

Home-based Stroke Rehabilitation

Practical point! for the nurse

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Outline

- Routine nursing care
- Mobility
- Tips in variety of stroke symptoms
- Prevention and detection of complication
- Assistive devices and home adaptation

Low-potential

- Routine nursing care
(routine but important)
- Prevent complications

High-potential

- Routine nursing care
- Mobility
- Ambulation
- Other aspect

Potential?

- Duration since stroke
- Rehabilitation program
- Caregiver (can/can't maintain program)
- Premorbid status
- Recurrent stroke
- Location and severity of stroke

Mechanisms of recovery

- Cerebral plasticity and functional reorganization of cerebral cortex

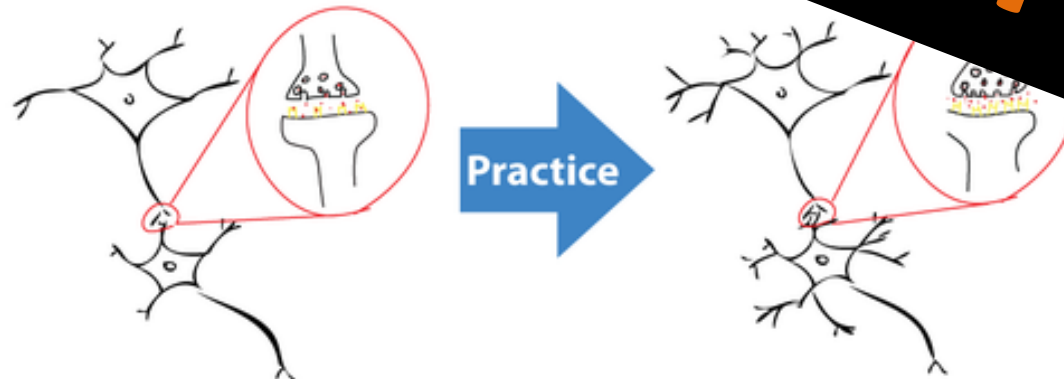
“Changes in neural pathways and synapses due to changes in behavior, environment, neural processes, thinking, and emotions - as well as to changes resulting from bodily injury”

