



# LA REHABILITATION TRÈS PRECOCE : CONTRE

Adéla Foudhaïli

Kinésithérapeute, doctorante, Hôpital Lariboisière, Paris

## Sujet de thèse

*Contre* la mobilisation précoce des  
patients admis en réanimation pour  
hémorragie sous-arachnoïdienne



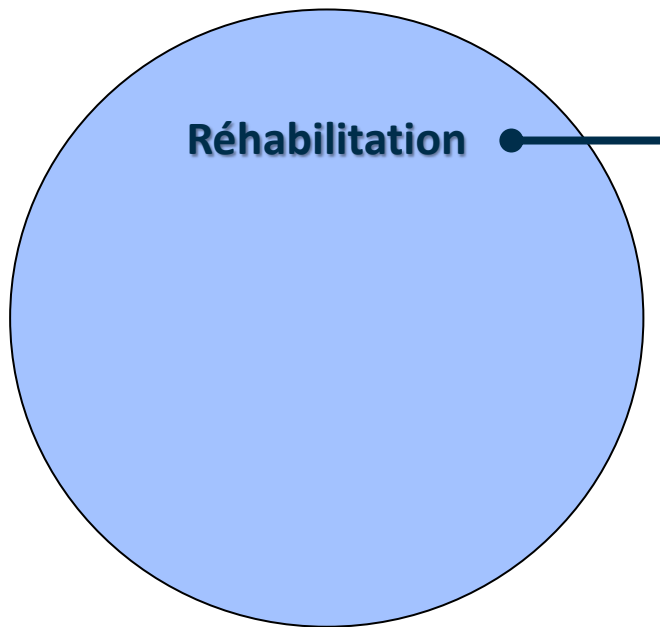


**Orateur : Adéla FOU DHAILI, Paris**

☒ Je n'ai pas de lien d'intérêt potentiel à déclarer

# **RÉHABILITATION PRÉCOCE : DÉFINITION(S)**

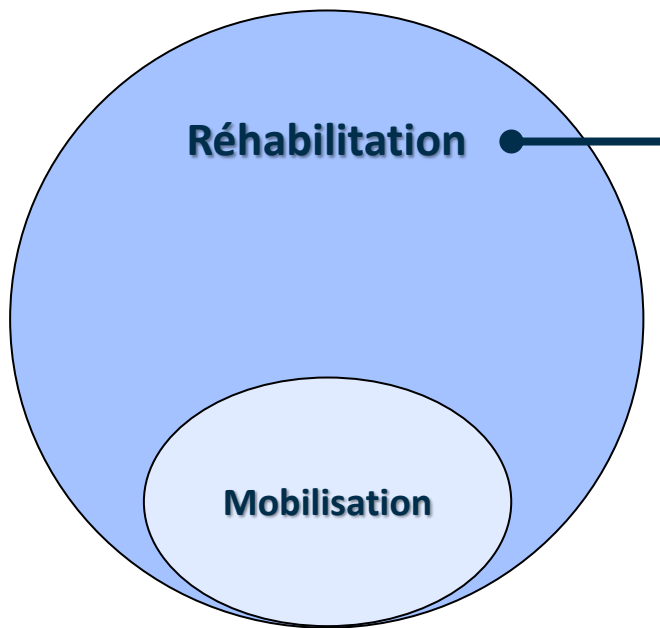
# Réhabilitation et mobilisation



**Réhabilitation**

Ensemble d'interventions conçues pour optimiser le fonctionnement et réduire l'invalidité des personnes atteintes d'un problème de santé

# Réhabilitation et mobilisation



Ensemble d'interventions conçues pour optimiser le fonctionnement et réduire l'invalidité des personnes atteintes d'un problème de santé

# En pratique

Journal of Intensive Care

## Early mobilisation in mechanically ventilated patients: a systematic integrative review of definitions and activities

Catherine Clarissa<sup>1\*</sup>, Lisa Salisbury<sup>2</sup>, Sheila Rodgers<sup>1</sup> and Susanne Kean<sup>1</sup>



**RÉHABILITATION**

**MOBILISATION**



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**MOBILISATION ← — → RÉHABILITATION**



## Activités variées

| In-bed activity                             | Out-of-bed activity                                                                                         |
|---------------------------------------------|-------------------------------------------------------------------------------------------------------------|
| Range of motion [39, 49, 77, 90, 101]       | Bed-transfer training [102, 107]                                                                            |
| Bridging [37]                               | Sitting at the edge of bed [54, 57, 77]                                                                     |
| Turning [36, 44, 73]                        | Sitting in a chair [49, 51, 65, 77],                                                                        |
| Transferring [25]                           | Standing [49, 65, 77]                                                                                       |
| Limb exercise [44, 75]                      | Marching [53, 65, 77]                                                                                       |
| Self-care activities [44]                   | Ambulating [24, 26, 35, 37, 38, 41, 42, 44, 46, 48, 56, 58, 61, 64–69, 71, 72, 76–79, 85, 93, 100–103, 107] |
| Breathing exercise [90]                     |                                                                                                             |
| Electrical stimulation [90]                 |                                                                                                             |
| Sitting in bed [25, 39, 46, 71, 76, 78, 83] |                                                                                                             |
| Sitting at the edge of bed [53, 71]         |                                                                                                             |
| Cycling [42, 53, 83, 90, 91]                |                                                                                                             |

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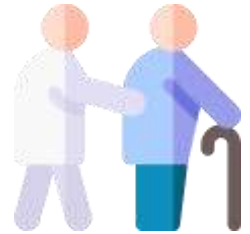


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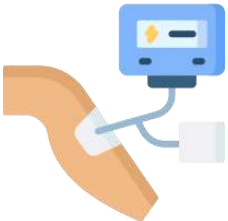
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# MÊMES TERMES POUR DES INTERVENTIONS TRÈS DIFFÉRENTES



# « Précoce » : quel délai pour l'initiation ?

**S2e guideline: positioning  
and early mobilisation in  
prophylaxis or therapy of  
pulmonary disorders**

German Society of Anaesthesiology  
and Intensive Care Medicine (DGAI)

Dans les **72 heures** suivant l'admission en soins intensifs

# « Précoce » : quel délai pour l'initiation ?

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Early mobilisation in mechanically ventilated patients: a systematic integrative review of definitions and activities

Catherine Clarissa<sup>1</sup>, Lisa Salisbury<sup>2</sup>, Sheila Rodgers<sup>1</sup> and Susanne Kean<sup>1</sup>



## La mobilisation très précoce

## AMOBES (Active Mobility Very Early After Stroke) A Randomized Controlled Trial

Alain F. Yehnik, MD; Victorine Quintaise, MD; Cedric Andriantsifanetra, MD;  
Marie Winesapain, PT; Peggy Reiner, MD; Hélène Marnef, PT; Mathilde Evard, FT;  
Elena Messegue, MD; Jean Pascal Devailly, MD; Monica Lozano, PT; Catherine Lamy, MD;  
Florence Colle, MD; Eric Vicaut, MD, PhD; on behalf of the AMORES Group\*

### A Very Early Rehabilitation Trial after stroke (AVERT): a Phase III, multicentre, randomised controlled trial

Peter Langhorne, Olivia Wu, Helen Rodgers, Ann Ashburn and Julie Bernhardt on behalf of the AVERT trialists' collaboration

## Impact of Very Early Physical Therapy During Septic Shock on Skeletal Muscle: A Randomized Controlled Trial

Cheryl E. Hickmann, PT, PhD<sup>1</sup>; Diego Castanates-Zapatero, MD, PhD<sup>2</sup>; Louise Deldicque, PhD<sup>3</sup>;  
P  ter Van den Bergh, MD, PhD<sup>3</sup>; Gilles G  ty, MD, PhD<sup>3</sup>; Annie Robert, PhD<sup>3</sup>; Jean Roessier, PT, PhD<sup>3</sup>;  
Marc Francoux, PhD<sup>3</sup>; Pierre-Fran  ois Latour, MD<sup>3</sup>



# Efficacy and Safety of Very Early Mobilization in Patients with Acute Stroke: A Systematic Review and Meta-analysis

Tao Xu, Hengyan Yu, Shu Cai, Xi Lai, Shoulin Yuan &amp; Yaping Chen

# Effectiveness of a Very Early Stepping Verticalization Protocol in Severe Acquired Brain Injured Patients: A Randomized Pilot Study in ICU

Giuseppe Frazzetta<sup>1\*</sup>, Ilaria Zivi<sup>1,2,\*</sup>, Roberto Valsecchi<sup>2,3</sup>, Sara Bonini<sup>1</sup>, Sara Maffei<sup>1</sup>,  
Katia Molatore<sup>1</sup>, Luca Sebastianelli<sup>1</sup>, Alessio Zarucchi<sup>1</sup>, Diana Maffei<sup>1</sup>, Giuseppe Ercoli<sup>1</sup>,  
Roberto Masetti<sup>3</sup>, Leopoldo Saltuari<sup>1,3</sup>



# MÊMES TERMES POUR DES DÉLAIS TRÈS DIFFÉRENTS



# LA RÉHABILITATION TRÈS PRÉCOCE



Quoi ? Comment ? Quand ? Qui ?

