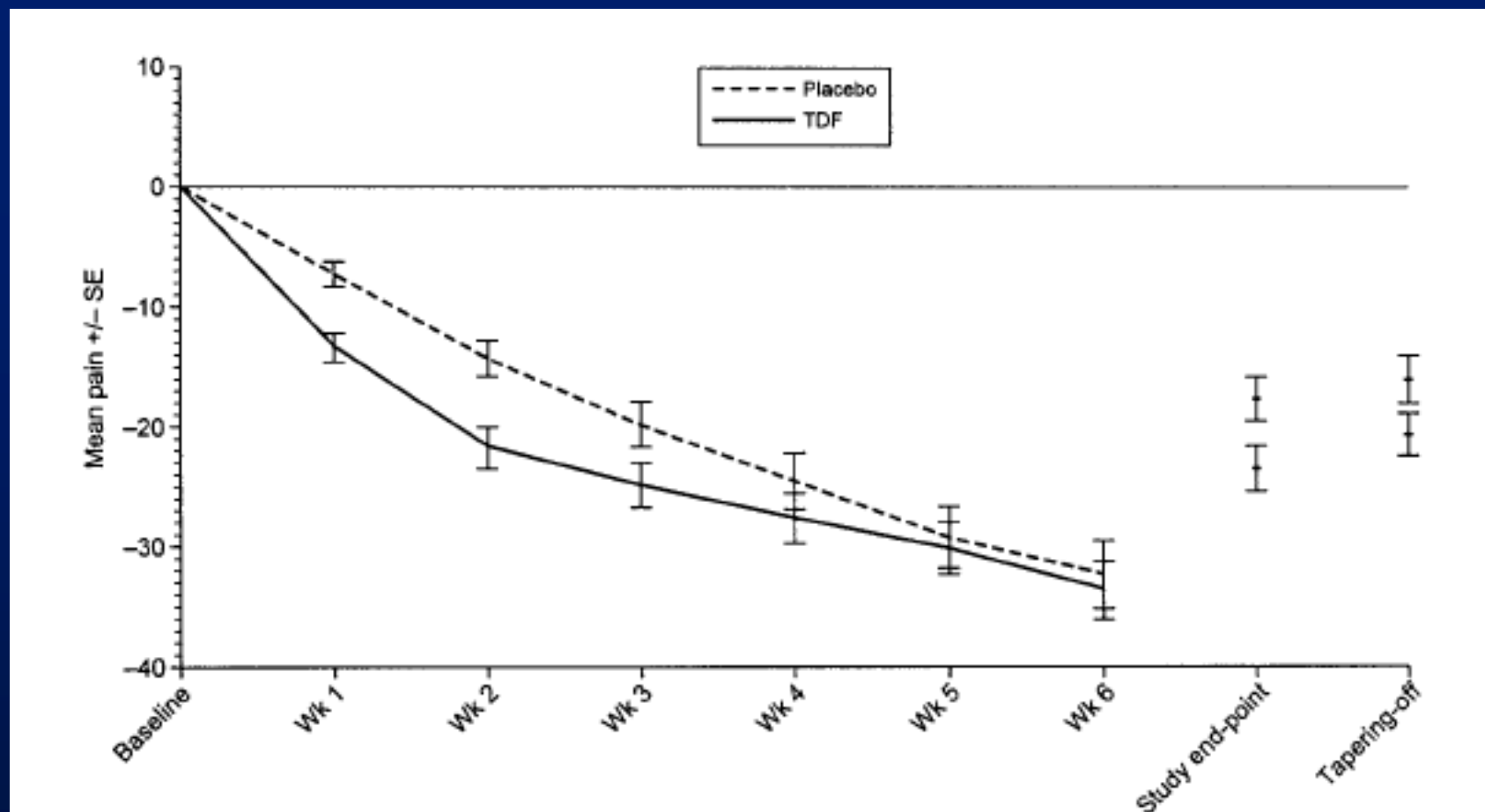
Richard Langford,<sup>1</sup> Frank McKenna,<sup>2</sup> Stuart Ratcliffe,<sup>1</sup> Jozef Vojtassák,<sup>3</sup> and Ute Richarz<sup>4</sup>

**Arthritis & Rheumatism 2006:54;1829-1837**

# Langford et al

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- ◆ OA hip and or knee (ACR Criteria) awaiting joint replacement
- ◆ WOMAC Index on function
- ◆ 399 pats 202 with TDF vs 197 placebo
- ◆ Dose range 25 mcg – 100 mcg / hr
- ◆ 6 week trial
- ◆ Completed TDF 106 vs placebo 93



**Figure 2.** Pain over the course of the study, expressed as the change from baseline in mean  $\pm$  SEM morning and evening pain assessments on visual analog scales (ranging from 0 = no pain to 100 = pain as bad

# Buprenorphine

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- ◆ Old dog with new tricks
- ◆ Partial mu agonist/kappa antagonist
- ◆ Transdermal preparation available in Europe for some time recent availability in Australia

## **Transdermal Buprenorphine in the Treatment of Chronic Pain: Results of a Phase III, Multicenter, Randomized, Double-Blind, Placebo-Controlled Study**

**“No statistical difference between buprenorphine and placebo”**

Jürgen Sorge, MD,<sup>1</sup> and Reinhard Sittl, MD<sup>2</sup>

*<sup>1</sup>Department of Anesthesiology, Surgical Intensive Care and Pain Therapy, Peine District Hospital, Peine, and <sup>2</sup>Pain Clinic, University Clinic of Anesthesiology and Intensive Medicine, Erlangen, Germany*

Clinical Therapeutics/Volume 28, Number 6, 2006


### **Brief Report**

**“Generally well tolerated and effective”**

## **Long-Term Management of Chronic Pain with Transdermal Buprenorphine: A Multicenter, Open-Label, Follow-Up Study in Patients from Three Short-Term Clinical Trials**

Rudolf Likar, MD<sup>1</sup>; Hubertus Kayser, MD<sup>2</sup>; and Reinhard Sittl, MD<sup>3</sup>

*<sup>1</sup>Pain Clinic, General Hospital Klagenfurt, Klagenfurt, Austria; <sup>2</sup>Practice for Anesthesiology and Special Pain Therapy, Bremen, Germany; and <sup>3</sup>Pain Clinic, University of Erlangen-Nürnberg, Erlangen, Germany*

- 
- ◆ transdermal buprenorphine or fentanyl may produce less somnolence and constipation compared with oral slow-release morphine (data from open-label, comparative studies).

