

HYPERALGESIC RESPONSES in METHADONE MAINTENANCE PATIENTS

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CONTENTS

[Introduction](#)

[Methods](#)

[Results](#)

[Conclusions](#)



INTRODUCTION

Opioid substitution therapy (OST) , also called opioid replacement therapy or maintenance therapy, provides opioid drug users with a prescription medicine that replaces their drug of choice (e.g., heroin) and helps them manage their addiction. The most often medicine used is methadone.



INTRODUCTION



INTRODUCTION

Challenges of Acute Pain Management in Opioid Addicts

- Opiophobia amongst Prescribers
- Fears of Exacerbating Addiction
- Societal Prejudices Against Addicts



INTRODUCTION

OPIOID REPLACEMENT THERAPY

HELPFUL or HURTFUL?



INTRODUCTION

Ho and Dole (1979)

- Cold Pressor Test
- No Significant Difference in Pain Tolerance
- Significantly Lower Pain Threshold in Methadone-Maintained Patients Compared with Drug-free Controls

Compton (1994)

- Cold Pressor Test
- Pain Intolerance in Methadone-Maintained Patients in Comparison with Control Group



INTRODUCTION

Schall et al. (1996)

- Mechanical Pressure-Induced Pain
- Trough Plasma Concentration of Methadone: Similar Pain Threshold and Tolerance Values
- Peak Plasma Concentration of Methadone: Higher Threshold and Tolerance Values than Controls



INTRODUCTION

Dyer et al. (1999)

- Electrical Stimulation
- Through Plasma Methadone Concentrations: Similar Pain Detection to Control Group
- Peak Plasma Concentration of Methadone: Less Pain-Sensitive than Controls



METHODS

Research Ethics Committee, Royal Adelaide Hospital, Adelaide, South Australia

Sixteen patients (11 male and 5 female; age range 21 - 43 years) who had been enrolled in the South Australian Public Methadone Maintenance Program for at least 3 months with no dose changes in the previous month were recruited.

The average dose of methadone was 62 ± 5.8 mg.

A Temperature-controlled Room (24°C)

The first test took place 30 minutes prior to their scheduled dose (0 h), and the second test 3 hours after the first test (3 h).



METHODS

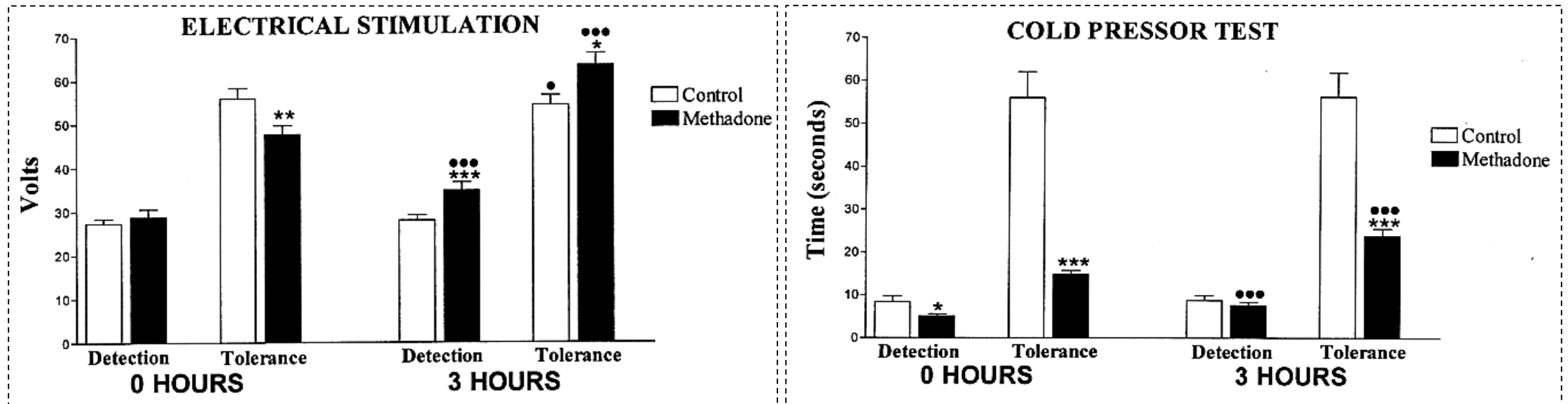
Methadone Concentrations: High-Performance Liquid Chromatography (HPLC)

