

# Médicaments antalgiques, douleur chronique et réadaptation de l'appareil locomoteur

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**5e Journée interprofessionnelle – 2 octobre 2026 -  
Centre hospitalier de Rennaz - Hôpital Riviera-Chablais**

# Crise des opioïdes – en Suisse aussi!

Entre 2015 et **2019**, la Suisse est passée:

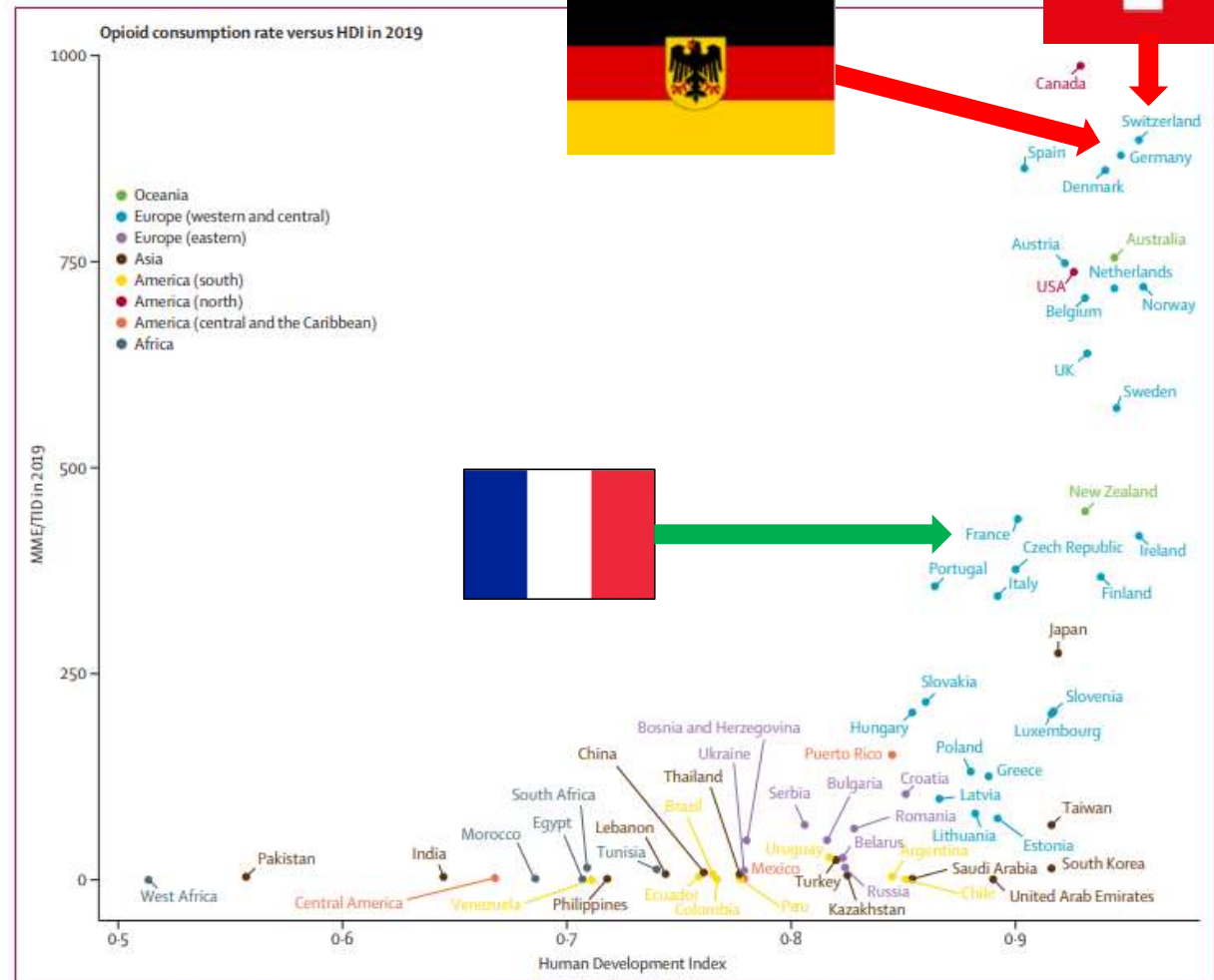
**Du 7ème rang au 2ème rang Mondial**  
Derrière le Canada

... devant les USA (1 → 8ème)