# Tramadol

- ◆ Mu, noradrenergic and serotonergic receptor agonist effects
- ◆ Limited Level 1 evidence of effect



Research article

Open Access

## Prevalence of opioid adverse events in chronic non-malignant pain: systematic review of randomised trials of oral opioids


R Andrew Moore and Henry J McQuay

Pain Research and Nuffield Department of Anaesthetics, University of Oxford, Oxford Radcliffe Hospital, Oxford, UK

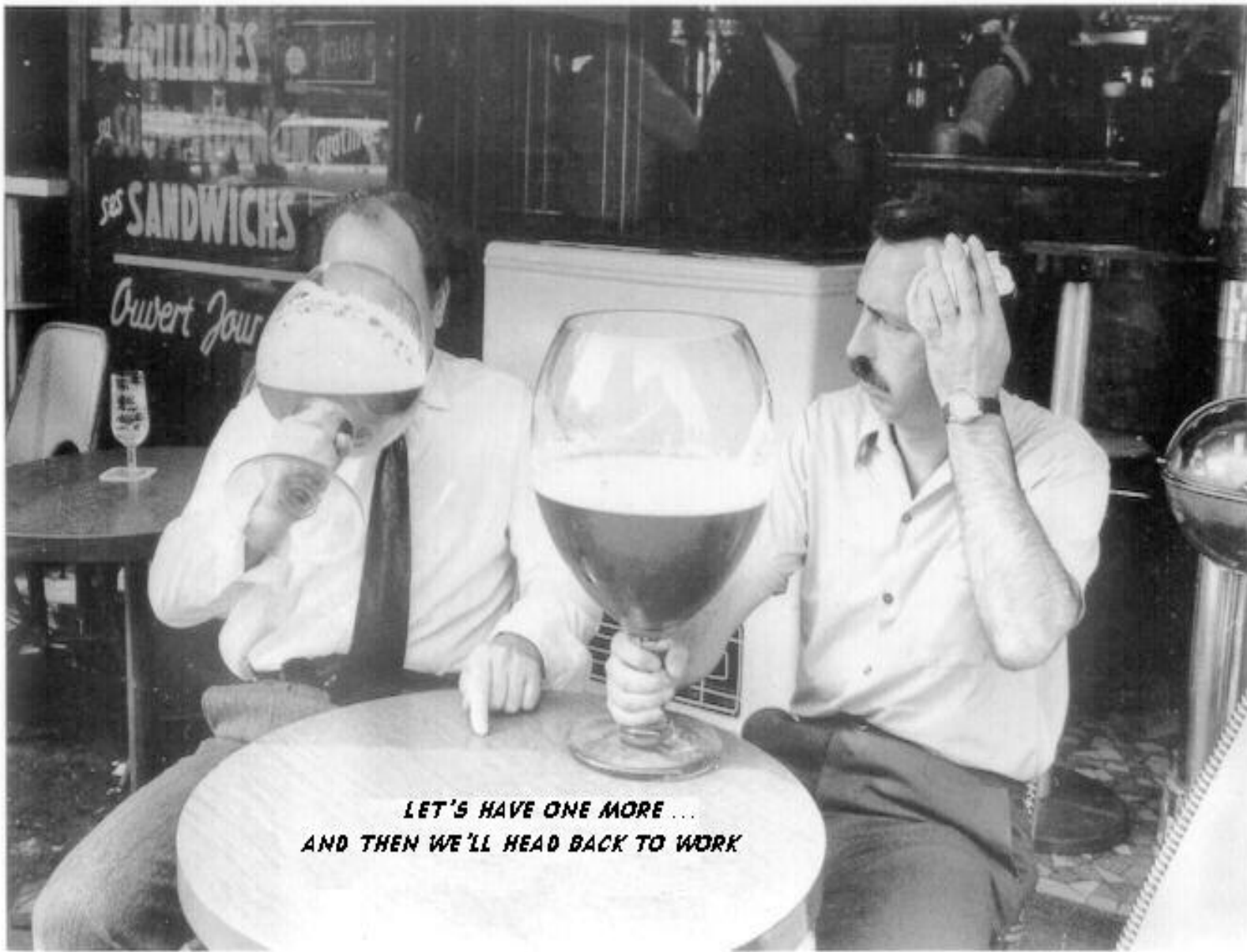
Corresponding author: R Andrew Moore, [andrew.moore@pru.ox.ac.uk](mailto:andrew.moore@pru.ox.ac.uk)

Received: 18 Apr 2005 Revisions requested: 18 May 2005 Revisions received: 24 May 2005 Accepted: 6 Jun 2005 Published: 28 Jun 2005

34 trials with 5546 patients  
Includes trials without a placebo  
Moderate rather than severe pain  
Dry mouth 25%  
Nausea 21%  
Constipation 22%  
Withdrawal from study 22%



**Abscence of evidence is not  
evidence of no effect!**



**LET'S HAVE ONE MORE ...  
AND THEN WE'LL HEAD BACK TO WORK**