

# TRAINING MANUAL

## PREVENTION OF PRESSURE ULCERS ON WHEELCHAIR



**HANDICAP  
INTERNATIONAL**



## Contents

# PREVENTION OF PRESSURE ULCERS WHEN USING A WHEELCHAIR

## Positioning in wheelchair

1. Body regions at risk where Pressure ulcers can develop
2. Advised seating position for patient using a wheelchair

## Education of the prevention of pressure ulcers for the patients

A. Method of push up to relieve pressure on buttocks and allow normal blood flow in this region of the body

1. Push up with strong upper arms
2. Push up with weak arms: 2 techniques
3. Push up with assistance: 2 techniques
4. Decrease pressure with assistance: 2 techniques

B. Daily observation and check of the skin

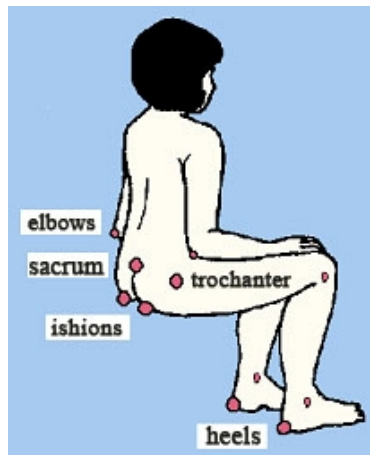
C. Prevention of pressure sore during transfers

D. Use of cushion to relieve pressure

# PREVENTION OF PRESSURE ULCERS WHEN USING A WHEELCHAIR

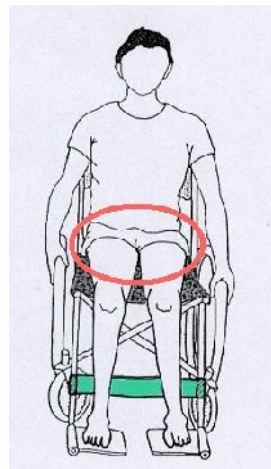
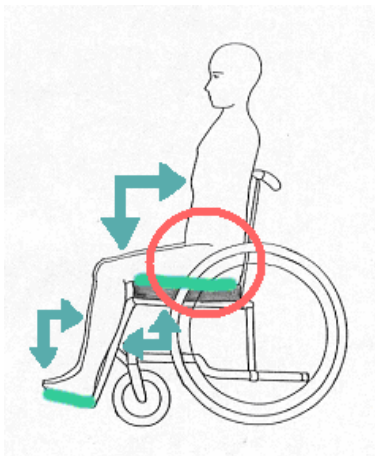
## Positioning in wheelchair

### 1. Body regions at risk where pressure ulcers can develop

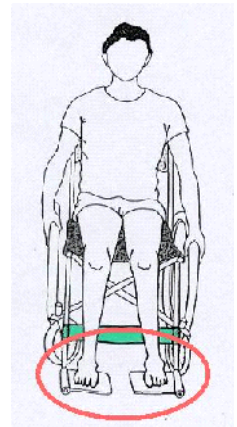
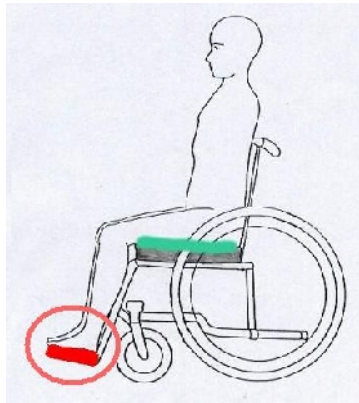


### 2. Advised seating position for patient using a wheelchair

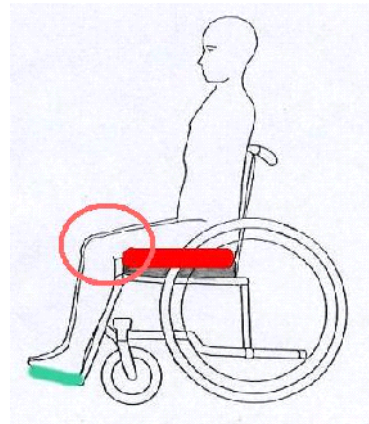
- a) The patient should sit at the back and in the middle of his wheelchair seat