# LA RÉHABILITATION TRÈS PRÉCOCE



Pour quelle efficacité ?

# THE LANCET

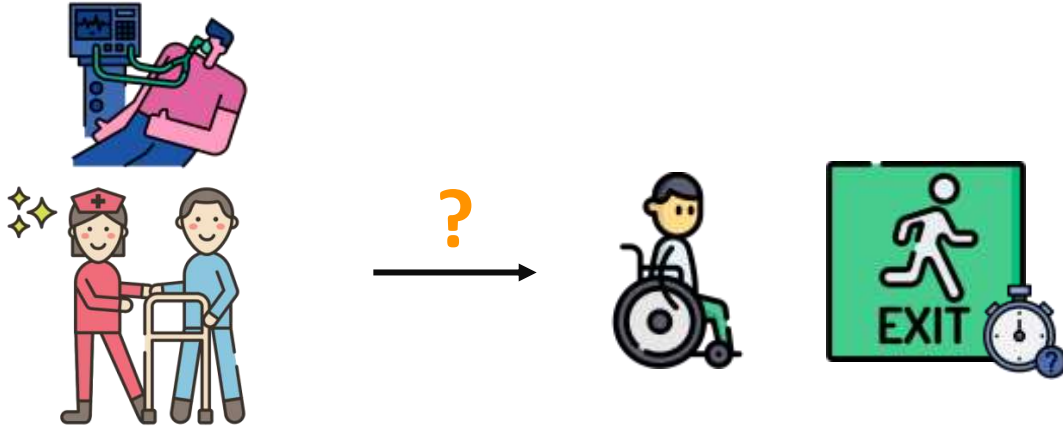
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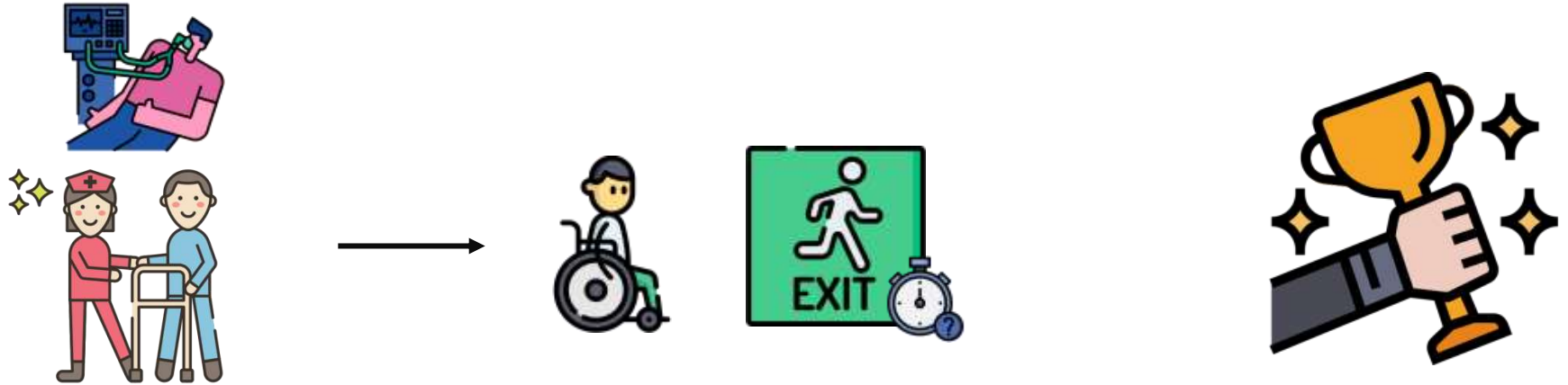
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## Influence of the acuity of patients' illness on effectiveness of early, goal-directed mobilization in the intensive care unit: a post hoc analysis

Ludwig Schefflenbichler<sup>1†</sup>, Brian Teja<sup>1,2†</sup>, Florin Schefflenbichler<sup>1,3†</sup>, Manfred Blobner<sup>4</sup>, Timothy Houle<sup>5</sup>, Matthias Eikermann<sup>1,2\*</sup> and SOMIT Team

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APACHE

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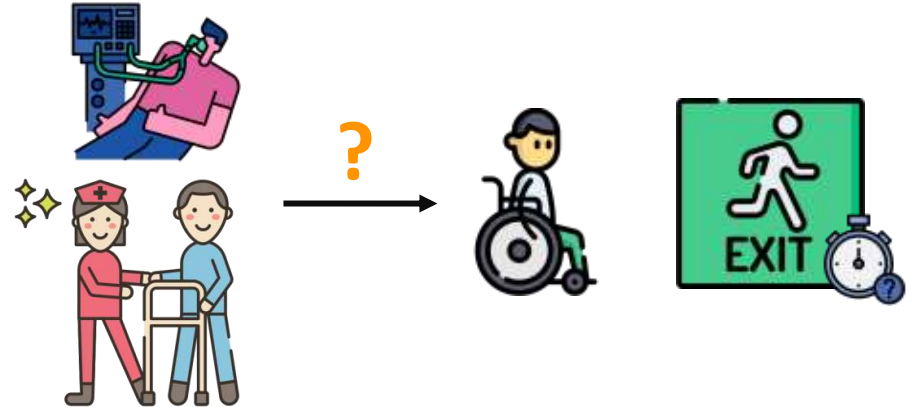


APACHE

- Sévérité élevée
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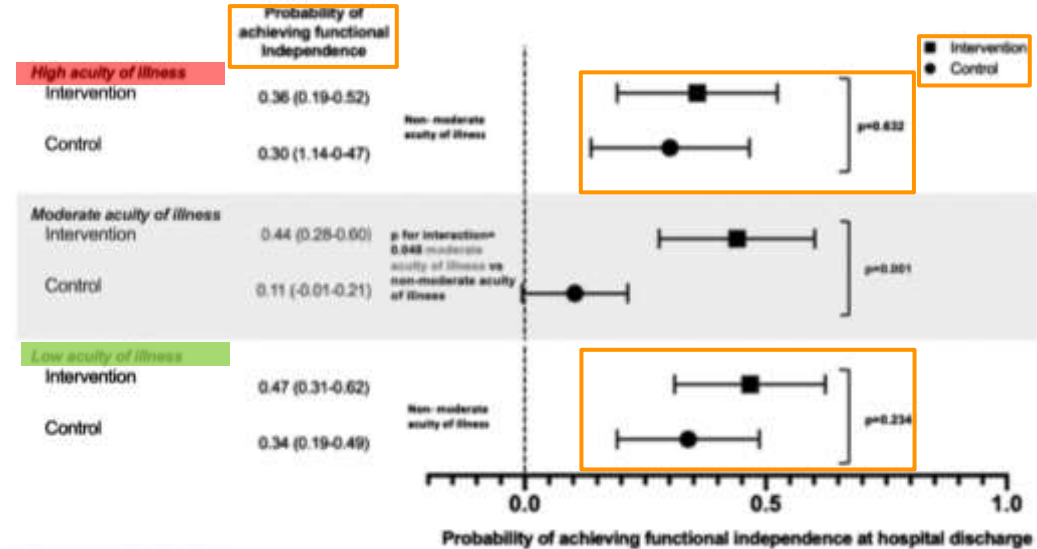


