



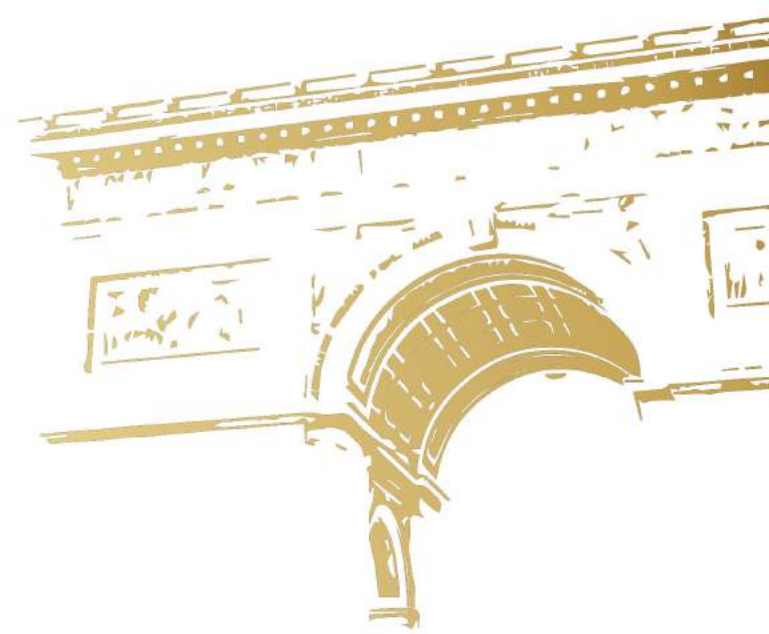
E.C.O.S.E.P.



6TH CONGRESS OF ECOSEP

EUROPEAN COLLEGE OF SPORTS & EXERCISE PHYSICIANS

FROM
LABS TO
THE PITCH



November 29th 2019

Rehabilitation of the common lateral ankle sprain

Aude AGUILANIU



No conflict of interest



- 1. A complex injury**
- 2. Rehab or No rehab in the literature ?**
- 3. What is the first reflex ?**
 - Optimal Loading
- 4. Sensorimotor control**
 - Variability of movement
- 5. Examples of rehab exercises**
 - Range of motion
 - Muscle strength
 - Posture balance, Agility, Power



1

The Lateral Ankle Sprain (LAS) is a complex injury



A continuum of disabilities (Wikstrom and al. 2013)



Re-injury

(Martin and al. 2013)

Persistent residual symptoms

(van Rijn and al. 2008)



Consensus statement

Diagnosis, treatment and prevention of ankle sprains: update of an evidence-based clinical guideline

Gwendolyn Vuurberg,^{1,2,3} Alexander Hoorntje,^{1,2,3} Lauren M Wink,^{1,4}
Brent F W van der Doelen,^{1,2,3} Michel P van den Bekerom,⁵ Rienk Dekker,⁶
C Niek van Dijk,^{1,2,3} Rover Krips,⁷ Masja C M Loogman,⁸ Milan L Ridderikhof,⁹
Frank F Smithuis,¹⁰ Sjoerd A S Stufkens,¹ Evert A L M Verhagen,^{3,4,11} Rob A de Bie,¹²
Gino M M J Kerkhoffs^{1,2,3}

2018 - Evidence-based clinical Guideline in **open access**

(Vuurberg G, Hoorntje A, Wink LM, et al. 2018)



2

Rehab or No rehab in the literature ?



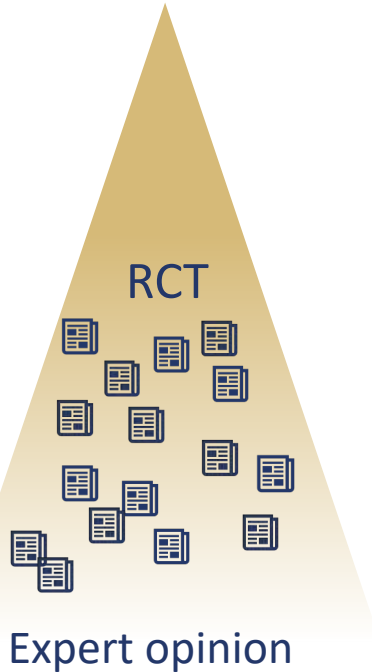
Rehab or No rehab?