Behavior

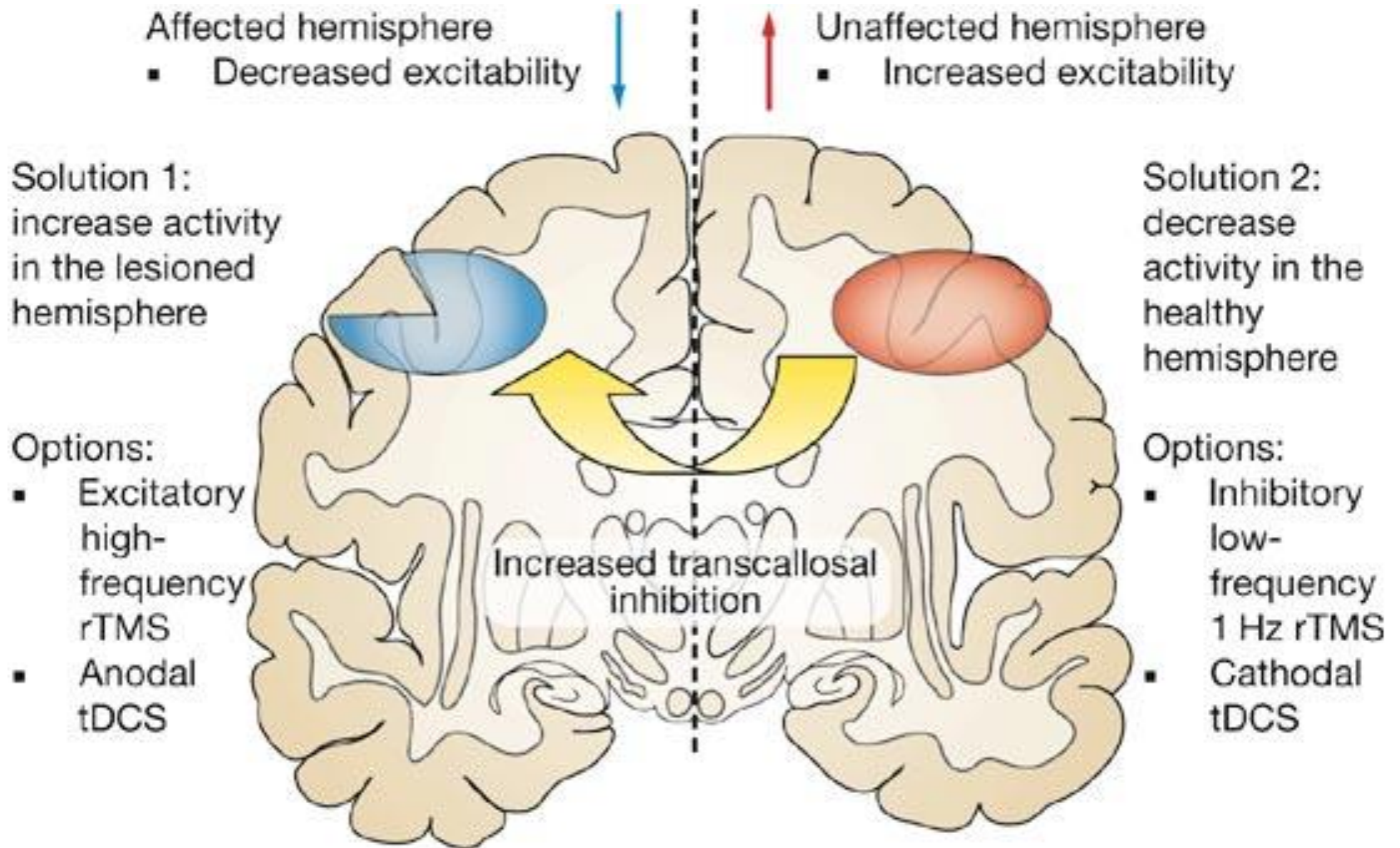


USE IT or LOSE IT

Neuron



Transcallosal inhibition



Routine nursing care

- Bed positioning
- Passive range of motion exercise
- Turning in bed
- Upright

Bed positioning

Positioning

Benefit

- Prevent contracture or contracture in functional position

If undo

- Contracture in non-functional position resulted in dysfunction, pain, poor hygiene care, spasticity, pressure ulcer