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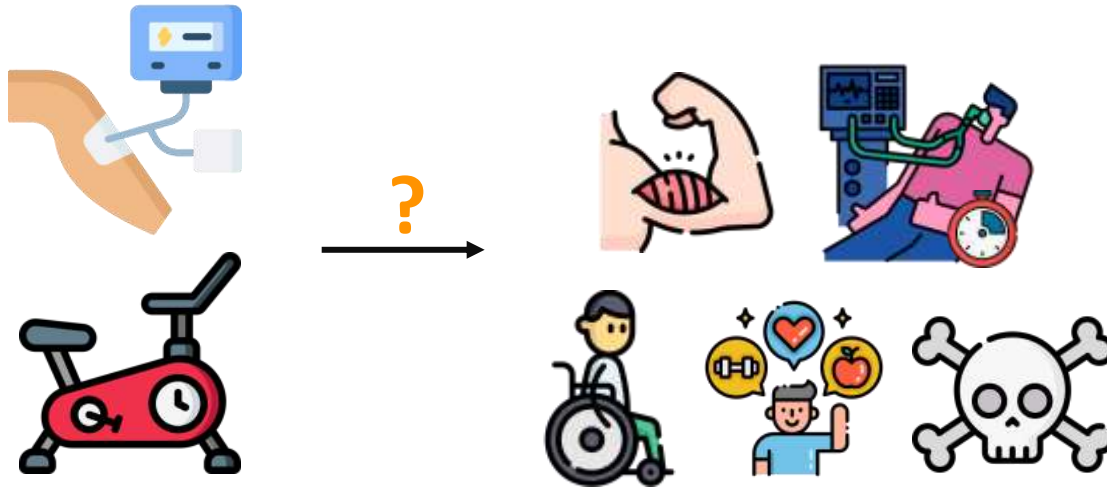
JAMA | Preliminary Communication

## Effect of In-Bed Leg Cycling and Electrical Stimulation of the Quadriceps on Global Muscle Strength in Critically Ill Adults A Randomized Clinical Trial

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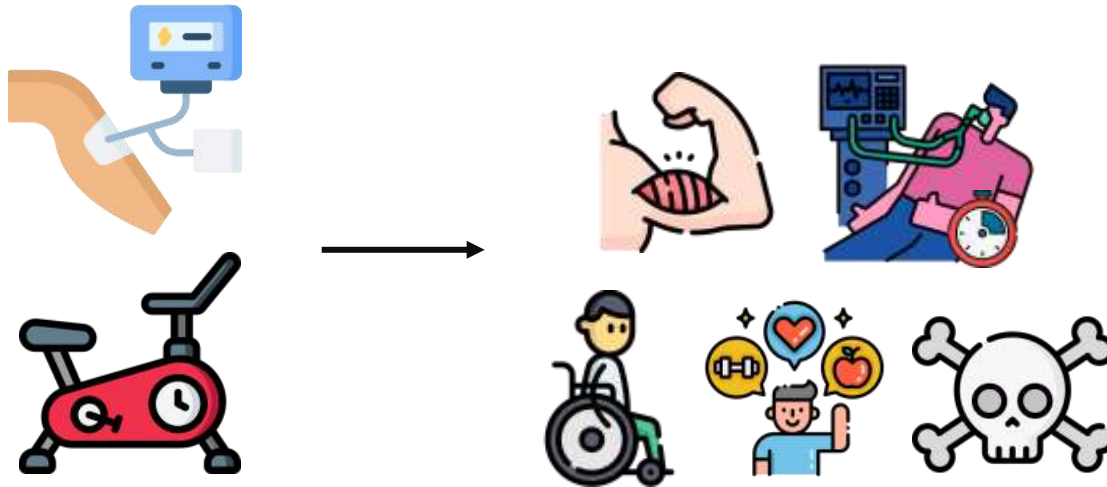
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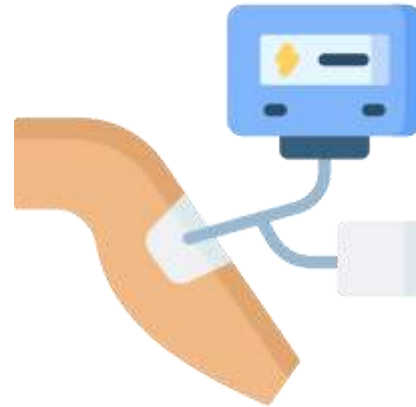
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Passive leg cycling and electrical stimulation cannot preserve strength in sepsis

Pierre-François Latere\*, Cheryl Hickmann and Diego Castaneda-Zapatero

### Électrostimulation :

- Patients de réanimation : œdème + réponse motrice réduite
  - $\pm$  sepsis/état de choc
- stimulation musculaire électrique :  
souvent **inefficace**



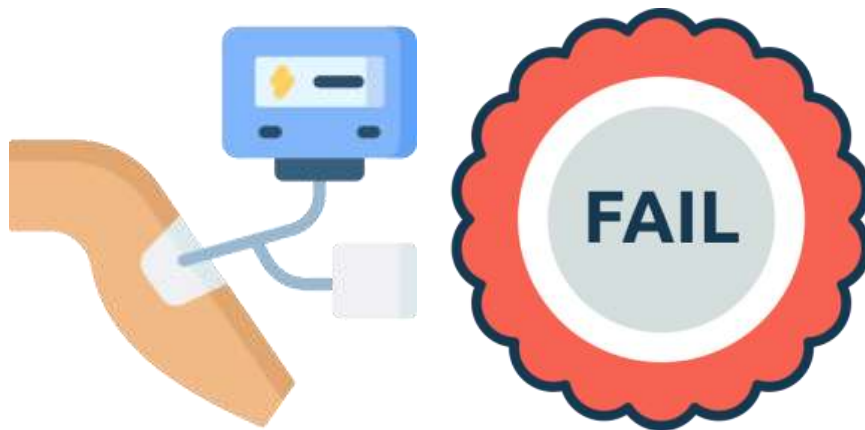


## Neuromuscular electrical stimulation in mechanically ventilated patients: A randomized, sham-controlled pilot trial with blinded outcome assessment

Michelle E. Kho, PT, PhD<sup>1,2</sup>, Alexander D. Truong, MD, MPH<sup>3</sup>, Jennifer M. Zanni, PT, DScPT<sup>1,4,6</sup>, Nancy D. Ciesla, DPT, MS<sup>5,6</sup>, Roy G. Brower, MD<sup>5</sup>, Jeffrey B. Palmer, MD<sup>1</sup>, and Dale M. Needham, FCA, MD, PhD<sup>1,5,6</sup>

## Functional electrical stimulation in-bed cycle ergometry in mechanically ventilated patients: a multicentre randomised controlled trial

Sue Berney <sup>1,2</sup>, Ramona O Hopkins,<sup>3,4,5</sup> Joleen Wyn Rose,<sup>2</sup> Rene Koopman,<sup>6</sup> Zudin Puthucherry,<sup>7,8</sup> Amy Pastva <sup>9</sup>, Ian Gordon,<sup>10</sup> Elizabeth Colantuoni,<sup>11,12</sup> Selina M Parry,<sup>1</sup> Dale M Needham <sup>11,13,14</sup>, Linda Denehy<sup>15,16</sup>



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**JAMA | Preliminary Communication**  
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## Passive leg cycling and electrical stimulation cannot preserve strength in sepsis

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- stimulation musculaire électrique :  
souvent **inefficace**

### Cycloergomètre :

- 75% des patients : CE **passif**
- peu probable d'obtenir un réel bénéfice pour la force musculaire.

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### Cycloergomètre :

- 75% des patients : CE **passif**

→ peu probable d'obtenir un réel bénéfice pour la force musculaire.

## Effect of In-Bed Leg Cycling and Electrical Stimulation of the Quadriceps on Global Muscle Strength in Critically Ill Adults A Randomized Clinical Trial

Guillaume Fossat, PT; Florian Baudin, PT; Léa Courtes, PT; Sabrina Bobet, PT; Arnaud Dupont, PT; Anne Bretagnol, MD; Dalila Benzekri-Lefèvre, MD; Toufik Kamel, MD; Grégoire Muller, MD; Nicolas Bercault, MD; François Barbier, MD, PhD; Isabelle Ruzgic, MD; Mai-Anh Nay, MD; Marie Skarzynski, MD; Amélie Mathonnet, MD; Thierry Boullet, MD



|                                 | Intervention Group (n = 158) | Usual Care Group (n = 154) |
|---------------------------------|------------------------------|----------------------------|
| Continuous intravenous sedation | 119 (75)                     | 118 (77)                   |