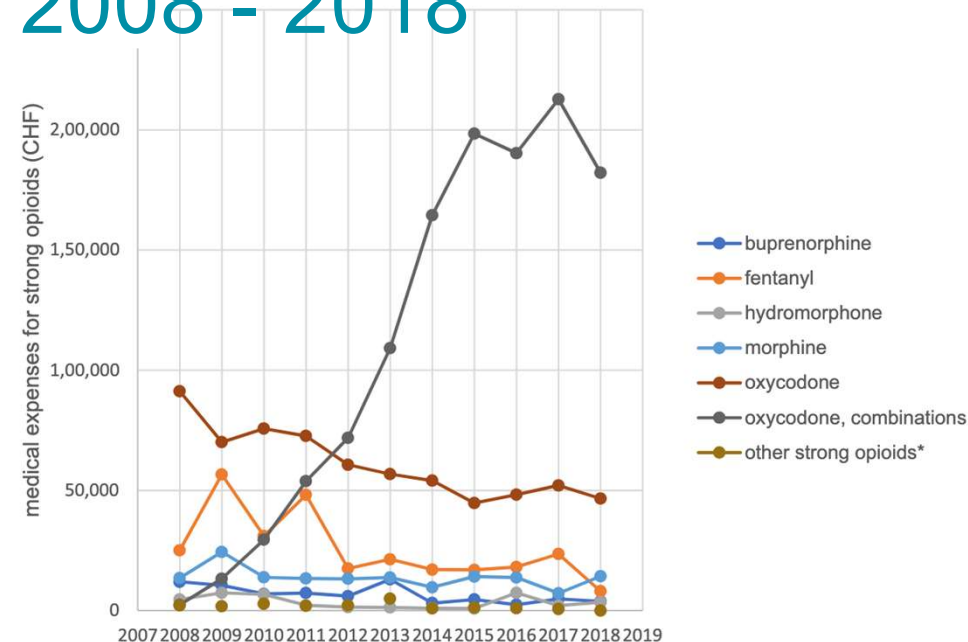
**Suisse Alémanique** > Suisse Romande

Toutes indications confondues...mais

**Douleur non cancéreuse: > 80% !**



# Crise des opioïdes et autres antalgiques aussi 2008 - 2018

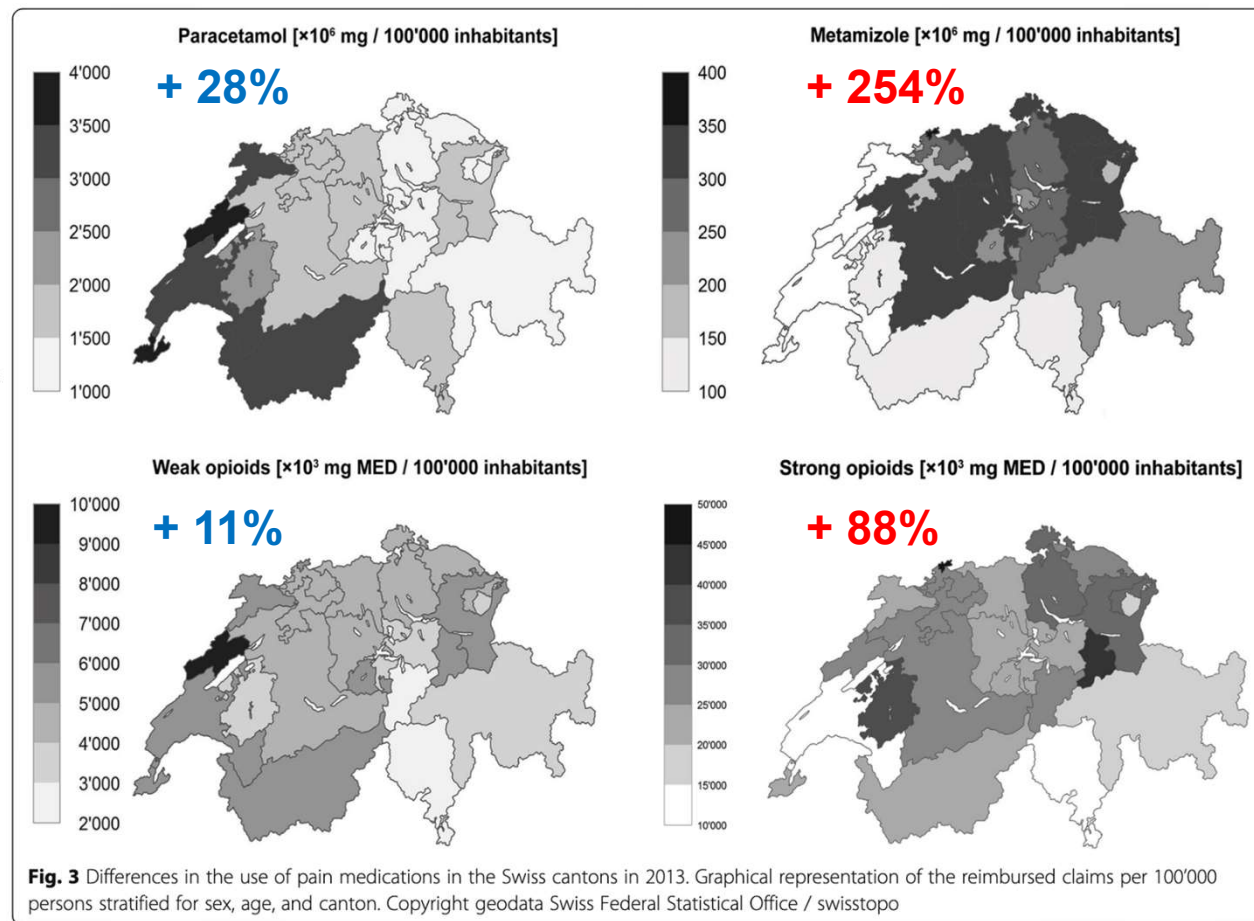


Opioïdes dit forts: Oxycodone +++

Trauma mineurs:

coûts ttt opioïdes: + 192%

prescription opioïdes: + 91%



Courtoisie Dr Konzelmann

Wertli MM. BMC Health Services Research 2017

Muller D. Journal of Occupational Rehabilitation 2024

# Plan

Expérience d'utilisation des antalgiques à la CRR

Facteurs de risque de consommation d'opioïdes

Relation Antalgiques - Fonctionnement

Quelques implications / recommandations

Conclusion



# Utilisation à la CRR et réflexions

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## Original article

### Analgesic consumption in a large sample of people in musculoskeletal rehabilitation: A descriptive study

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Chronic non-cancer pain  
Vocational

## ABSTRACT

**Background:** Consumption of opioids is increasing worldwide in people with chronic non-cancer pain, although their effectiveness is debated.  
**Objectives:** The aim of the current study was to evaluate analgesic consumption and its association with different variables (demographic variables, pain, anxiety/depression, catastrophism, and kinesiophobia), in the field of musculoskeletal rehabilitation, where no data are available.

**Methods:** This was a retrospective study over a period of 8 years on people hospitalised for rehabilitation after injury. Participants were classified into 3 categories: no analgesics (NA), non-opioid analgesics (NOA), and opioid analgesics (OPA). ANOVA or chi-squared tests were used to compare the 3 groups.

**Results:** A total of 4350 people (84% men; mean [SD] age, 44 [11] years) were included. In total, 20% were taking OPA, 40% NOA and 40% NA. In the OPA group, tramadol was mainly used, and the morphine equivalent median dose was 8.3 mg/day. In the NOA group, paracetamol and ibuprofen were mostly used. Symptoms increased progressively across the 3 groups (NA/NOA/OPA), with increased levels of pain severity/interference, anxiety/depression and catastrophizing, and a higher prevalence of neuropathic pain in the OPA group versus the others.

**Conclusions:** These results are consistent with those found in groups of people with chronic pain taking larger doses of opioids and following opioid reduction or cessation programs. Opioid prescription did not increase over the 8 years, which was reassuring. These factors are important to emphasize because they can be modified in the rehabilitation setting with interdisciplinary management.