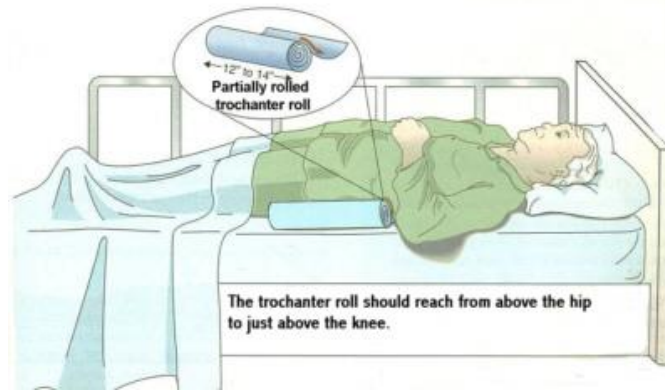


Positioning

- Hand roll



- Trochanter roll

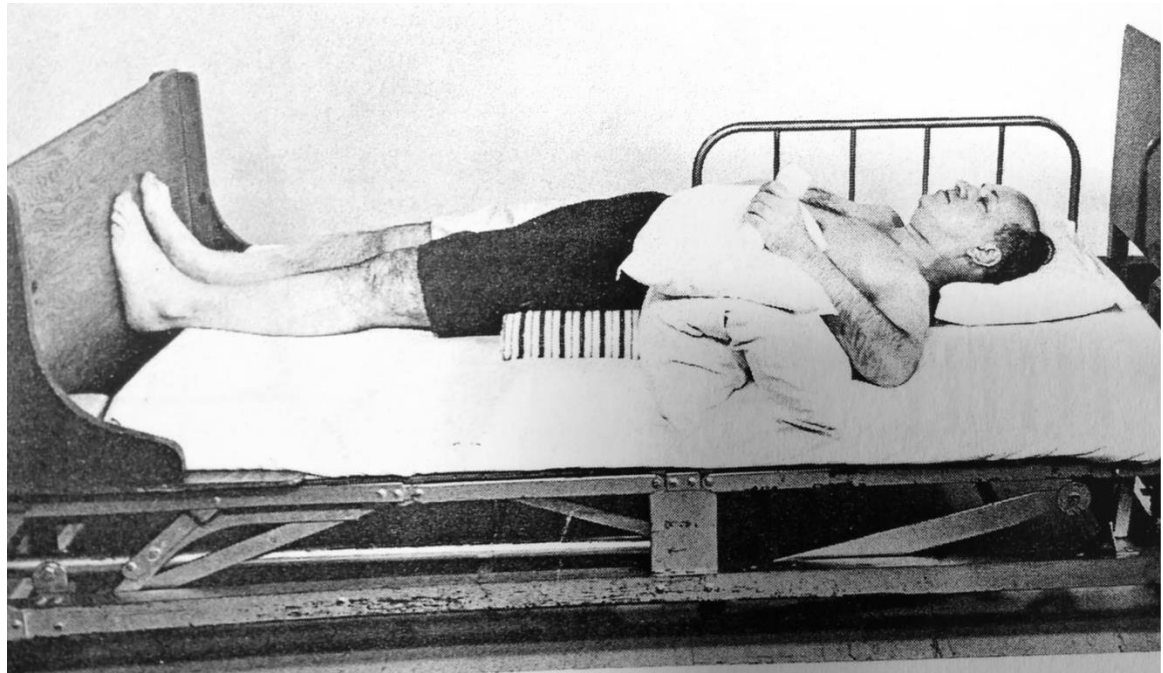


- Lots! and Lots! of pillows



How to do positioning in bed

- Supine



Lower extremities

Foot: against foot board

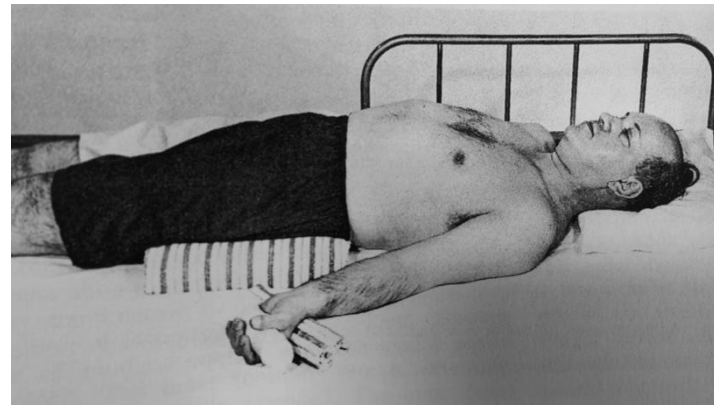
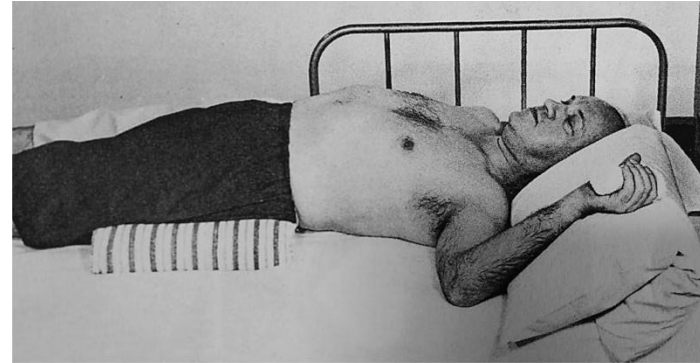
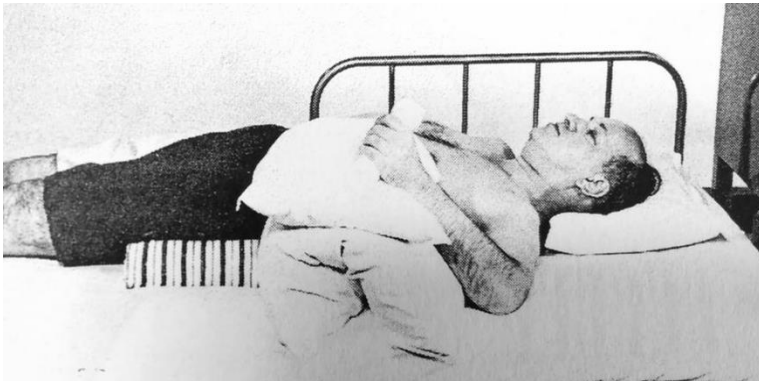
Heel: avoid contact

Leg: neutral position using trochanter roll

Hip and knee: extension

How to do positioning in bed

- Supine



Upper extremities

Position 1: shoulder Ab 90, elbow flex 90, slightly IR, forearm pronate

Position 2: same but shoulder ER

Position 3: shoulder slightly Ab, elbow extend, forearm supinate

Wrist and hand

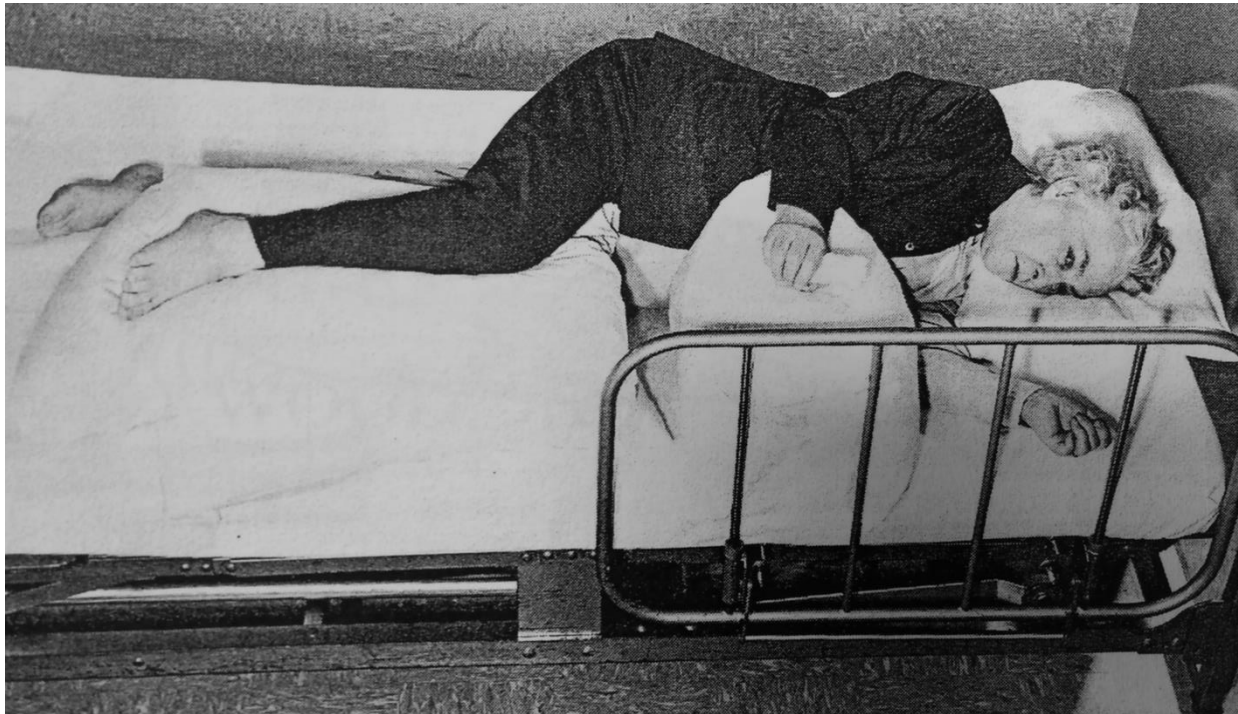
Position 1: wrist ext, fingers partially flex, thumb palmar Ab and opposed using hand roll