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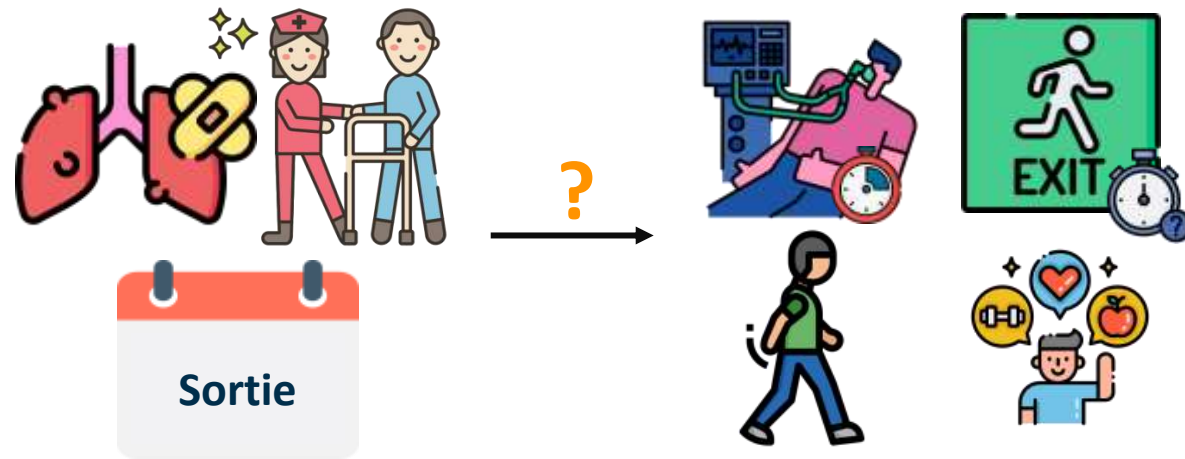


# Standardized Rehabilitation and Hospital Length of Stay Among Patients With Acute Respiratory Failure A Randomized Clinical Trial

Peter E. Morris, MD; Michael J. Berry, PhD; D. Clark Files, MD; J. Clifton Thompson, RN; Jordan Hauser, MS; Lori Flores, RN; Sanjay Dhar, MD; Elizabeth Chmelo, MS; James Lovato, MS; L. Douglas Case, PhD; Rita N. Bakhru, MD, MS; Aarti Sarwal, MD; Selina M. Parry, PhD; Pamela Campbell, RN; Arthur Mote; Chris Winkelman, PhD; Robert D. Hite, MD; Barbara Nicklas, PhD; Arjun Chatterjee, MD, MS; Michael P. Young, MD

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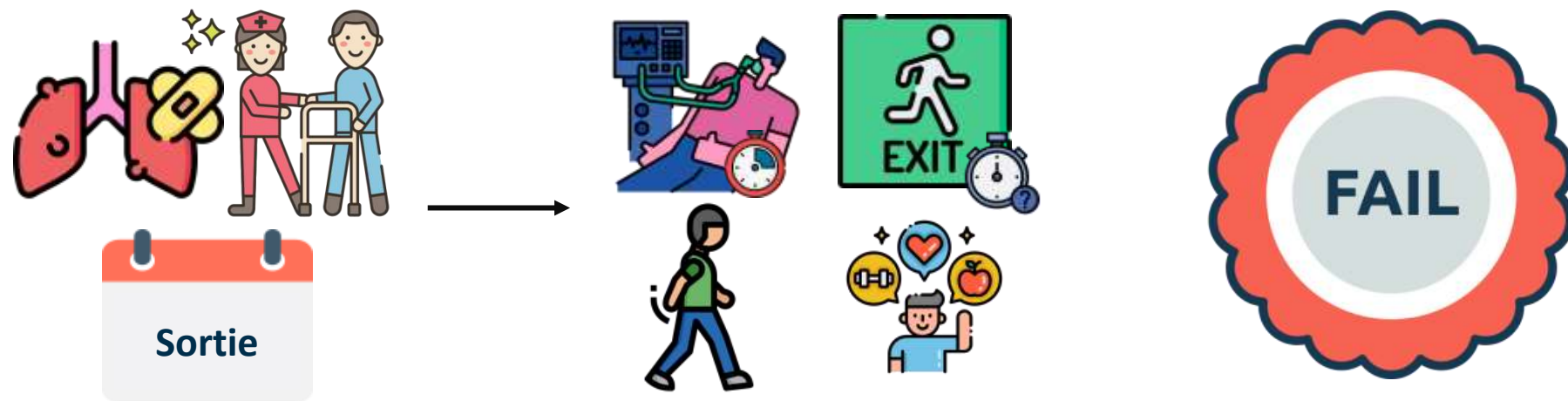
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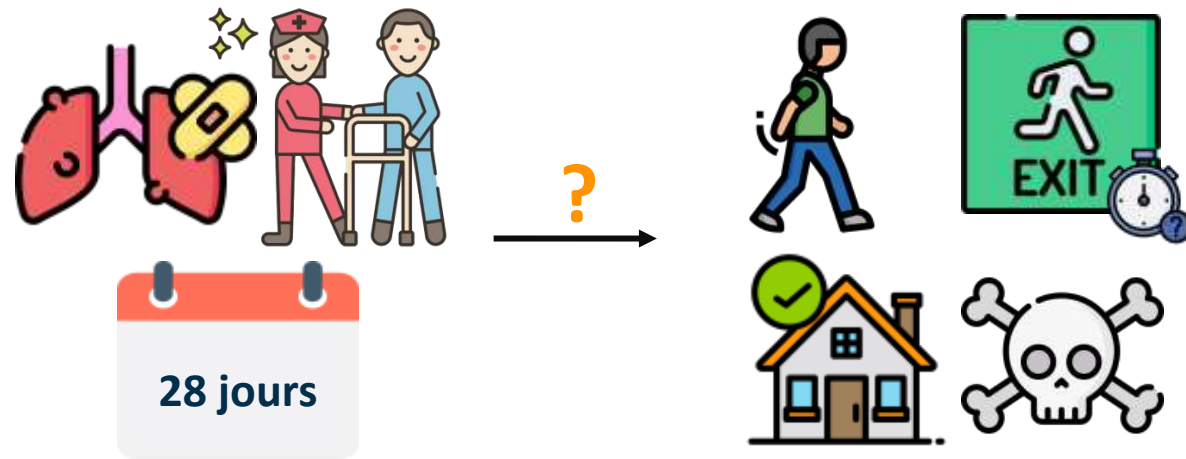


# **A Randomized Trial of an Intensive Physical Therapy Program for Patients with Acute Respiratory Failure**

Marc Moss<sup>1</sup>, Amy Nordon-Craft<sup>2</sup>, Dan Malone<sup>2</sup>, David Van Pelt<sup>3</sup>, Stephen K. Frankel<sup>4</sup>, Mary Laird Warner<sup>4</sup>, Wendy Kriekels<sup>2</sup>, Monica McNulty<sup>5</sup>, Diane L. Fairclough<sup>5</sup>, and Margaret Schenkman<sup>2</sup>

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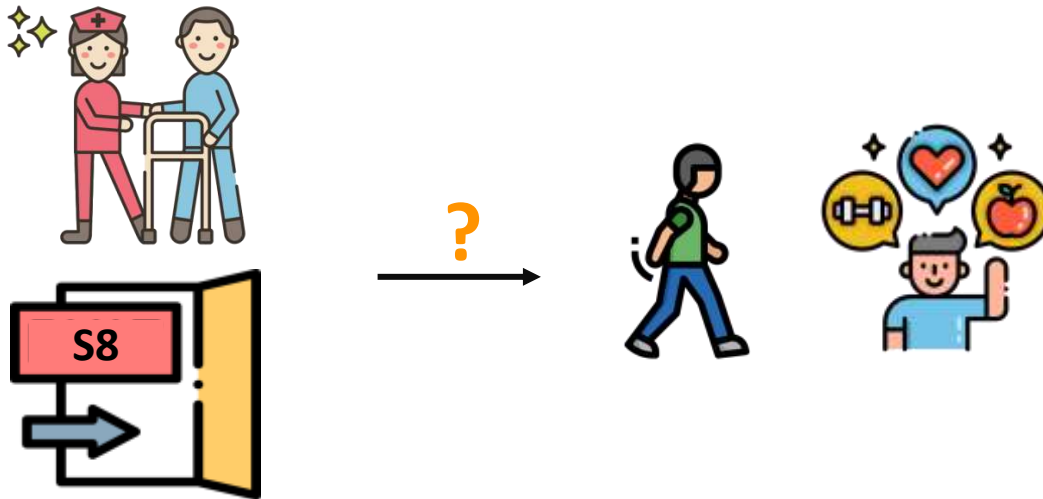


# Exercise rehabilitation for patients with critical illness: a randomized controlled trial with 12 months of follow-up

Linda Denehy<sup>1\*</sup>, Elizabeth H Skinner<sup>2</sup>, Lara Edbrooke<sup>1</sup>, Kimberley Haines<sup>2</sup>, Stephen Warrillow<sup>3</sup>, Graeme Hawthorne<sup>4</sup>, Karla Gough<sup>5</sup>, Steven Vander Hoorn<sup>6</sup>, Meg E Morris<sup>7</sup> and Sue Berney<sup>2</sup>