[diagnosis and advice]
+
Rehab exercises

[diagnosis and advice]



High level of evidence



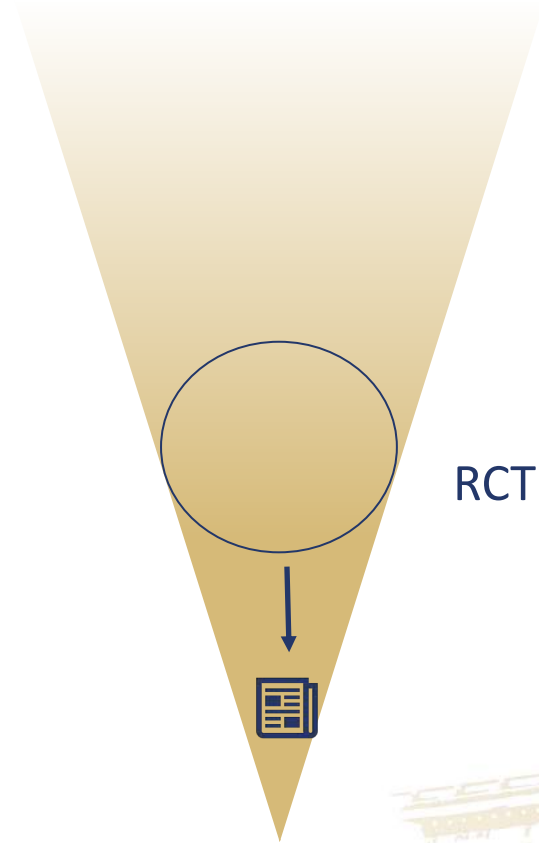
Rehab or No rehab

What do the studies say ?



 Bleakley C., Taylor J. and al. 2019

Rehab or No rehab ?



RCT

High level of evidence

Rehabilitation exercises post ankle sprain

Decrease the risk of re-injury (10% at 7-10 month)

(Bleakley C., Taylor J. and al. 2019)

But

Which exercises ?

How many time they do exercises ?



3

What is the first reflex ?



RICE

vs.

POLICE

R : Rest

I : Ice

C : compression

E : Elevation

P : Protection

OL : Optimal Loading

I : Ice

C : compression

E : Elevation

PRICE → POLICE
(Bleakley, Glasgow, McAuley, 2012)



RICE

Binary progress

Rest = Unload

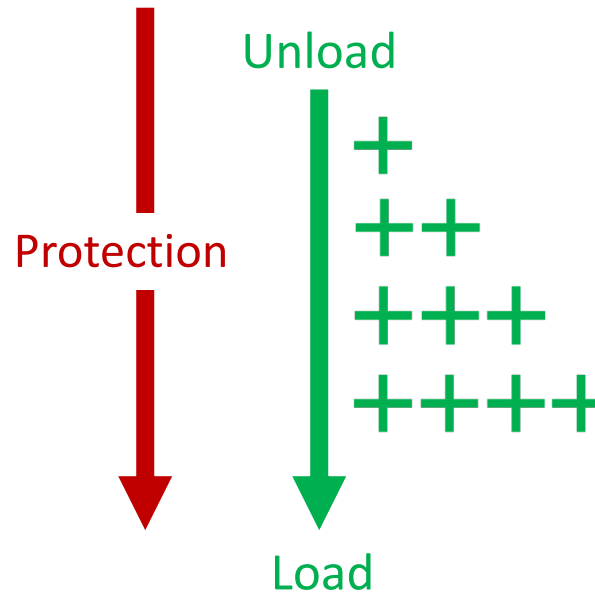


VS.

POLICE

Steady progress

Optimal Loading



PRICE → POLICE
(Bleakley, Glasgow,
McAuley, 2012)



RICE



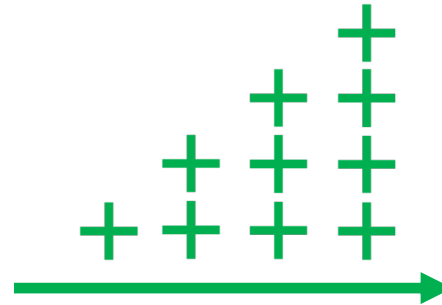
TOO LONG

period of unload

Immobilization

No more than 10 days

POLICE



Gradually load

Functional support
exercise therapy

(Vuurberg, Hoorntje, Wink and al. 2018)