**Registration:** Our database was registered on Mendeley Data.

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## Introduction

Consumption of analgesics, particularly opioids, is increasing worldwide in people with chronic pain. In the United States and Europe, opioid consumption is a major public health problem that causes death, addiction, and misuse [1–3]. Switzerland is the seventh largest consumer of opioids worldwide, with 421 mg/year/inhabitant of morphine consumption [4]. Thus, between 2006 and 2013, the insurance claims for prescriptions of strong opioids have increased by 110% [5], mainly for methadone and oxycodone, and by 13% for weak opioids.

In the treatment of chronic non-cancer pain, the use of opioids is questionable because its efficacy is not better than that of analgesics or non-steroidal anti-inflammatory drugs (NSAIDs) [6,7].

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OPEN



### Pain medication associated with decreased physical performance and rehabilitation progress

Maria Mendes Fernandes<sup>a</sup>, Philippe Vuistiner<sup>a</sup>, Cyrille Burrus<sup>a,b</sup>, Michel Konzelmann<sup>a,c</sup>, Bertrand Léger<sup>a</sup>, Marie Besson<sup>d</sup>, François Luthi<sup>a,b,d,\*</sup>

## Abstract

**Introduction:** The effects of pain medication on physical performance in chronic pain are poorly understood. We examined the association between analgesics and physical performance in people with chronic musculoskeletal pain (CMSP) requiring rehabilitation.

**Methods:** We classified participants into 3 categories according to the highest level of medication used at admission for rehabilitation: no analgesics (NAs), nonopioid analgesics (NOAs), and opioid analgesics (OPAs). We measured performance with functional tests (8-minute walk test [8MWT], progressive isometric lifting evaluation [PILE], steep ramp test, handgrip strength test [HST], 5 times sit-to-stand test, and 1-minute stair-climbing test [MSCT]) at admission and discharge. Multiple regression models were used to assess the differences in functional capacity between the 3 groups, adjusting for potential confounders.

**Results:** We included 4,339 individuals; 1,731 took no analgesics (40%), 1,742 took NOAs (40%), and 866 took OPAs (20%). The median consumption was 11.7 mg per day according to morphine-equivalent dose calculation. Physical performance was poorer for patients taking than those not taking analgesics in all tests examined. We found a negative gradient in performance with increasing WHO analgesic ladder. The odds of achieving clinically significant improvements in 4 tests (8MWT, PILE, HST affected side, and MSCT) was reduced for people taking opioids compared with the NA group.

**Conclusion:** Given the inconclusive and limited evidence for the benefit of analgesics on pain and disability in CMSP, health professionals should be aware of these results for even low doses of opioids, which were associated with poor physical performance and rehabilitation progress.

**Keywords:** Physical performance measures, Physical activity, Function, Functional performance, Chronic musculoskeletal pain, Rehabilitation, Analgesics, Opioids, Pain medication, 6-minute walk test, Progressive isometric lifting evaluation, Steep ramp test, 1-minute stair-climbing test, 5 times sit-to-stand test, Handgrip strength test

## 1. Introduction

Most countries are facing an epidemic of analgesic prescriptions, especially opioids.<sup>67</sup> A retrospective analysis of drug prescriptions over 11 years (2008–2018) in a Swiss database showed increased use of all analgesics in patients with musculoskeletal injuries. The increase was even greater after minor injury.<sup>68</sup> In Switzerland,

opioid-related sales and poisonings increased by 91% and 177%, respectively, from 2000 to 2019.<sup>26</sup> Early opioid prescribing and long-term opioid use may also be counterproductive to recovery from many conditions because of the impact on reported clinical outcomes, prolonged disability, and increased use of medical resources.<sup>1,17,25,34,35,40,49</sup> even at low doses.<sup>26</sup>

*Sponsorships or competing interests that may be relevant to content are disclosed at the end of this article.*

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OPEN



### Effects of biopsychosocial complexity and pain-related factors on opioid prescription in patients with chronic musculoskeletal pain

Cyrille Burrus<sup>a,b,c</sup>, Hong Phuoc Duong<sup>a</sup>, Philippe Vuistiner<sup>a</sup>, Michel Konzelmann<sup>a,c</sup>, Bertrand Léger<sup>a</sup>, François Luthi<sup>a,b,d</sup>

## Abstract

**Introduction:** Opioid prescription is associated with various biopsychosocial (BPS) domains. Explaining how they interact is worth to better understand their role.

**Objectives:** To assess direct and indirect effects of BPS complexity and pain-related factors on opioid prescription in patients with chronic musculoskeletal pain.

**Methods:** We included 3,923 individuals admitted to a tertiary care rehabilitation clinic. Two outcomes were defined: likelihood of opioid prescription at admission (yes/no) and daily morphine equivalent dose (dMED) during rehabilitation. Predictors were sociodemographic factors, injury severity and location, pain-related factors (pain catastrophizing, depressive symptoms, pain severity), and BPS complexity assessed by the INTERMED method. Structural equation modelling was used to assess the direct and indirect effects of BPS complexity on outcomes.

**Results:** Biopsychosocial complexity had a direct effect on opioid prescription (OR 1.20; 95% CI 1.10–1.32) and indirect effects via pain severity (OR 1.09; 95% CI 1.05–1.12) and depressive symptoms (OR 1.02; 95% CI 1.00–1.04). Biopsychosocial complexity also had direct effect on dMED ( $\beta = 1.17$ , 95% CI 1.06–1.28) and an indirect effect via pain severity (exp  $\beta = 1.03$ ; 95% CI 1.00–1.07). Pain catastrophizing was indirectly associated with opioid prescription and dose via pain. The likelihood of opioid prescription was associated with female sex, increased education level, and spine trauma; the latter 2 factors were also associated with increased dMED.

**Conclusion:** Our study suggests that BPS complexity is associated with opioid prescription and dose, with direct and indirect effects via pain severity or depressive symptoms. Screening and addressing patients' complexity may help decrease opioid prescriptions and risk of misuse.