Position 2: on wrist-hand splint



How to do positioning in bed

- Side-lying



Lower extremities

Top leg: hip and knee flex supported by pillow

Bottom leg: hip and knee ext

How to do positioning in bed

- Side-lying on the non-affected side (semi-prone)



Upper extremities

Affected side: shoulder slightly forward, elbow ext, forearm neutral supported by pillow

Non-affected side: shoulder ER and slightly flex or as comfort

How to do positioning in bed

- Side-lying on the affected side (semi-supine)



Upper extremities

Affected side: shoulder slightly forward, elbow ext, forearm neutral

Non-affected side: on pillow or thigh as comfort

Passive range of motion

Passive range of motion exercise

Benefit

- Prevent contracture

If undo

- Obstacle when recovery come
- Pain
- Hygiene care

Passive range of motion exercise

Principle

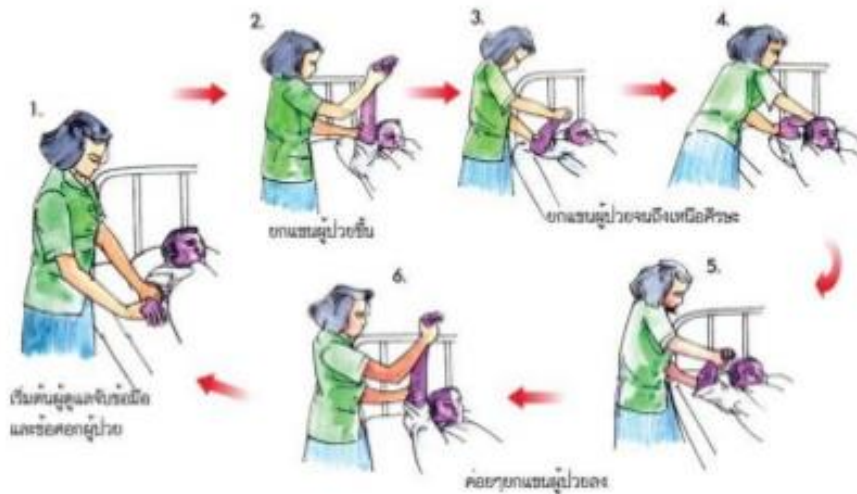
- Move every joint to its end-range at least once daily
- 3 times/joint/bid would be proper if no contracture is present