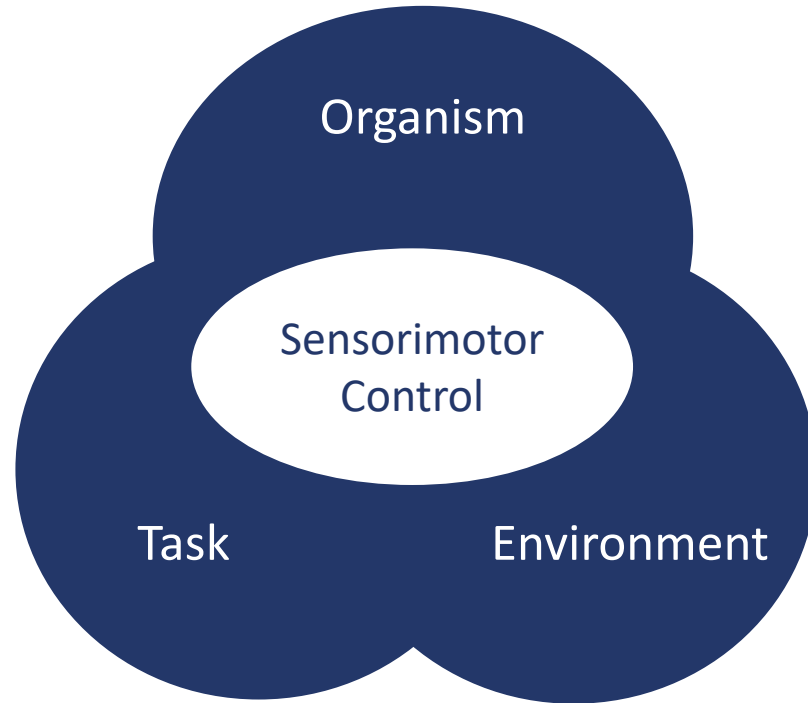
(Bleakley, Glasgow, McAuley, 2012)



4

Sensorimotor control





*(Wikstrom, Hubbard-turner,
Mckeon, 2013)*



GOAL-oriented rehabilitation

Ability to accomplish a movement goal in
VARIETY of ways

*(Wikstrom, Hubbard-turner,
Mckeeon, 2013)*



5

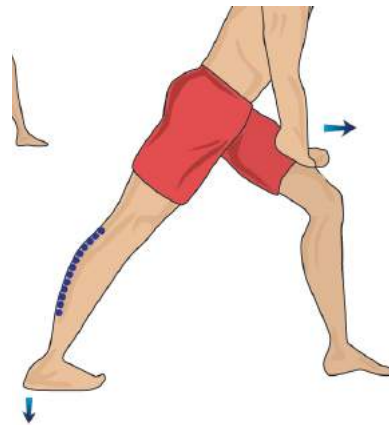
Examples of rehabilitation exercises



Global mobility
(alphabet exercise)

ABC

Muscle stretch
(calf stretch)



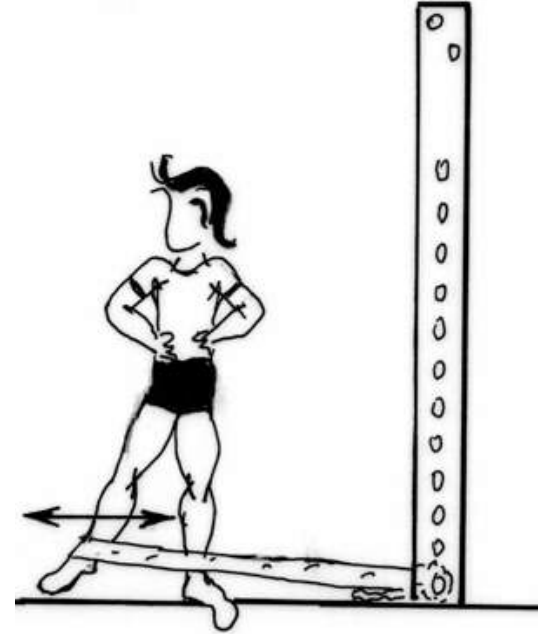
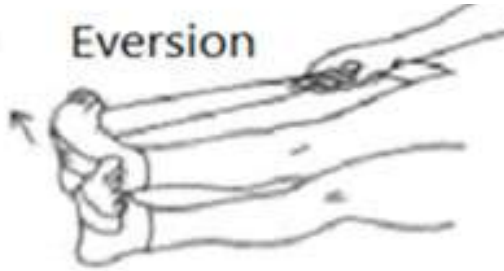
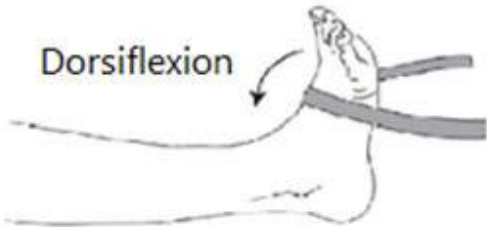
Arthrokinematic
(joint glide)



(Cleland, Mintkent and McDevitt, 2013)



Increase load
 Adapt intensity
 Adapt volume





Myolux®



Propriofoot®



Plateau d'équilibre Devajal®

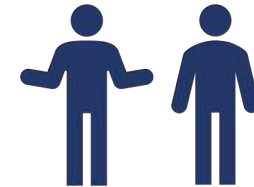


Plateau Sissel Balancefit®



airex®

Add progressively perturbations/difficulties



Learning with constraints



Postural balance

GROUND VARIABILITY



When we do
Rehabilitation exercises



Keep in mind what is
going on the field



VARIATIONS
and
ADAPTATIONS



Rehabilitation exercises for ankle sprain ?

YES

with

Protection

Optimal loading

Variations and adaptations





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