**Keywords:** Opioid, Chronic pain, Biopsychosocial factors, Complexity, Depression, INTERMED method

## 1. Introduction

The opioid crisis has become a major public health issue over the past 2 decades.<sup>27</sup> Following traumatic injury, up to 35% of patients continue to use opioids 4 months later,<sup>79</sup> and during the

rehabilitation phase after orthopedic trauma, 20% of individuals with chronic pain remain on opioids.<sup>40</sup> Opioid prescription is associated with biological,<sup>4,15,33,41,69</sup> psychological,<sup>47,48</sup> and social factors.<sup>60,73</sup>

*Sponsorships or competing interests that may be relevant to content are disclosed at the end of this article.*

C. Burrus, H. P. Duong equally contributed to this study.

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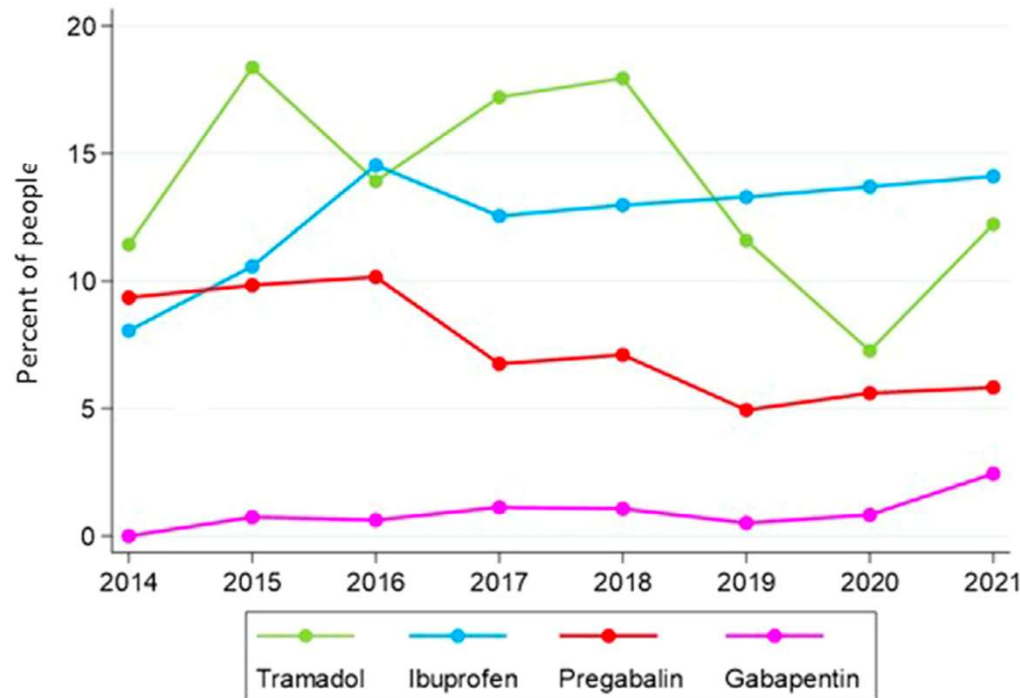
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# Place des antalgiques à la CRR

CRR: 4 350 patients en réadaptation MSK (2014-2021)

**Objectif** : décrire la consommation d'antalgiques et ses liens avec la douleur, l'anxiété, la dépression, le catastrophisme et la kinésiophobie



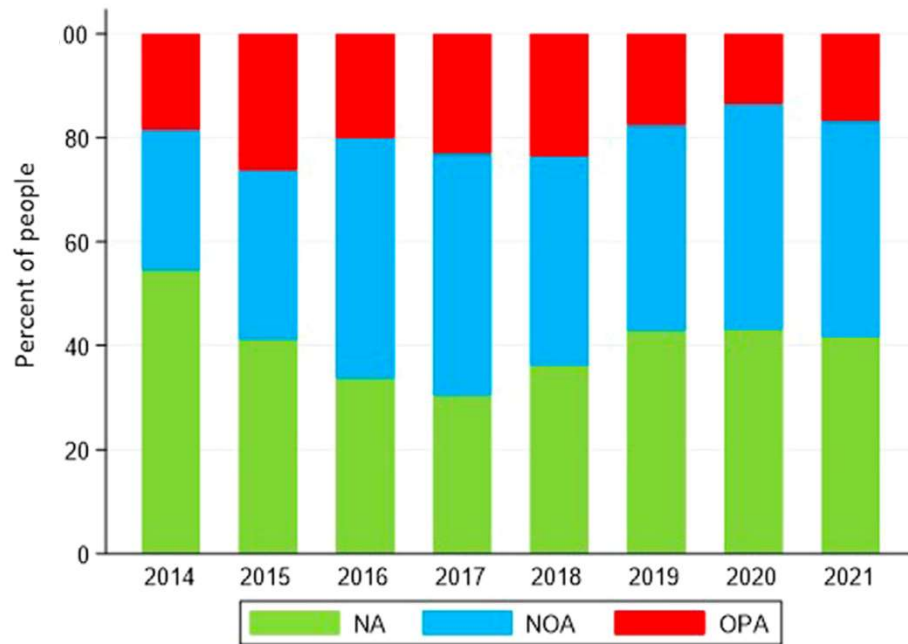
La prescription d'opioïdes n'a pas augmenté en 8 ans.

## À la sortie

21 % des patients qui avaient des opioïdes à l'admission ont pu arrêter  
10 % des patients ont reçu leur première prescription d'opioïdes durant le séjour.



# Place des antalgiques à la CRR / 1



**20 % avec opioïdes (OPA) à l'admission**

(principalement Tramadol, dose équivalente morphine méd. : 8,3 mg/jour).