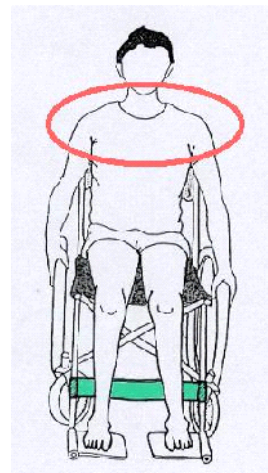
b) The patient should pose foot soles in contact with the foot rests and in the middle of the foot platform of the wheelchair



c) Adjust the height of the footrests in order to allow a space of two fingers wide between the crest of the seat and the inferior part of the thighs.



d) The upper body is straight and in the middle of the backrest , the shoulders are horizontal



# Education of the prevention of pressure ulcers for the patients

## A. Method of push up to relieve pressure on buttocks and allow normal blood flow in this region of the body

### 1. Push ups with strong upper arms:

- Put the brakes on
- The patient has a grip with both his hands on the armrests or wheels to lift his buttocks
- The duration of his lift is calculated by counting from 1 top 30 (15 – 20 seconds)
- This should be repeated every 15 to 20 minutes

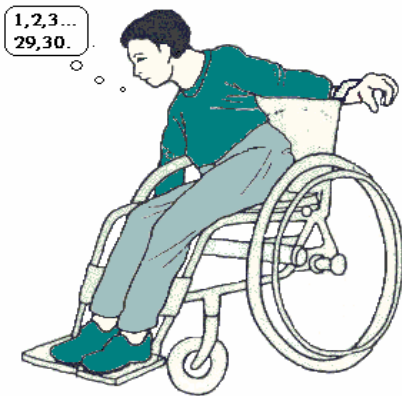


## 2. Push up with weak arms:

### 2.1. Technique 1 :

- **Attention !!!** To do the following technique , it is important to take out the armrests from your wheelchair first

- Put the brakes on
- Patient passes his hand under hand grips and hold this position. The other hand bears on the handrim as he passes his weight towards the handrim to lift as much as possible one part of his buttocks.
- the duration of this shift should last between 15 to 20 seconds or by counting to 30 (15 -20 seconds)
- repeat the same procedure at the opposite side
- Repeat the manoeuvres every 15 to 30 minutes





## 2.2. Technique 2 :

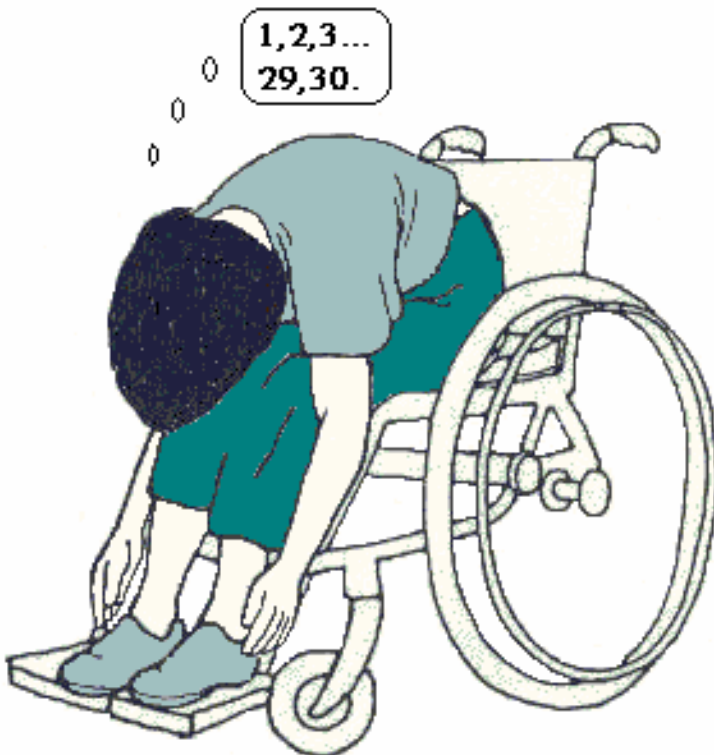
- It is not needed to take of the armrests for this technique

- Put on the brakes

- According his condition , the patient can bear on the armrests , brakes , legs and foot rests and uses them as a support . After this he benches over as much as possible on his thighs , allowing his buttocks to be lifted.

- the duration of this shift should last between 15 to 20 seconds or by counting to 30 (15-20 seconds)

- the patient should repeat the maneuver every 15 to 30 minutes.