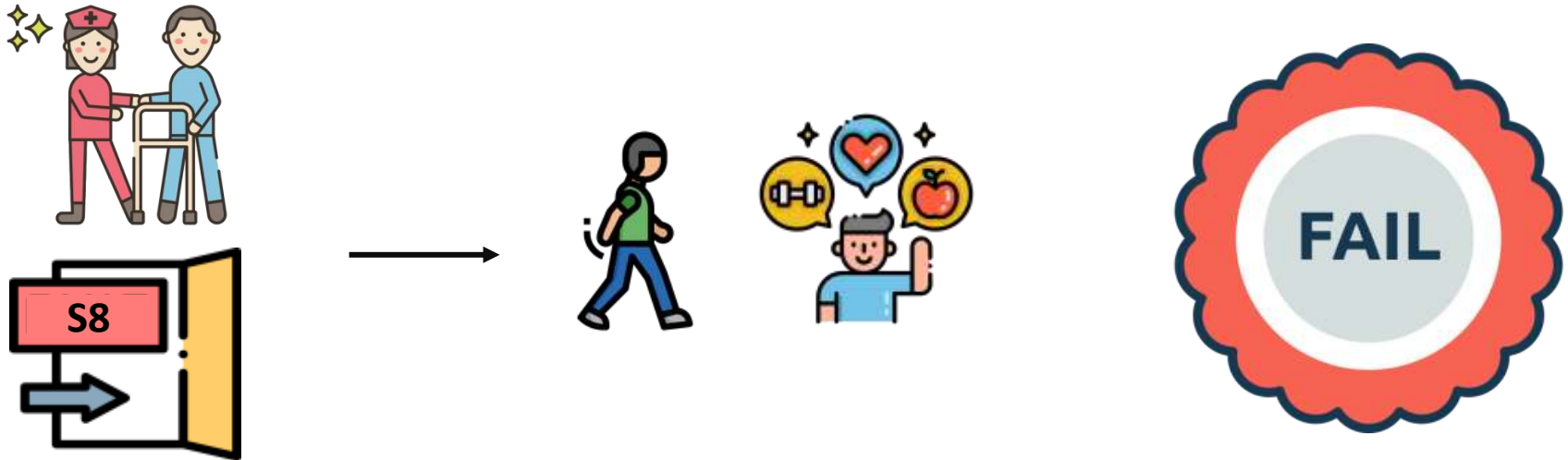
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# Revue systématique

Critical Care

## Systematic early versus late mobilization or standard early mobilization in mechanically ventilated adult ICU patients: systematic review and meta-analysis

Dominik Menges<sup>1\*</sup>, Bianca Seiler<sup>2</sup>, Yuki Tomonaga<sup>1</sup>, Matthias Schwenkglens<sup>1,3</sup>, Milo A. Puhan<sup>1</sup> and Henock G. Yebo<sup>1</sup>



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**« Nous avons jugé que le degré de certitude des preuves pour tous les résultats était très faible à faible. »**



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Cochrane Database of Systematic Reviews

## Early intervention (mobilization or active exercise) for critically ill adults in the intensive care unit (Review)

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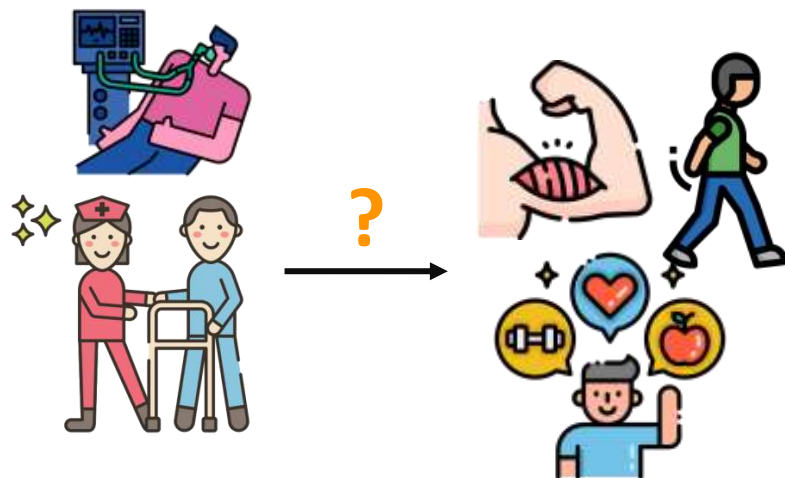


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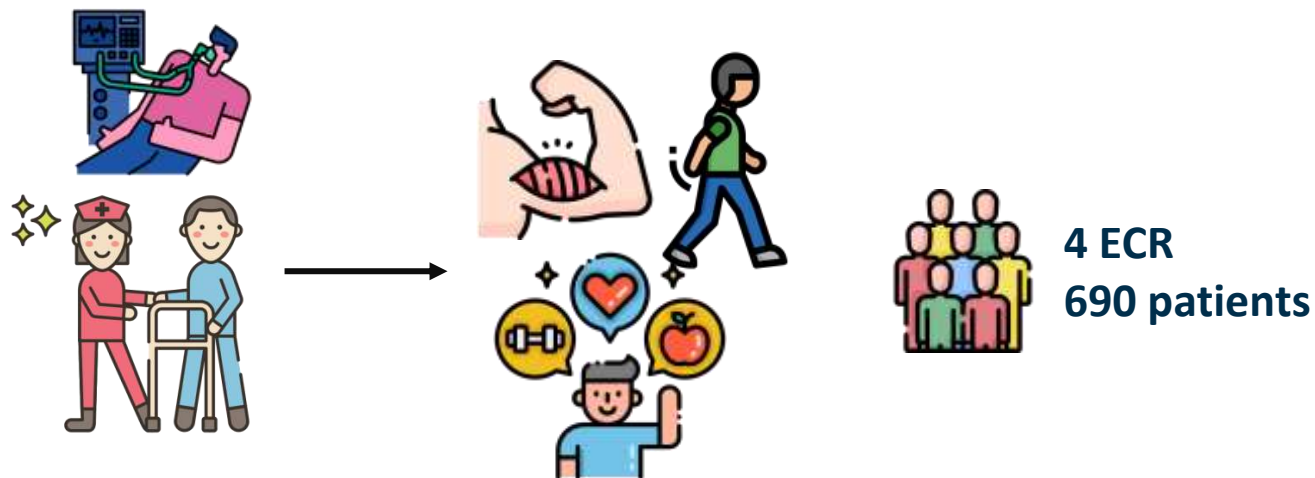


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4 ECR  
690 patients



Journal of Intensive Care

# Early versus delayed mobilization for in-hospital mortality and health-related quality of life among critically ill patients: a systematic review and meta-analysis

Yohei Okada<sup>1,2\*</sup> , Takeshi Unoki<sup>3</sup>, Yujiro Matsuishi<sup>4</sup>, Yuko Egawa<sup>5</sup>, Kei Hayashida<sup>6</sup> and Shigeaki Inoue<sup>7</sup>

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**11 ECR**  
**1322 patients**

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**11 ECR**  
**1322 patients**









**RESEARCH**

**Open Access**

# Expert consensus and recommendations on safety criteria for active mobilization of mechanically ventilated critically ill adults

Carol L Hodgson<sup>1,2\*</sup>, Kathy Stiller<sup>3</sup>, Dale M Needham<sup>4</sup>, Claire J Tipping<sup>2</sup>, Megan Harrold<sup>5</sup>, Claire E Baldwin<sup>6,7</sup>, Scott Bradley<sup>2</sup>, Sue Berney<sup>8</sup>, Lawrence R Caruana<sup>9</sup>, Doug Elliott<sup>10</sup>, Margot Green<sup>11</sup>, Kimberley Haines<sup>8,12</sup>, Alisa M Higgins<sup>1</sup>, Kirsi-Maija Kaukonen<sup>1,13</sup>, Isabel Anne Leditschke<sup>14,15</sup>, Marc R Nickels<sup>16</sup>, Jennifer Paratz<sup>17,18</sup>, Shane Patman<sup>19</sup>, Elizabeth H Skinner<sup>20,21</sup>, Paul J Young<sup>22,23</sup>, Jennifer M Zanni<sup>24</sup>, Linda Denehy<sup>25</sup> and Steven A Webb<sup>1,26</sup>



Low risk of an adverse event.  
Proceed as usual according to each ICU's protocols and procedures.