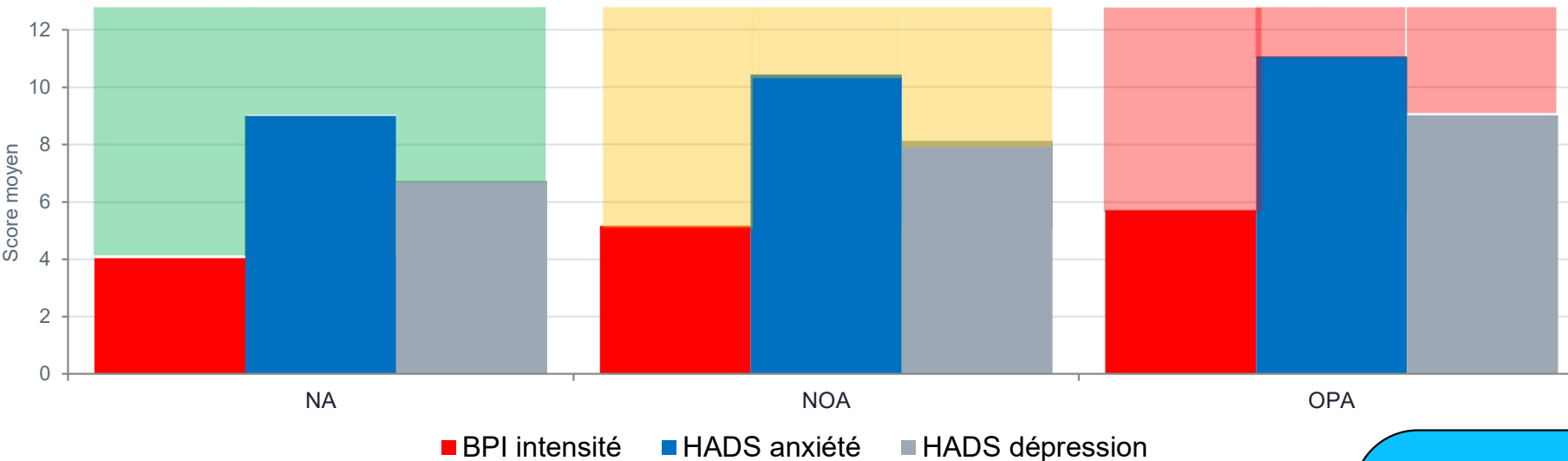
**40 % avec antalgiques non opioïdes (NOA)**

(Paracétamol, Ibuprofène).

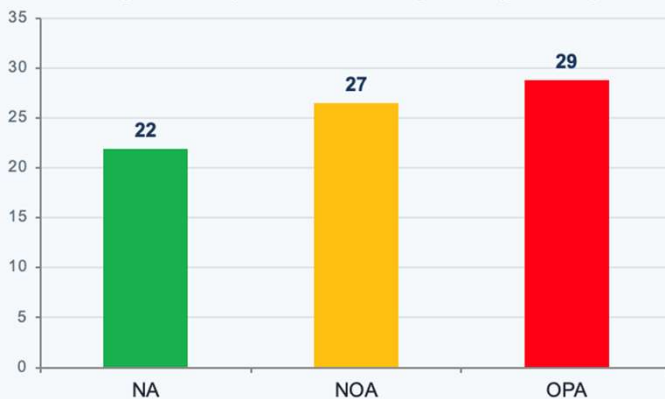
**40 % sans aucun antalgique (NA).**

# Place des antalgiques à la CRR / 2

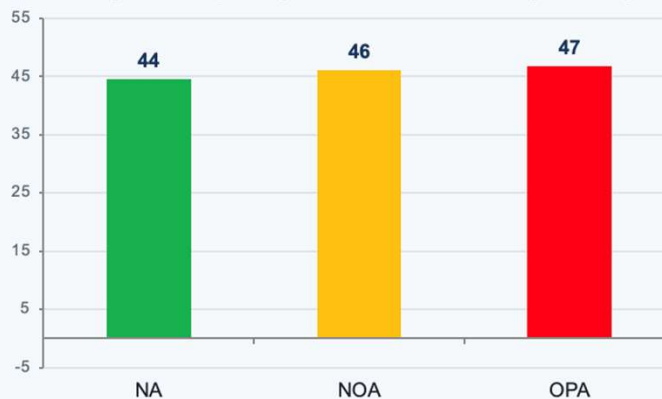
## Scores cliniques selon le groupe d'antalgiques