Pain Induction

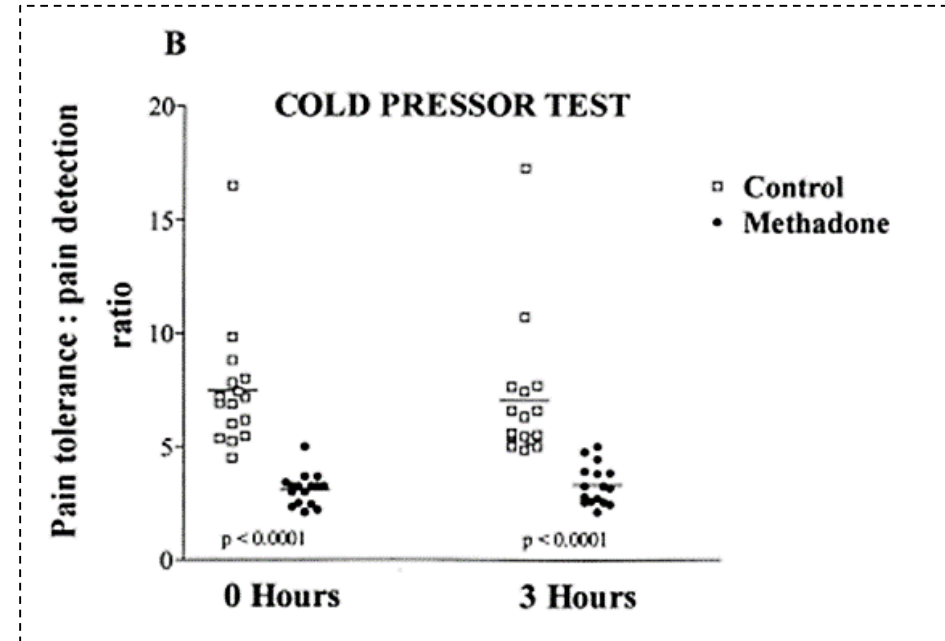
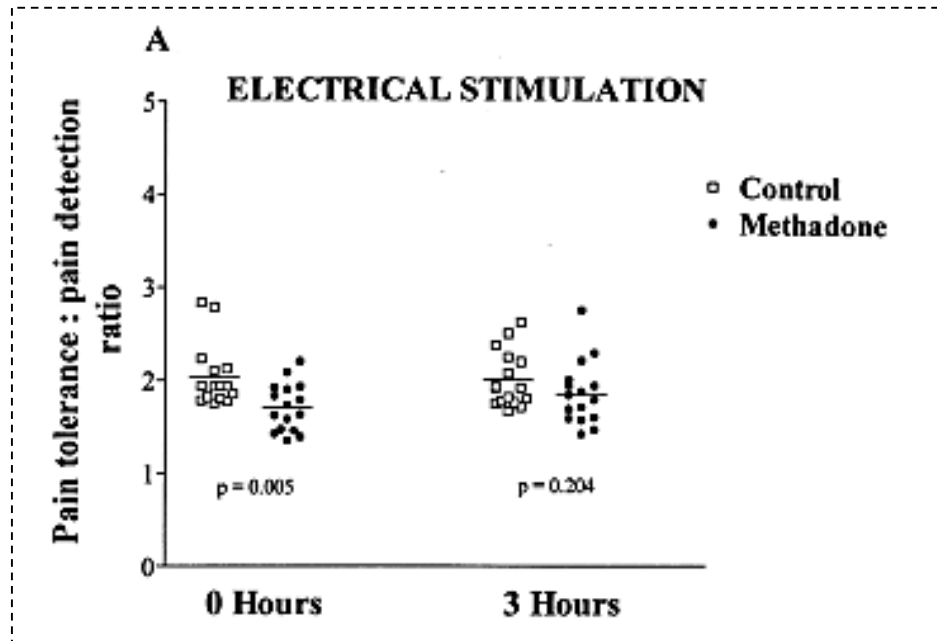
- Electrical Stimulation
- Cold Pressor Test



RESULTS



RESULTS



CONCLUSIONS

Pain sensitivity of methadone maintenance patients is determined by these factors:

- The Nature of the Nociceptive Stimulus
- The Concentration of Methadone in Plasma



**Thank you
for your attention**