How to do PROM

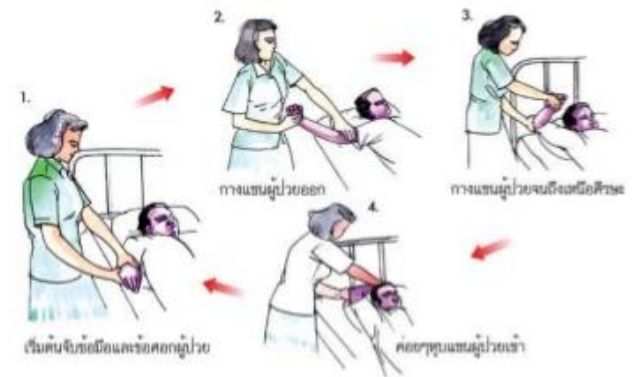
- By caregiver

การบริหารส่วนแขน

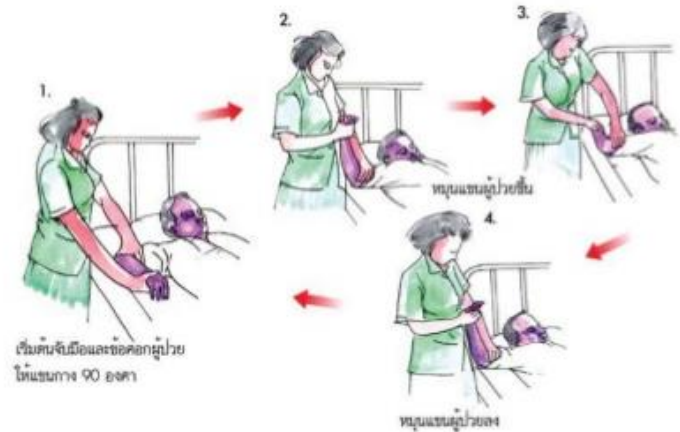
1. การยกแขนขึ้นและลง



2. การกางแขนออก และหุบแขนเข้า



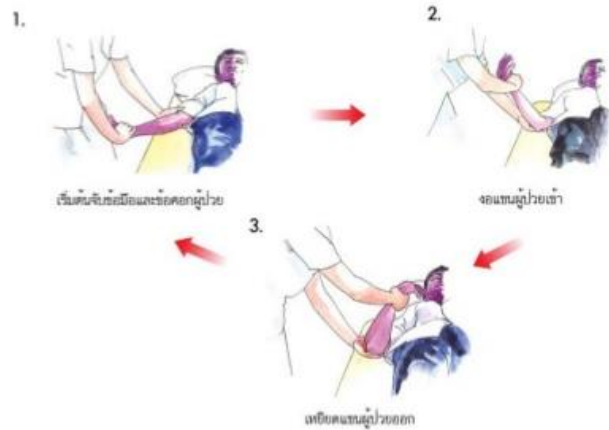
3. การหมุนข้อไหล่เข้า และออก



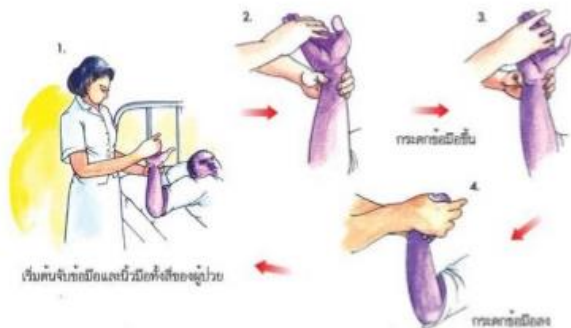
How to do PROM

- By caregiver

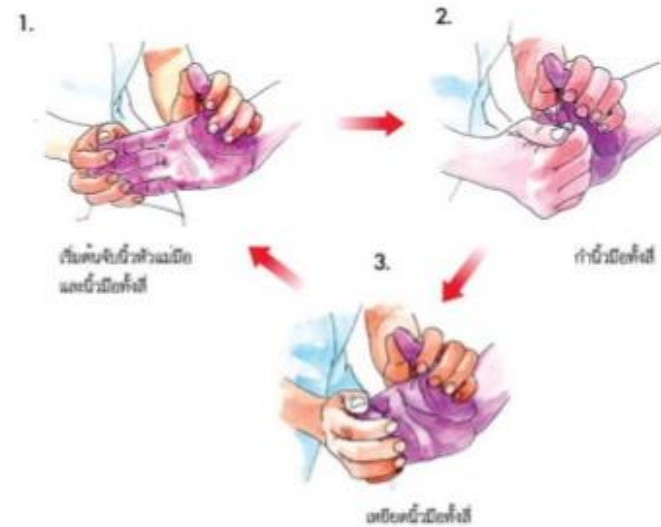
4. การงอข้อศอกเข้า และเหยียดออก



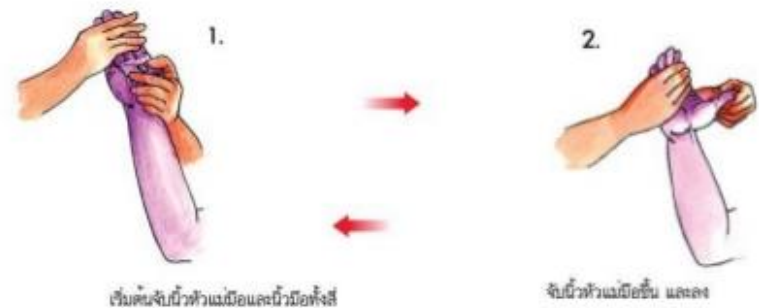
5. การกระดกข้อมือขึ้น และลง



6. การกำนิ้วมือเข้า และเหยียดนิ้วมือออก



7. การกระดกนิ้วโป้งขึ้น และลง



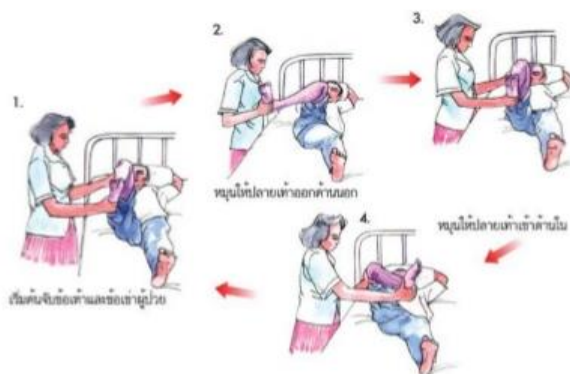
How to do PROM