Potential risk and consequences of an adverse event are higher than green, but may be outweighed by the potential benefits of mobilization.  
The precautions or contraindications should be clarified prior to any mobilization episode. If mobilized, consideration should be given to doing so gradually and cautiously.



Significant potential risk or consequences of an adverse event.  
Active mobilization should not occur unless specifically authorized by the treating intensive care specialist in consultation with the senior physical therapist and senior nursing staff.



Low risk of an adverse event.  
Proceed as usual according to each ICU's protocols and procedures.



Potential risk and complications are higher than green, but may be outweighed by the benefits of mobilization.  
The precautions or modifications must be identified prior to any mobilization episode. If mobilization is necessary, proceed to doing so gradually and cautiously.

***CAUTIOUS***



Significant potential for an adverse event.  
Active mobilization should not occur unless specifically authorized by the treating physician, physical therapist and senior nursing staff.

***SHOULD NOT  
OCCUR***

| RESPIRATORY CONSIDERATIONS           | IN-BED EXERCISES                                                                    | OUT-OF-BED EXERCISES                                                                |
|--------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| <b>Intubation</b>                    |                                                                                     |                                                                                     |
| Endotracheal tube <sup>a</sup>       |     |     |
| Tracheostomy tube                    |    |    |
| <b>Respiratory parameters</b>        |                                                                                     |                                                                                     |
| Fraction of inspired oxygen          |                                                                                     |                                                                                     |
| ≤ 0.6                                |    |    |
| > 0.6                                |    |    |
| Percutaneous oxygen saturation       |                                                                                     |                                                                                     |
| ≥ 90%                                |    |    |
| < 90% <sup>b</sup>                   |    |    |
| Respiratory rate                     |                                                                                     |                                                                                     |
| ≤ 30 bpm                             |    |    |
| > 30 bpm                             |    |    |
| <b>Ventilation</b>                   |                                                                                     |                                                                                     |
| Mode HFOV                            |    |    |
| PEEP                                 |                                                                                     |                                                                                     |
| ≤ 10 cmH <sub>2</sub> O              |    |    |
| > 10 cmH <sub>2</sub> O              |    |    |
| Ventilator dyssynchrony <sup>c</sup> |    |    |
| <b>Rescue therapies</b>              |                                                                                     |                                                                                     |
| Nitric oxide                         |    |    |
| Prostacyclin                         |   |   |
| Prone positioning <sup>d</sup>       |  |  |

| NEUROLOGICAL CONSIDERATIONS                                                             | IN-BED EXERCISES                                                                    | OUT-OF-BED EXERCISES                                                                |
|-----------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| <b>Level of consciousness</b>                                                           |                                                                                     |                                                                                     |
| Patient drowsy, calm or restless (e.g., RASS -1 to +1)                                  |  |  |
| Patient lightly sedated or agitated (e.g., RASS -2 or +2)                               |  |  |
| Patient unrousable or deeply sedated (e.g., RASS <-2)                                   |  |  |
| Patient very agitated or combative (e.g., RASS >+2)                                     |  |  |
| <b>Delirium</b>                                                                         |                                                                                     |                                                                                     |
| Delirium tool (e.g., CAM-ICU) –ve                                                       |  |  |
| Delirium tool +ve and able to follow simple commands                                    |  |  |
| Delirium tool +ve and not able to follow commands                                       |  |  |
| <b>Intracranial pressure</b>                                                            |                                                                                     |                                                                                     |
| Active management of intracranial hypertension, with ICP not in desired range           |  |  |
| Intracranial pressure monitoring without active management of intracranial hypertension |  |  |

| CARDIOVASCULAR CONSIDERATIONS                                                                      | IN-BED EXERCISES                                                                    | OUT-OF-BED EXERCISES                                                                |
|----------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| <b>Blood pressure</b>                                                                              |                                                                                     |                                                                                     |
| Intravenous antihypertensive therapy for hypertensive emergency <sup>a</sup>                       |    |    |
| MAP <sup>b</sup> :                                                                                 |                                                                                     |                                                                                     |
| Below target range and causing symptoms                                                            |    |    |
| Below target range despite support (vasoactive and/or mechanical)                                  |    |    |
| Greater than lower limit of target range while receiving no support or low level support           |    |    |
| Greater than lower limit of target range while receiving moderate level support                    |    |    |
| Greater than lower limit of target range on high level support                                     |    |    |
| Known or suspected severe pulmonary hypertension                                                   |    |    |
| <b>Cardiac arrhythmias</b>                                                                         |                                                                                     |                                                                                     |
| <b>Bradycardia:</b>                                                                                |                                                                                     |                                                                                     |
| Requiring pharmacological treatment (e.g., isoprenaline) or awaiting emergency pacemaker insertion |    |    |
| Not requiring pharmacological treatment and not awaiting emergency pacemaker insertion             |    |    |
| <b>Transvenous or epicardial pacemaker:</b>                                                        |                                                                                     |                                                                                     |
| Dependent rhythm                                                                                   |   |   |
| Stable underlying rhythm                                                                           |  |  |

|                                                                                |                                                                                     |                                                                                     |
|--------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Any stable tachyarrhythmia:                                                    |                                                                                     |                                                                                     |
| Ventricular rate >150 bpm                                                      |   |   |
| Ventricular rate 120 to 150 bpm                                                |  |  |
| Any tachyarrhythmia with ventricular rate <120 bpm                             |  |  |
| <b>Devices</b>                                                                 |                                                                                     |                                                                                     |
| Femoral IABP <sup>c</sup>                                                      |  |  |
| ECMO:                                                                          |                                                                                     |                                                                                     |
| Femoral <sup>c</sup> or subclavian (not single bicaval dual lumen cannulae)    |  |  |
| Single bicaval dual lumen cannulae inserted into a central vein                |  |  |
| Ventricular assist device                                                      |  |  |
| Pulmonary artery catheter or other continuous cardiac output monitoring device |  |  |
| <b>Other cardiovascular considerations</b>                                     |                                                                                     |                                                                                     |
| Shock of any cause with lactate >4mmol/L                                       |  |  |
| Known or suspected acute DVT/PE                                                |  |  |
| Known or suspected severe aortic stenosis                                      |  |  |
| Cardiac ischemia (defined as ongoing chest pain and/or dynamic EKG changes)    |  |  |

IABP = intra-aortic balloon pump; ECMO = extracorporeal membrane oxygenation; bpm = beats per minute; MAP = mean arterial pressure; DVT = deep vein thrombosis; PE = pulmonary embolus.

<sup>a</sup> This may be a yellow (pause) for in-bed activities if the blood pressure is within target range as documented by the medical team.

<sup>b</sup> Experienced ICU practitioners were considered to have good judgment about the impact of cardiovascular instability and low, medium or high levels of hemodynamic support, on the ability to exercise. However, in the case of uncertainty or lack of experience, it is recommended that the decision to mobilize a patient is discussed with appropriate experienced ICU staff. The target mean arterial pressure is determined by the treating ICU team.

<sup>c</sup> Cycling and hip flexion may be contraindicated in the leg where the IABP/ECMO is inserted. If so, in-bed exercises may need to be modified to limit hip flexion.



| CARDIOVASCULAR CONSIDERATIONS                                                                      | IN-BED EXERCISES | OUT-OF-BED EXERCISES |
|----------------------------------------------------------------------------------------------------|------------------|----------------------|
| <b>Blood pressure</b>                                                                              |                  |                      |
| Intravenous antihypertensive therapy for hypertensive emergency <sup>a</sup>                       | Red Octagon      | Red Octagon          |
| MAP <sup>b</sup> :                                                                                 |                  |                      |
| Below target range and causing symptoms                                                            | Yellow Triangle  | Red Octagon          |
| Below target range despite support (vasoactive and/or mechanical)                                  | Yellow Triangle  | Red Octagon          |
| Greater than lower limit of target range while receiving no support or low level support           | Green Circle     | Green Circle         |
| Greater than lower limit of target range while receiving moderate level support                    | Green Circle     | Green Circle         |
| Greater than lower limit of target range while receiving high level support                        | Green Circle     | Green Circle         |
| Known or suspected severe pulmonary hypertension                                                   | Yellow Triangle  | Yellow Triangle      |
| <b>Cardiac arrhythmias</b>                                                                         |                  |                      |
| Bradycardia:                                                                                       |                  |                      |
| Requiring pharmacological treatment (e.g., isoprenaline) or awaiting emergency pacemaker insertion | Red Octagon      | Red Octagon          |
| Not requiring pharmacological treatment and not awaiting emergency pacemaker insertion             | Yellow Triangle  | Yellow Triangle      |
| Transvenous or epicardial pacemaker:                                                               |                  |                      |
| Dependent rhythm                                                                                   | Yellow Triangle  | Red Octagon          |
| Stable underlying rhythm                                                                           | Green Circle     | Green Circle         |