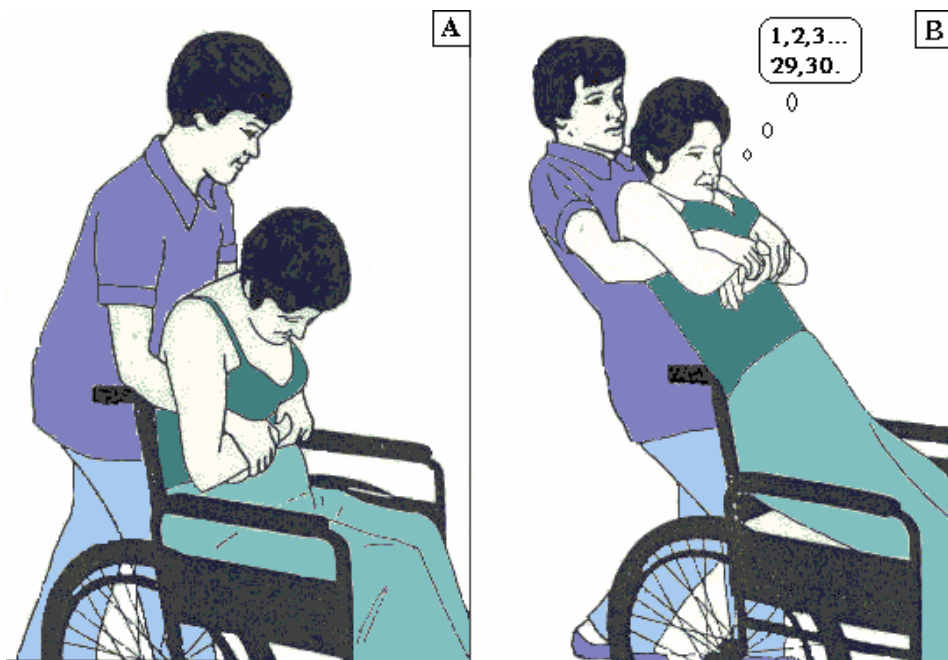




### 3. Push up with assistance: 2 techniques

#### 3.1. Technique 1:

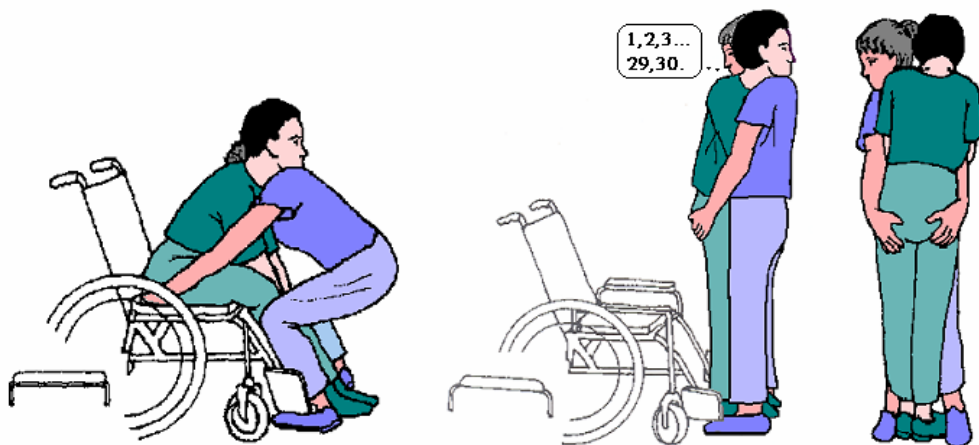
- Put the brakes on
- An attendant stands behind the patient . the latter crosses his arms and puts them on his chest . One hand of the attendant holds both arms of the patient , the other arm passes under the shoulder of the patient and holds on.
- The attendant holds one leg against the backrest of the wheelchair . The other leg goes behind ( image A).
- The attendant puts his chest against the back of the patient , knees bended and tilting his upper body backwards , he brings the patient upwards by keeping his chest against the back of the patient ( image B ).
- the duration of this shift should last between 15 to 20 seconds or by counting to 30
- the maneuver should be repeated every 15 to 30 minutes