- By caregiver

1. การงอขาเข้า และเหยียดขาออกของข้อสะโพก และข้อเข่า



2. การหมุนข้อสะโพกเข้า และหมุนข้อสะโพกออก



3. การกางขาออก และหุบขาเข้าของข้อสะโพก



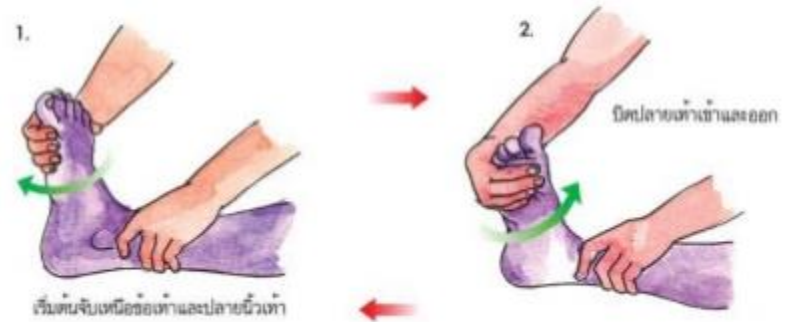
How to do PROM

- By caregiver

4. การกระดกข้อเท้าขึ้น และลง

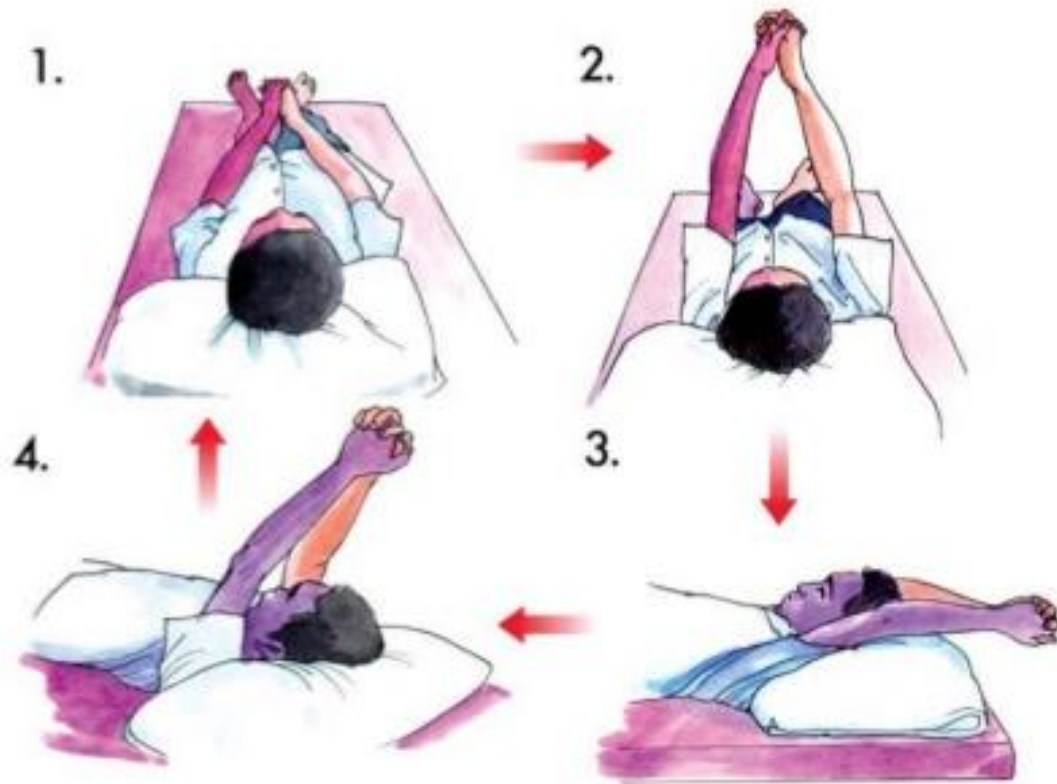


5. การหมุนปลายเท้าผู้ป่วยเข้า และออก



How to do PROM

- By patient



Upright

- Perceptual stimulation
- Help respiration
- Change weight bearing
- Prevent orthostatic hypotension
- Better quality of life

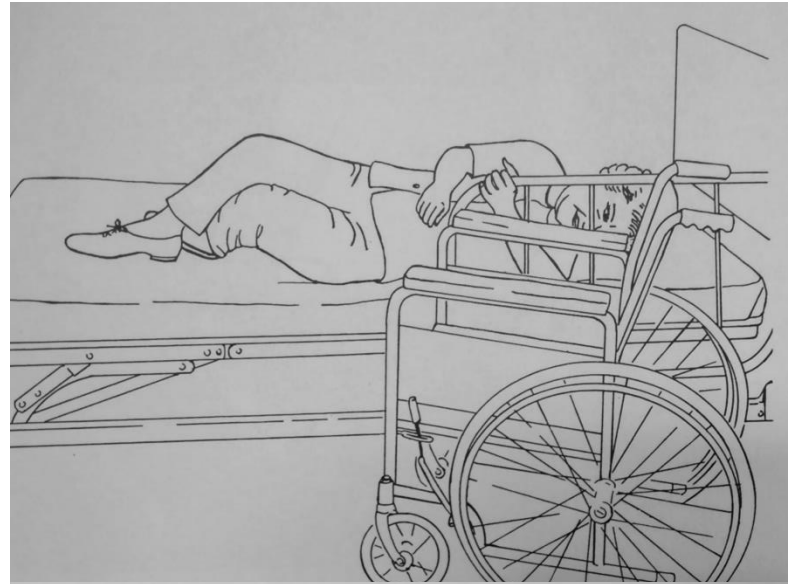
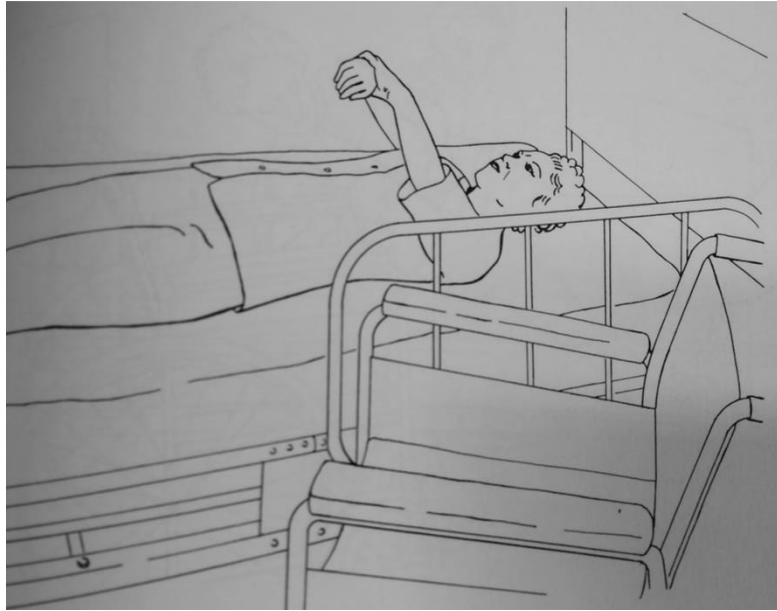
Mobility