**EXPERIENCED ICU PRACTITIONERS**

|                                                                             |                 |                 |
|-----------------------------------------------------------------------------|-----------------|-----------------|
| Any stable tachyarrhythmia:                                                 |                 |                 |
| Ventricular rate >150 bpm                                                   | Yellow Triangle | Red Octagon     |
| Ventricular rate 120 to 150 bpm                                             | Yellow Triangle | Yellow Triangle |
| Any tachyarrhythmia with ventricular rate <120 bpm                          | Green Circle    | Green Circle    |
| <b>Devices</b>                                                              |                 |                 |
| Femoral IABP <sup>c</sup>                                                   | Green Circle    | Red Octagon     |
| ECMO:                                                                       |                 |                 |
| Femoral <sup>c</sup> or subclavian (not single bicaval dual lumen cannulae) | Green Circle    | Green Circle    |
| Other cardiovascular considerations                                         |                 |                 |
| Shock of any cause with lactate >4mmol/L                                    | Yellow Triangle | Yellow Triangle |
| Known or suspected acute DVT/PE                                             | Yellow Triangle | Yellow Triangle |
| Known or suspected severe aortic stenosis                                   | Green Circle    | Yellow Triangle |
| Cardiac ischemia (defined as ongoing chest pain and/or dynamic EKG changes) | Yellow Triangle | Red Octagon     |

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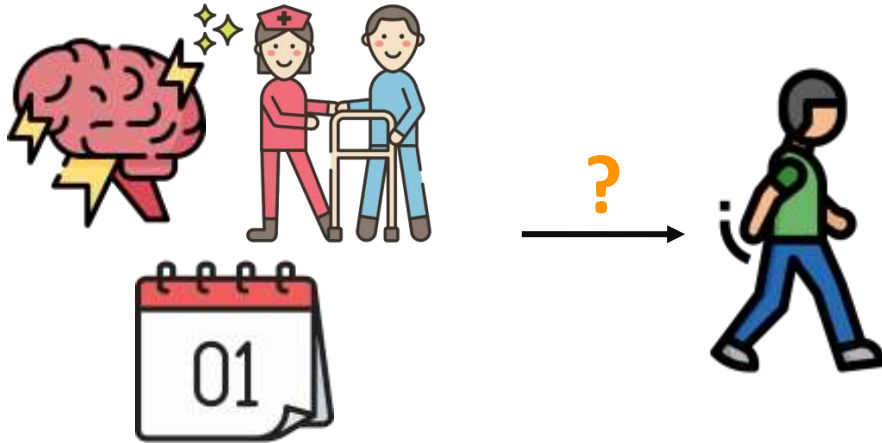


## A Very Early Rehabilitation Trial after stroke (AVERT): a Phase III, multicentre, randomised controlled trial

*Peter Langhorne, Olivia Wu, Helen Rodgers, Ann Ashburn and  
Julie Bernhardt on behalf of the AVERT trialists' collaboration*

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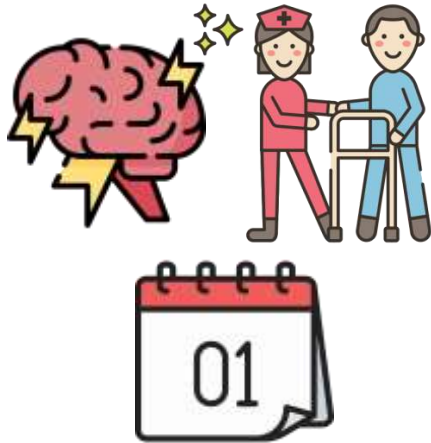
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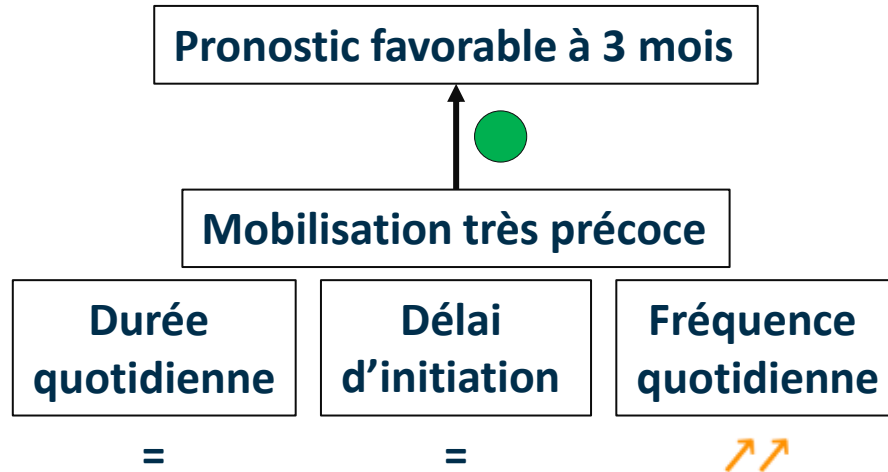
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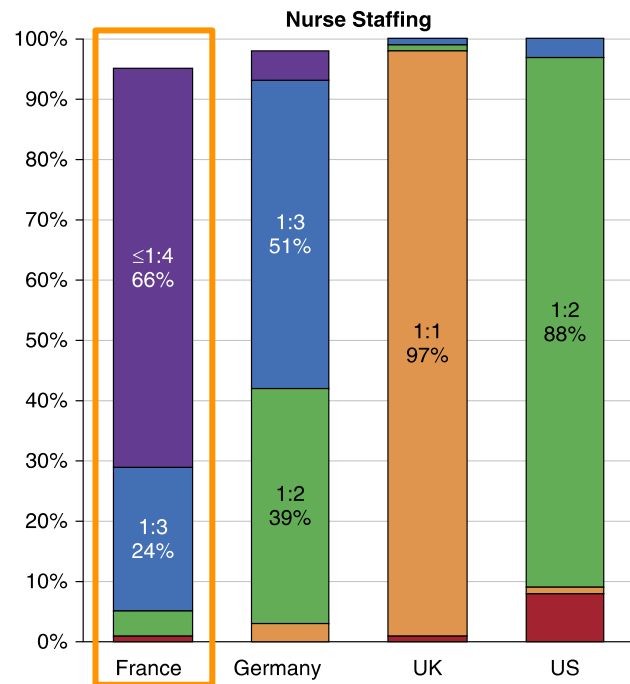
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Prespecified dose-response analysis for A  
Very Early Rehabilitation Trial (AVERT)