### 3.2. Technique 2:

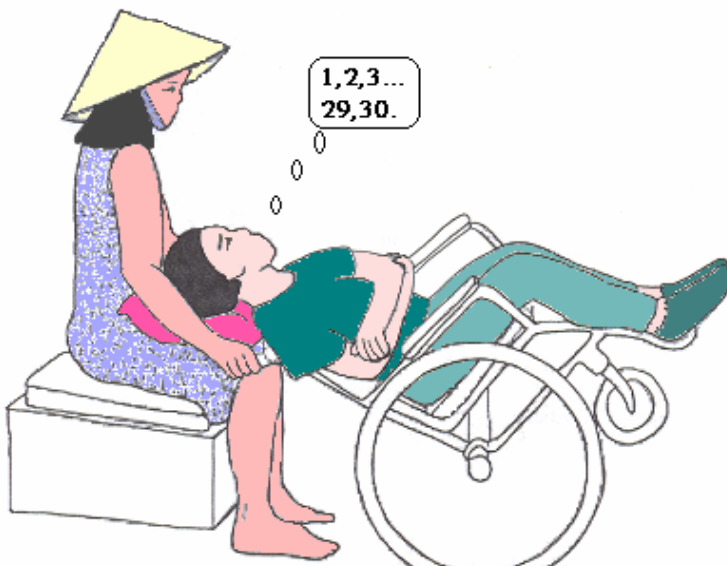
- Put the brakes on
- Take the armrests of the wheelchair
- Put the feet of the patient on the ground and turn the footrests on the sides
- The attendant stands in front of the patient legs squatted , both his arms grasp the hips of the patient . Each hand brings the buttock of the patient towards the middle of the seat .
- Position the feet of the patient parallel and in contact with the ground
- The attendant blocks both knees of the patient between his own knees
- The attendant puts the patient's arms crossed in front of him
- The patient benches forward and his chin touches a shoulder of the attendant
- The attendant positions both his hands on the buttocks of the patient
- The attendant lifts the buttocks up and holds them above the seat of the wheelchair
- The duration of this position is calculated by counting til 30 ( 15 to 20 seconds)
- The maneuver should be repeated every 15 to 30 minutes



## 4. Decrease pressure with assistance : 2 techniques

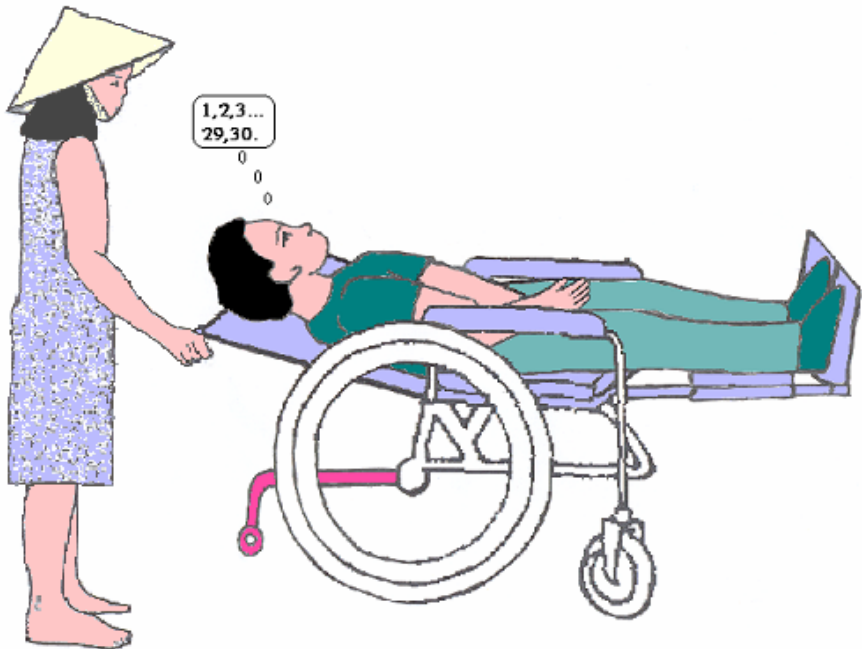
### 4.1. Technique 1: with a wheelchair equipped with a belt on the footrests

- Put the brakes on
- The attendant is standing in front of a chair on the same height as the wheelchair seat behind the wheelchair
- Cross both hands of the patient in front
- The attendant takes both handles of the wheelchair and balances the wheelchair behind
- The attendant sits in his chair and rests the patient's head on his hips by still holding the handles of the wheelchair
- The duration of this position can be held by counting until 30 ( 15 to 20 seconds )
- **Attention!!!** Put the the wheelchair **SLOWLY** back to his normal position in order to avoid the patient falling to the front.
- The maneuver can be repeated every 15 to 30 minutes



#### 4.2. Technique 2: for a wheelchair for tetraplegic patient

- The attendant must put the backrest at horizontal level and lift the footrests.
- The duration of this position can be held by counting until 30 (15 to 20 seconds)
- The maneuver should be repeated every 15 to 30 minutes



These methods and techniques can help the patient to reduce the pressure on his seat . The attendant and his family can choose which method is the most suitable to them.