Mobility

- Supine to sit
- Sit to stand
- Standing
- Transfer to wheelchair (pivot)

Supine to sit

To normal side

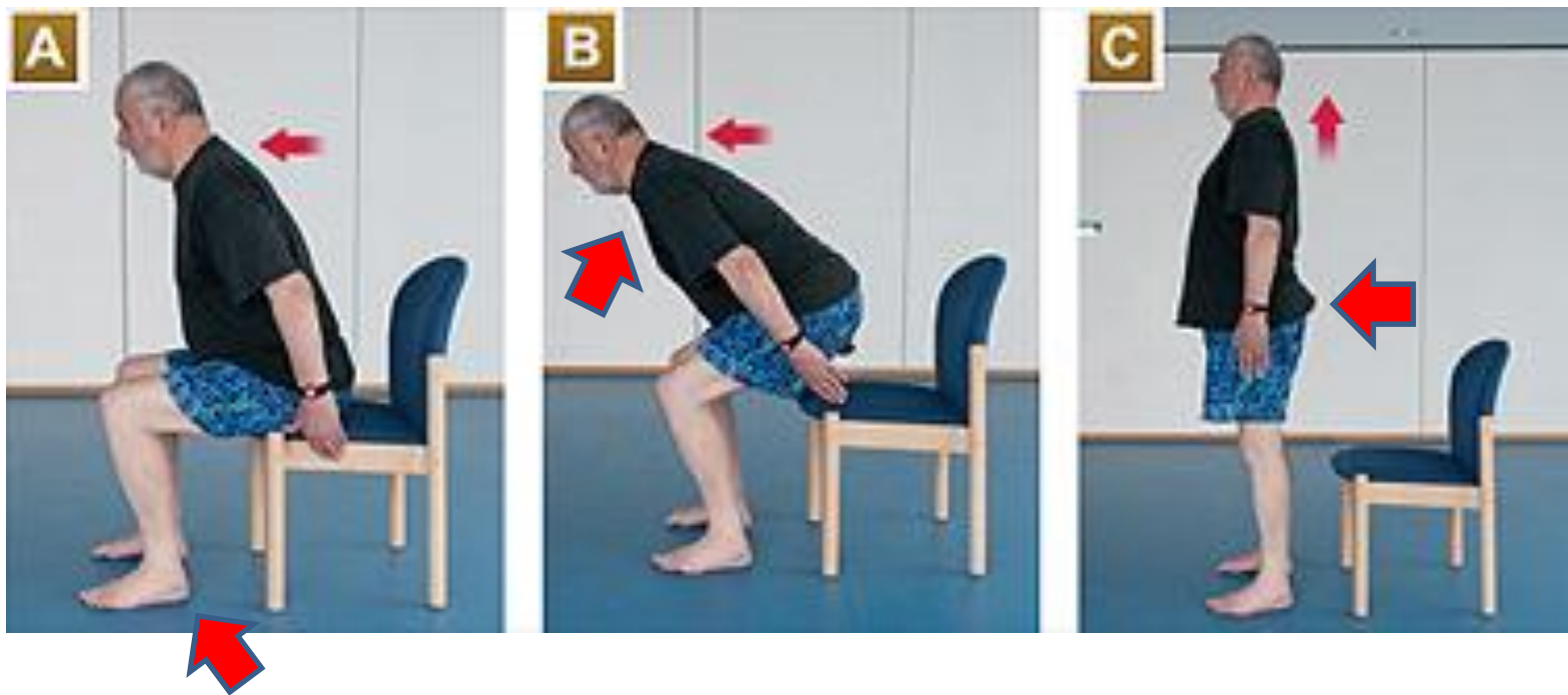


Supine to sit

To normal side

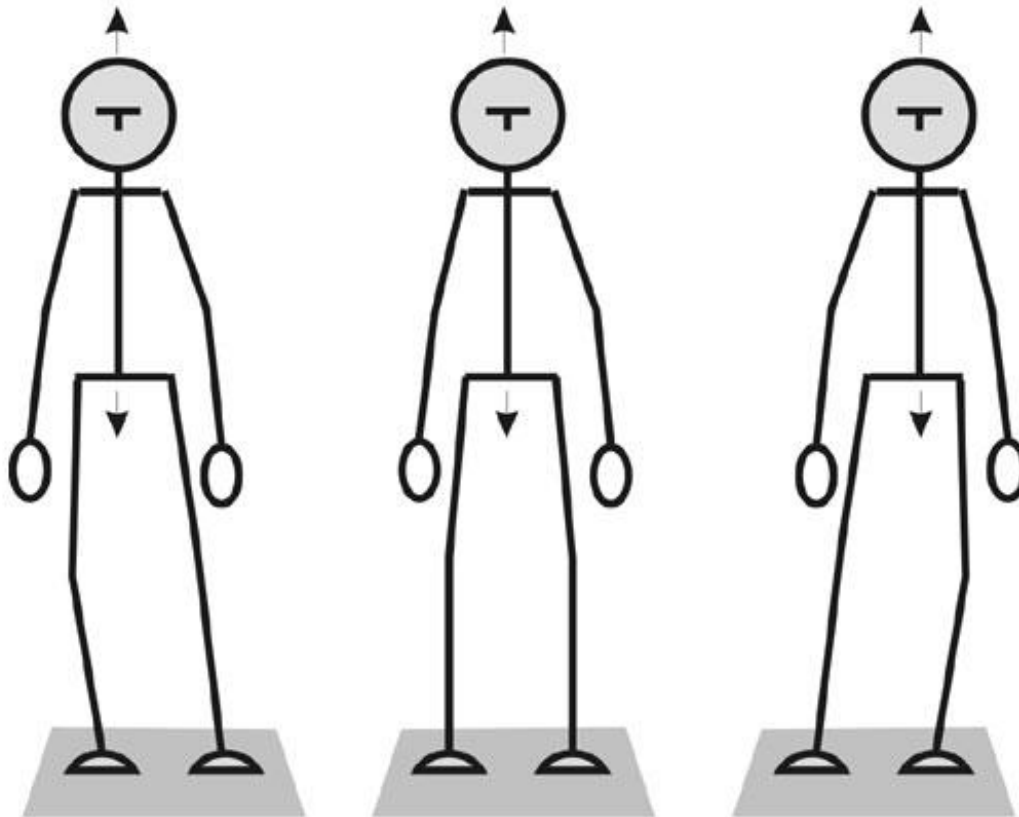
- Bring the affected upper extremity across abdomen