### Catastrophisme (Pain Catastrophizing Scale)



### Kinésiophobie (Tampa Scale of Kinesiophobia)



**Gradient croissant NA →  
NOA → OPA DLR,  
anxiété, dépression et  
catastrophisme**

# Facteurs de risque de prise d'opioïdes / 1

Modélisation par équations structurelles, N = 3923 patients — méthode INTERMED

## BIO

Sévérité, diagnostic

## PSY

Coping, symptômes

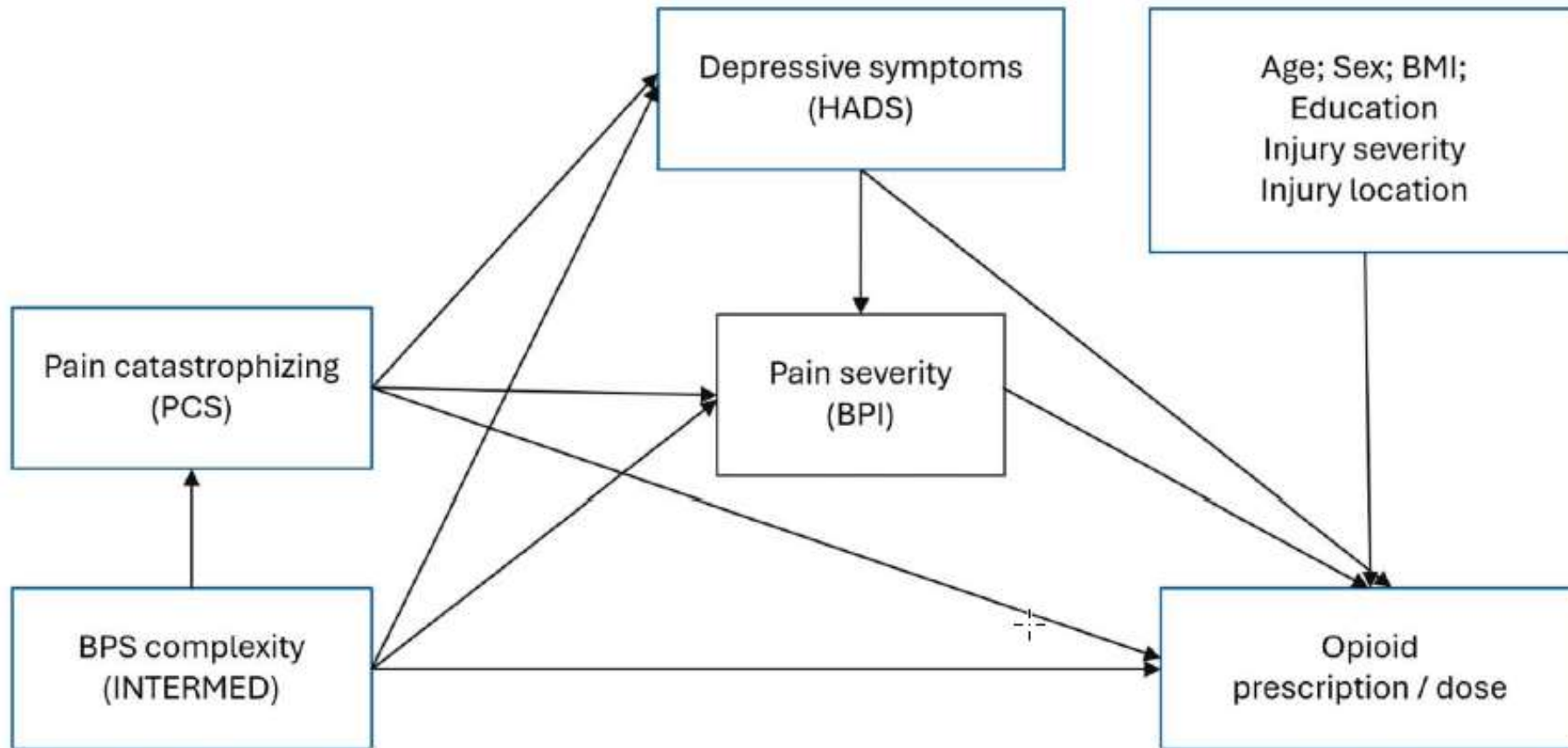
## SOCIAL

Soutien, stabilité

## SOINS

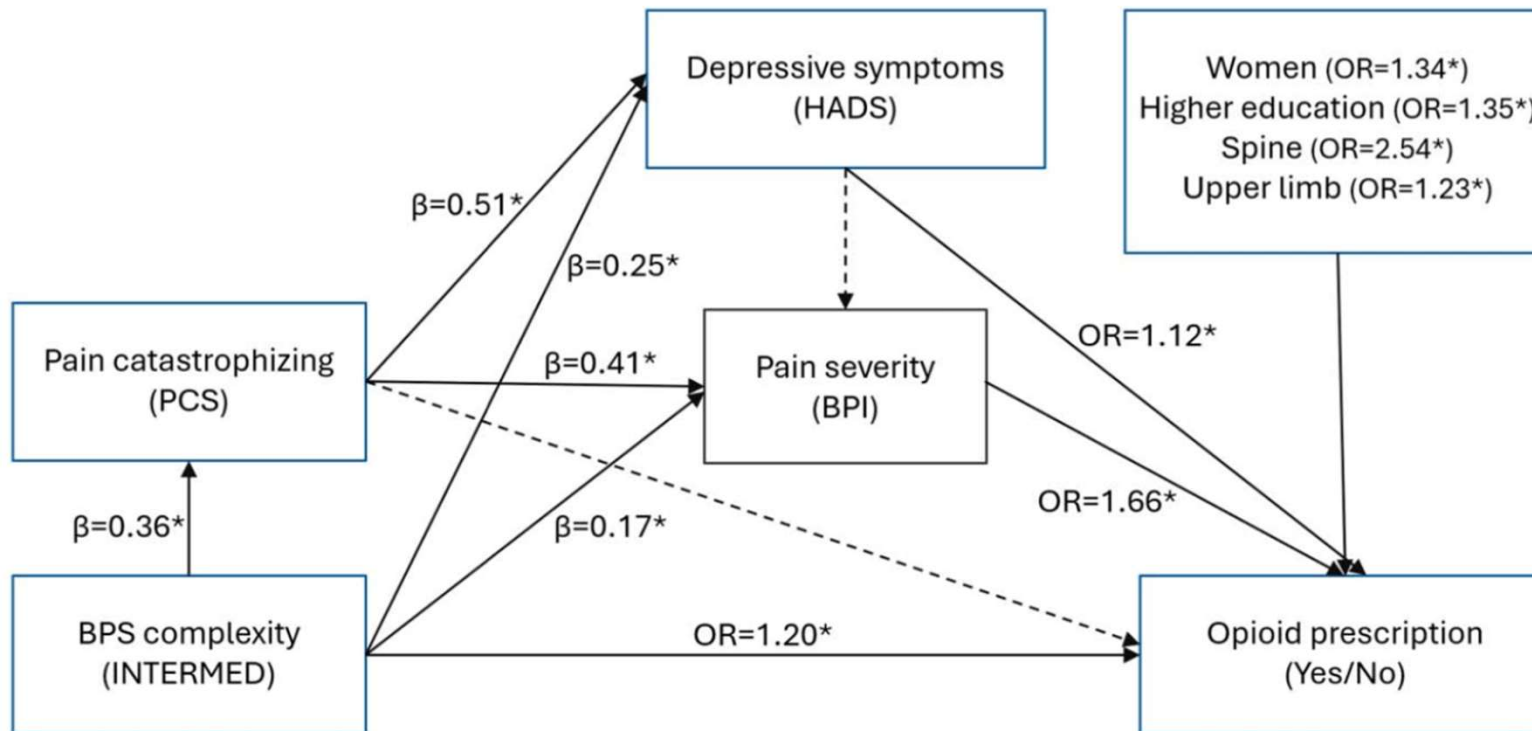
Complexité de prise en charge

Méthode INTERMED : 4 domaines × 3 dimensions temporelles (histoire, statut actuel, pronostic) — score de 0 à 60



# Facteurs de risque de prise d'opioïdes / 2

Modélisation par équations structurelles, N = 3923 patients — méthode INTERMED



## Complexité BPS:

directement et indirectement liée à prescription et dose d'opioïdes  
(indirectement liée via sévérité de la douleur et symptômes dépressifs)

**Catastrophisme:** agit indirectement (via douleur et dépression)

**Autres facteurs associés :** femme, niveau d'éducation sup, rachis

# Antalgiques et performance physique

**Tests fonctionnels** : 6-minute walk test (6MWT), Progressive Isoinertial Lifting Evaluation (PILE), Steep Ramp Test (SRT), handgrip strength test (HST), 5 times sit-to-stand test (FTSST), 1-minute Stair-climbing test (1MSCT).