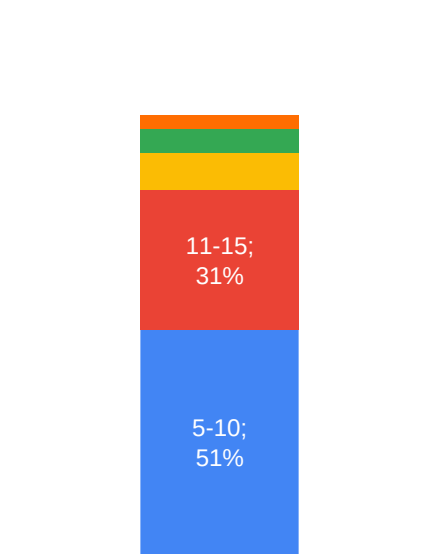
### Nurse:Patient Ratio

■ 1:4 or less ■ 1:3 ■ 1:2 ■ 1:1 ■ 2:1 or more



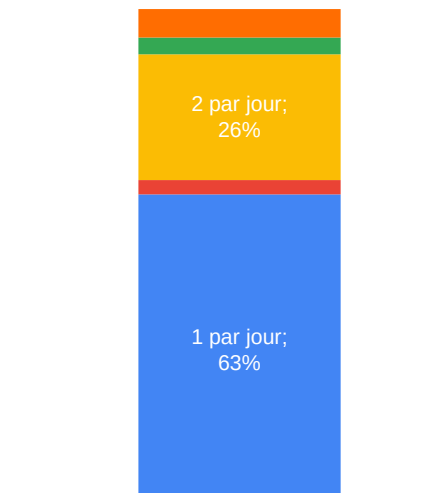
### Ratio kinésithérapeute/patients

■ 5-10 ■ 11-15  
■ 16-20 ■ >20 ■ Non défini



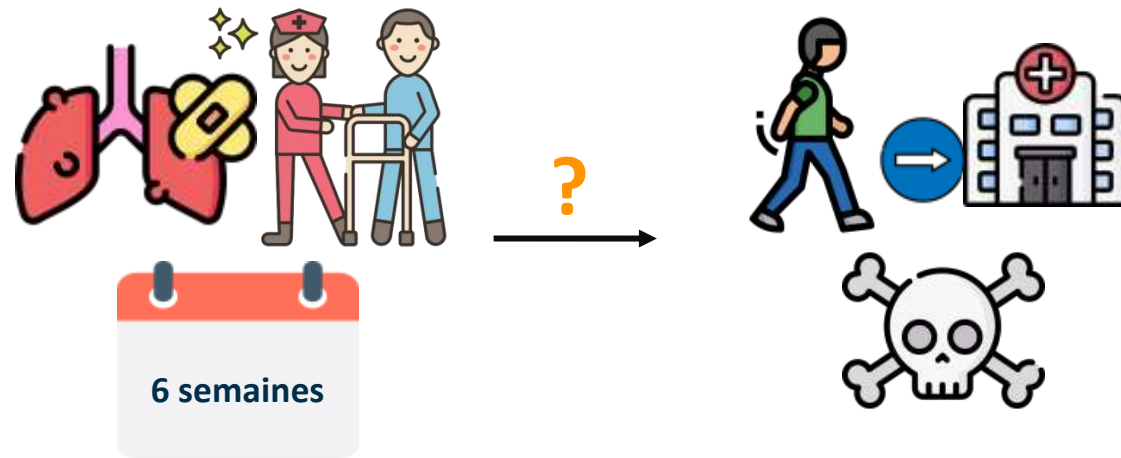
### Nombre de séances par patient et par jour

■ 1 / jour ■ 1 jour / 2  
■ 1-2 / jour ■ < 1 / semaine  
■ 2 / jour



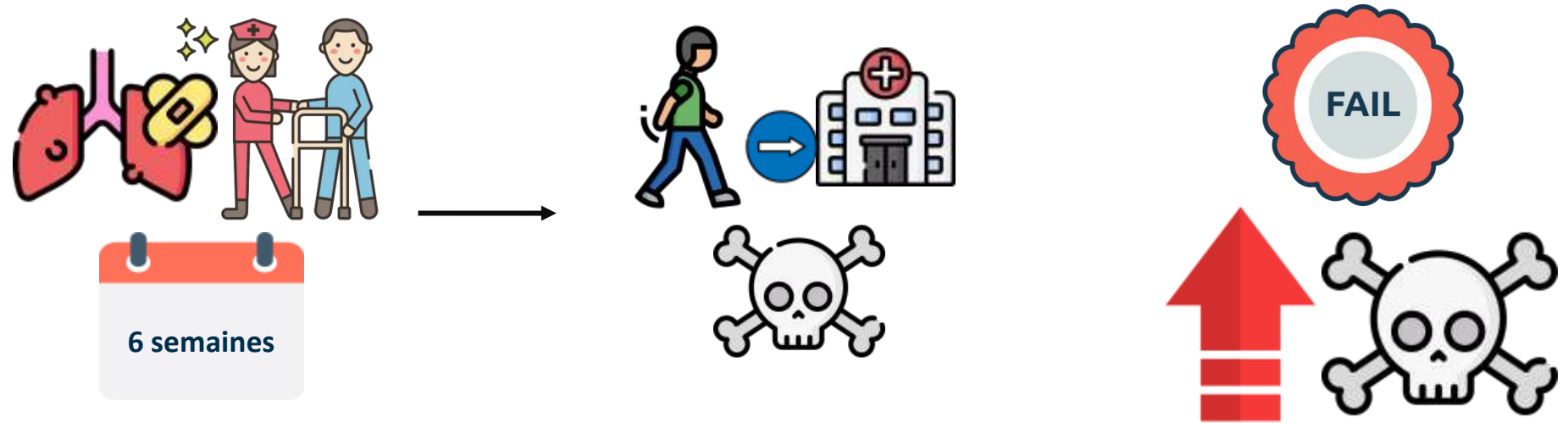
# An early rehabilitation intervention to enhance recovery during hospital admission for an exacerbation of chronic respiratory disease: randomised controlled trial

*Neil J Greening, Johanne E A Williams, Syed F Hussain et al.*



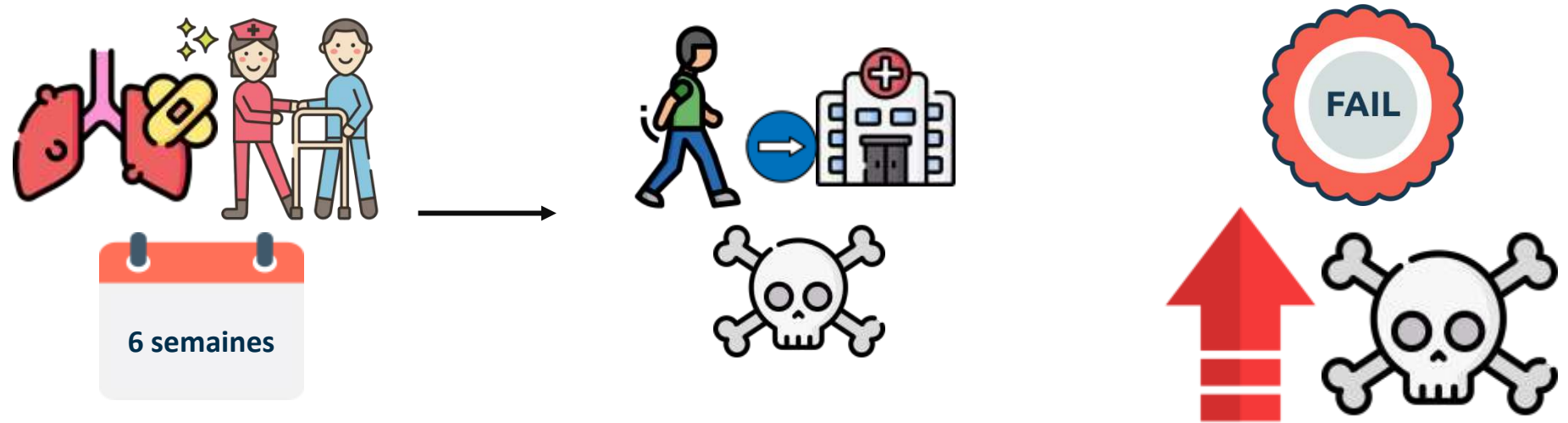
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**« We [...] accept that this observation could have occurred by chance. »**

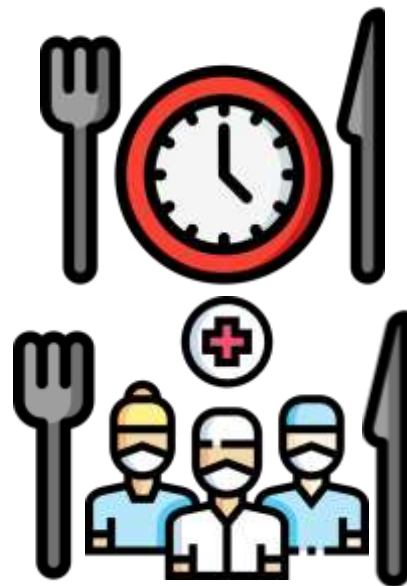


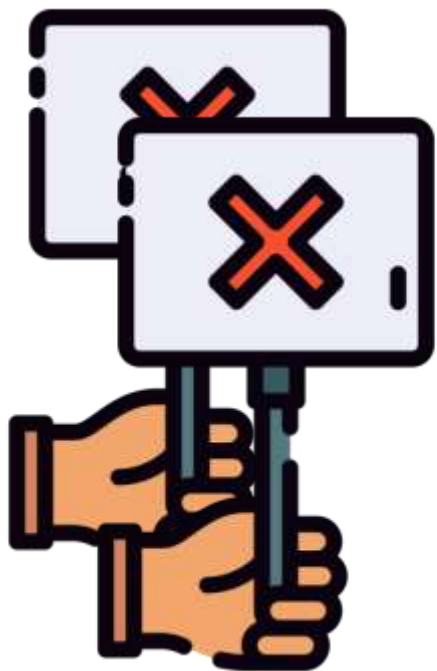














**Merci de votre attention**

Contact : [adela.foudhaili@aphp.fr](mailto:adela.foudhaili@aphp.fr)





## Iconographie

<https://www.flaticon.com>