## !!! SUMMARY !!!

For all methods:

The duration of decreasing pressure can be held by counting until 30 (15 to 20 seconds)

Each maneuver should be repeated every 15 – 30 minutes

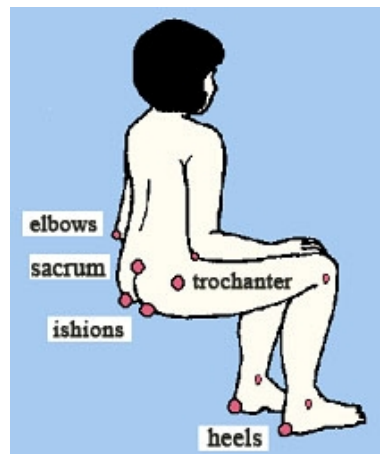
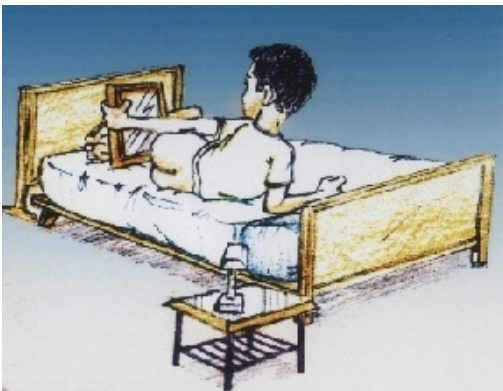
## B. Daily observation and check of the skin

It is important that the patient and his attendant check regularly the specific pressure areas on the body after using the wheelchair, these areas are : the buttocks, the hips, internal side of the knees, external side of the feet and the heels. Some areas may be difficult to check (like the buttocks), you can use a mirror to make it possible.

If there is any skin redness on one or more of the specific pressure areas, the patient has to use a cushion or towel to reduce the pressure on the skin area when using the wheelchair.

If there is a skin redness at the buttocks, you should consider not using the wheelchair or sitting position until this redness disappears.

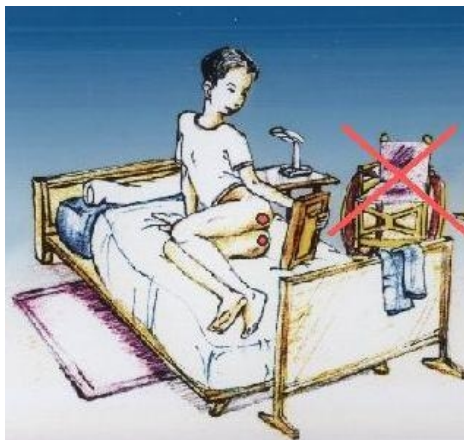
check every morning and evening  
the areas on your body prone to pressure:



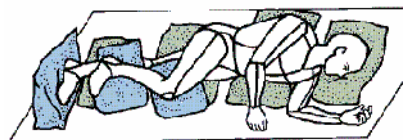
The patient should pay particular attention to the buttocks during the check.

!!! As soon as the patient or attendant observes a redness on the buttocks , he should not sit in the wheelchair neither lying on his back