Mayer TG. Et al. Spine 1988



Sitting



Flexion



Extension



Standing



Mendes L. Pain Reports 2025

# Antalgiques et performance physique / 1

**Performances inférieures si prise d'antalgiques**  
**Gradient négatif : NA > NOA > OPA.**

| Test fonctionnel | NA          | NOA         | OPA         | Diff. NA vs OPA | p       |
|------------------|-------------|-------------|-------------|-----------------|---------|
| 6MWT (m)         | 523 ± 117   | 471 ± 134   | 445 ± 1358  | -78             | < 0,001 |
| PILE (kg)        | 17 ± 8,4    | 13,4 ± 8,7  | 11,2 ± 8,1  | -5,9            | < 0,001 |
| SRT (W)          | 204 ± 95    | 170 ± 91    | 154 ± 82    | -50             | < 0,001 |
| HST atteint (kg) | 25,3 ± 13,6 | 19,6 ± 13,0 | 15,8 ± 11,7 | -9,5            | < 0,001 |
| 1MSCT (marches)  | 91 ± 37     | 75 ± 34     | 72 ± 37     | -19             | < 0,001 |
| 5TSST (sec)      | 15,5 ± 7,5  | 18,7 ± 9,1  | 20,4 ± 10,1 | +4,9            | < 0,001 |

# Antalgiques et performance physique / 2

## Analyse multivariée

**Ajustement:** Âge; Sexe; Douleur; Sévérité de lésion; Localisation; Education; Comorbidités; BMI; DLR neuropathique; Chirurgie (oui/non);

| Test fonctionnel | Diff. NOA vs NA<br>(IC95%) | Diff. OPA vs NA<br>(IC95%) | Diff. OPA vs NOA<br>(IC95%) |
|------------------|----------------------------|----------------------------|-----------------------------|
| 6MWT (m)         | -28 (-37 ; -19)            | -48 (-59 ; -36)            | -19 (-30 ; -9)              |
| PILE (kg)        | -2,5 (-3,4 ; -1,6)         | -3,8 (-5,0 ; -2,6)         | -1,3 (-2,5 ; -0,1)          |
| SRT (W)          | -20 (-27 ; -17)            | -32 (-42 ; -22)            | -12 (-22 ; -2)              |
| HST atteint (kg) | -3,3 (-4,9 ; -1,7)         | -5,6 (-7,8 ; -3,5)         | -2,4 (-4,4 ; -0,3)          |
| 1MSCT (marches)  | 0,86 (0,81 ; 0,91)         | 0,82 (0,76 ; 0,87)         | 0,95 (0,89 ; 1,01)          |
| 5TSST (sec)      | 1,09 (1,04 ; 1,15)         | 1,16 (1,09 ; 1,23)         | 1,06 (1,00 ; 1,12)          |

**Performances  
physiques  
inférieures avec  
antalgiques  
Gradient négatif  
NA > NOA >  
OPA.**

# Antalgiques et performance physique / 3

## Progression durant le séjour

| Test fonctionnel | NA          | NOA         | OPA         | p       |
|------------------|-------------|-------------|-------------|---------|
| 6MWT (m)         | 50,7 ± 73,3 | 47,6 ± 74,8 | 51,3 ± 73,8 | = 0,378 |
| PILE (kg)        | 2,61 ± 4,99 | 2,66 ± 4,87 | 2,47 ± 5,00 | = 0,756 |
| SRT (W)          | 33,0 ± 54,0 | 30,7 ± 53,0 | 31,0 ± 51,5 | = 0,506 |
| HST atteint (kg) | 3,43 ± 6,97 | 4,00 ± 7,33 | 2,44 ± 6,82 | = 0,009 |
| 1MSCT (marches)  | 17,8 ± 23,5 | 14,8 ± 22,1 | 13,6 ± 20,2 | = 0,002 |
| 5TSST (sec)      | 3,21 ± 5,24 | 3,97 ± 6,27 | 4,07 ± 7,23 | = 0,013 |

**Amélioration  
chez tous!**

# Antalgiques et performance physique / 4

## Chance d'atteindre le MCID

| Test fonctionnel | NOA vs NA<br>(OR) | OPA vs NA<br>(OR) | OPA vs NOA<br>(OR) | p       |
|------------------|-------------------|-------------------|--------------------|---------|
| 6MWT (m)         |                   | 0,77              |                    | = 0,042 |
| PILE (kg)        |                   | 0,66              |                    | = 0,005 |
| SRT (W)          |                   |                   |                    | = 0,021 |
| HST atteint (kg) |                   | 0,62              |                    | = 0,002 |
| 1MSCT (marches)  |                   | 0,61              |                    | = 0,003 |
| 5TSST (sec)      |                   |                   |                    | = 0,119 |

**Probabilité  
moindre  
d'amélioration  
cliniquement  
significative si  
prise d'opioïdes**



**Effet délétère (fatigue, ES) des opioïdes à long terme!**

# Messages clés

- 60% des patients en réadaptation MSK prennent des antalgiques, 20% des opioïdes
- Consommation d'opioïdes = **profils cliniques plus sévères** : douleur - anxiété, dépression - catastrophisme
- Même à faible dose, les opioïdes sont associés à une **moins bonne performance physique** et à une progression fonctionnelle plus lente
- La **complexité biopsychosociale** (INTERMED) prédit la prescription d'opioïdes en plus du niveau de douleur, symptômes dépressifs et catastrophisme



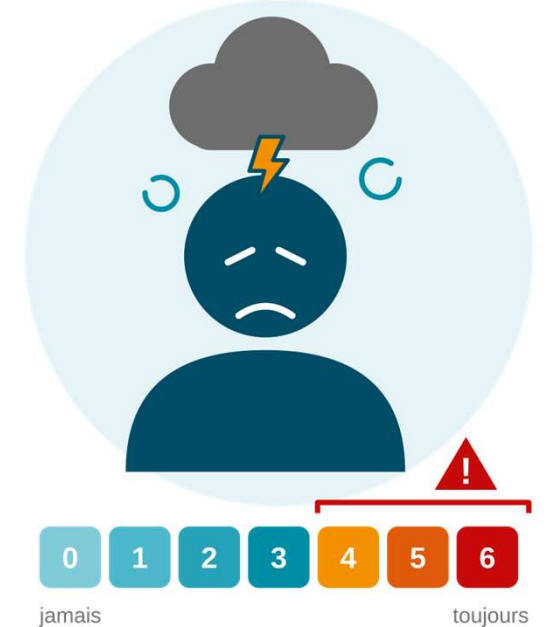
# Quelques implications recommandations

# Catastrophisme ?

## Catastrophisme

« Quand j'ai mal, c'est terrible et j'ai l'impression que ça ne s'améliorera jamais »