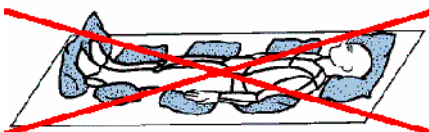
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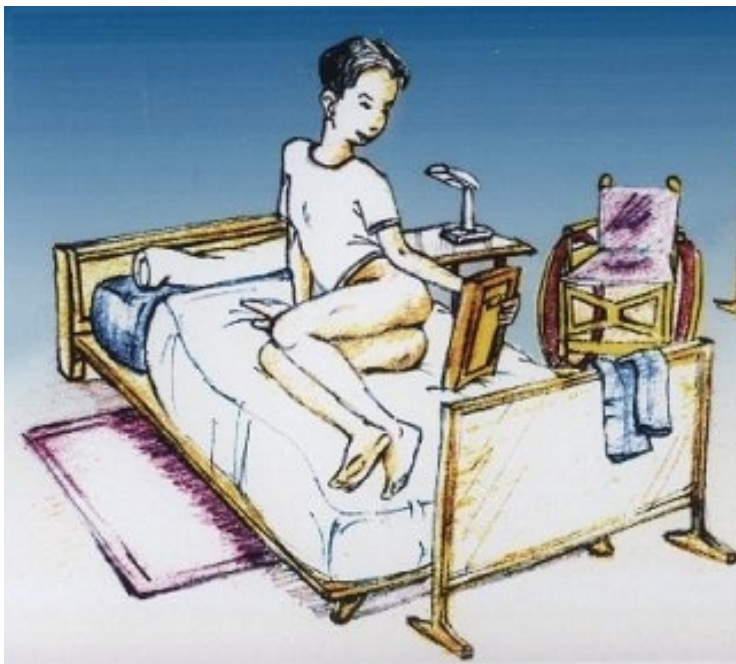


Хорошо





UNTIL:



THEN:



## C. Prevention of pressure sores during transfers

When a patient makes a transfer from his wheelchair to his bed , chair or the floor , he should not touch or rub his skin with parts of his wheelchair in order to prevent occurrence of pressure sores.

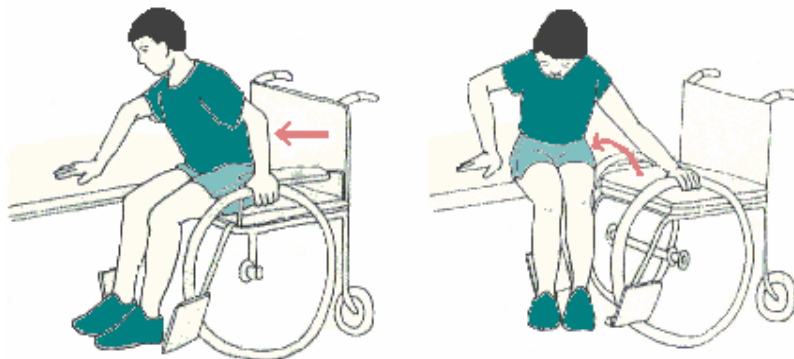
To avoid this contact with his wheelchair , he should:

1. Before making the transfer: put his buttocks towards the front of his seat and near the side to where he is making the transfer.

2. During the transfer:

\* If there is no board:

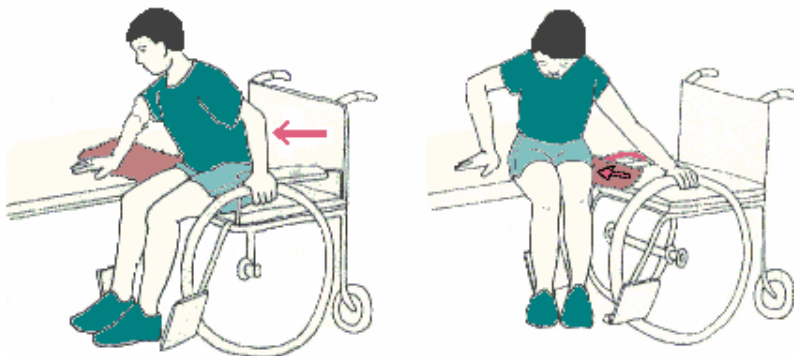
The patient lifts his buttocks to his front and over the wheel.



\* If there is a board:

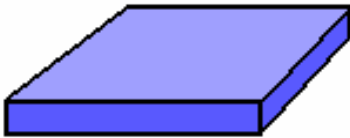
The patient has to shift his buttocks to the front of the wheel .

He has to avoid to squeeze his skin between the board and the seat



## D. Use of cushion to relieve pressure

ATTENTION !!! Even with a anti-pressure cushion , the patient should continue to do his lifts as shown before !!!



AND



- If the patient does his transfer to a hard seat and remains there for more than 20 minutes , he has to take the cushion with him , use it on the hard seat and practice the lifting schedule
- The patient should not sit on a cushion that is:
  - + Torn apart
  - + Covered with folds
  - + Humid , wet or dirty
  - + Too small for his buttocks

[illegible]