**Un score supérieur à 3 doit alerter** (Lutz 2017)



Facile à intégrer dans toute évaluation de la douleur, au même titre qu'une échelle de la douleur (EVA/NRS)

# Freins à la rééducation ?

**Opioides, BZD, gabapentinoïdes et antidépresseurs tricycliques** peuvent altérer certaines capacités:

- Sédation → participation réduite à l'exercice et à l'éducation
- Vertiges → risque de chute accru
- Effets cognitifs → compréhension réduite
- Motivation réduite → désengagement de la réadaptation active



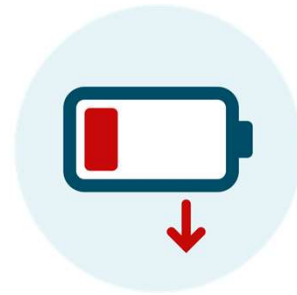
Sédation



Vertiges



Cognition



Motivation

# Quelques recommandations de bonne pratique

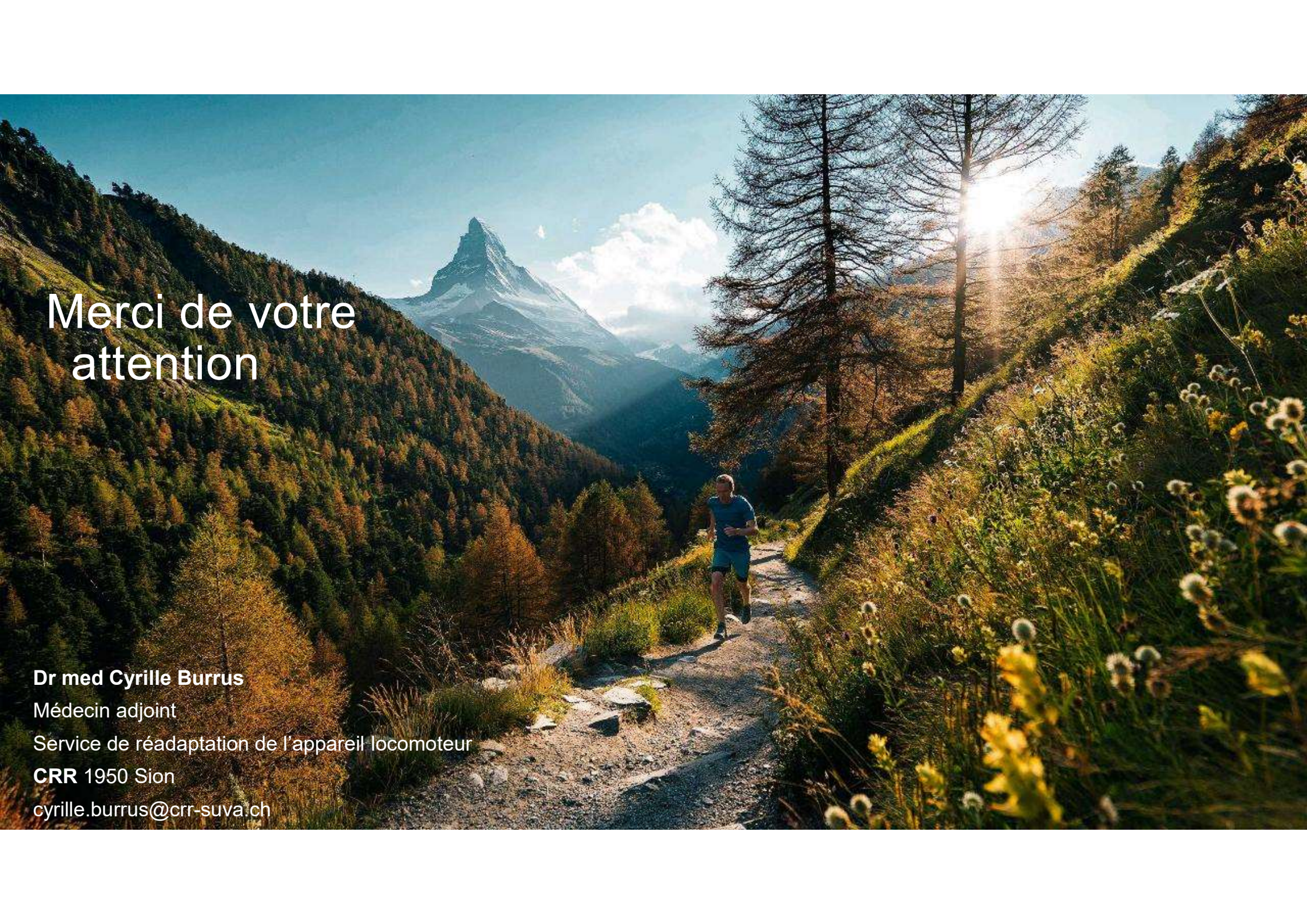
1. **Thérapies non pharmacologiques et non-opiacés** à favoriser (opiacés seulement si bénéfice attendu sur douleur ET fonction qui ...surpasse les risques (privilégier combinaison > opioïdes seuls)
2. **Établir des objectifs** (réalistes) avec le patient AVANT... et parler déjà du retrait si pas atteint...
3. **Discuter** avant ET pendant des bénéfices (B) et des risques (R)
4. **Évaluer** bénéfice dans les 1-4 semaines (revoir les gens !)...évaluation stricte (B/R) chaque 3 mois
5. **Éviter co-prescription** opioïdes/BZD



# Conclusion



- **Douleur chronique et antalgiques** ➡ amélioration de la fonction
- **Intégrer:** activité physique, traitements non médicamenteux, éducation thérapeutique.
- **Privilégier** antalgiques non opioïdes.
- **Coordination** des prestataires quand situation complexe.

A full-page background image showing a person running on a dirt trail in a mountainous area. The trail is surrounded by dense forest with autumn-colored trees. In the background, a prominent, sharp mountain peak is visible under a blue sky with some clouds. The sun is shining from the upper right, creating a lens flare effect. The overall scene is bright and scenic.

Merci de votre  
attention

**Dr med Cyrille Burrus**

Médecin adjoint

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**CRR** 1950 Sion

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