- Place normal foot under knee of the affected leg and slide foot down to ankle. Then partly flex and lift the affected leg
- Grasp and pull the side-rail and swing into sitting position

Sit to stand



Standing

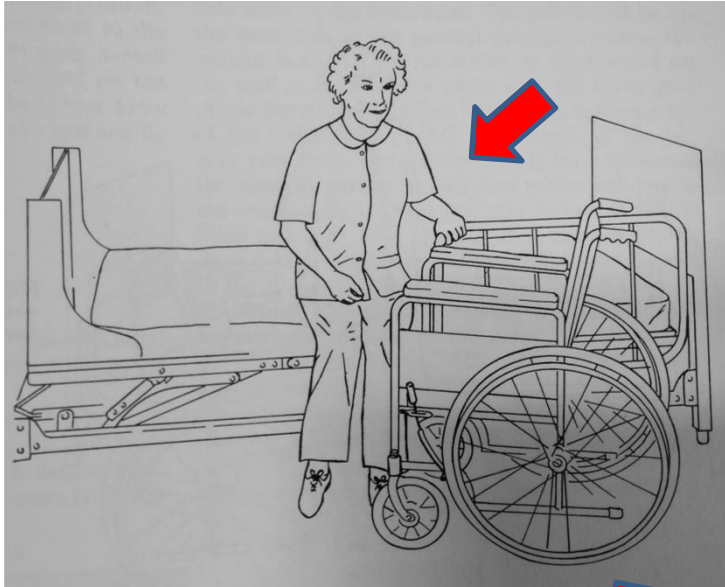
- Weight shifting



Belt



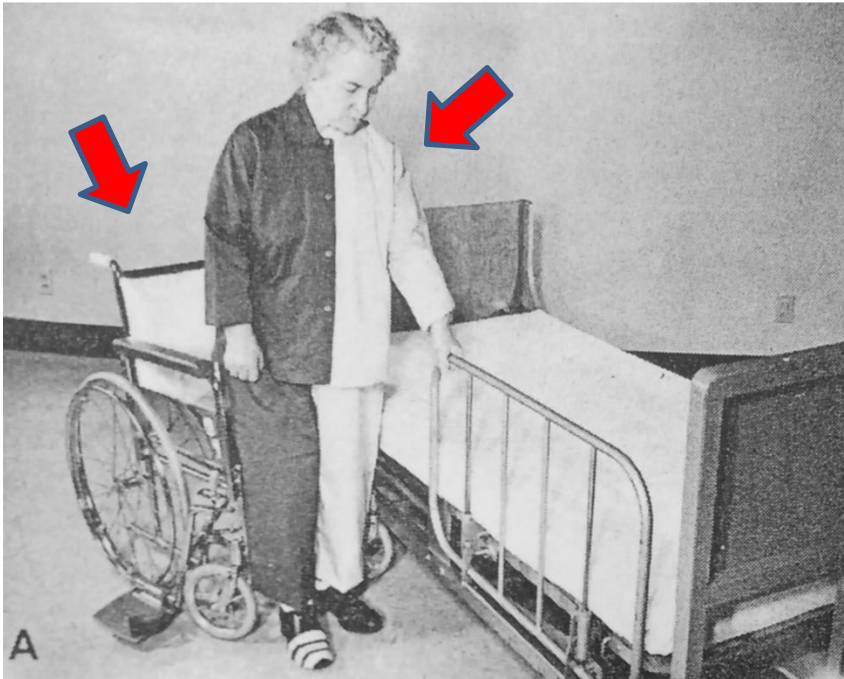
Transfer to wheelchair (pivot)



- Bed to wheelchair

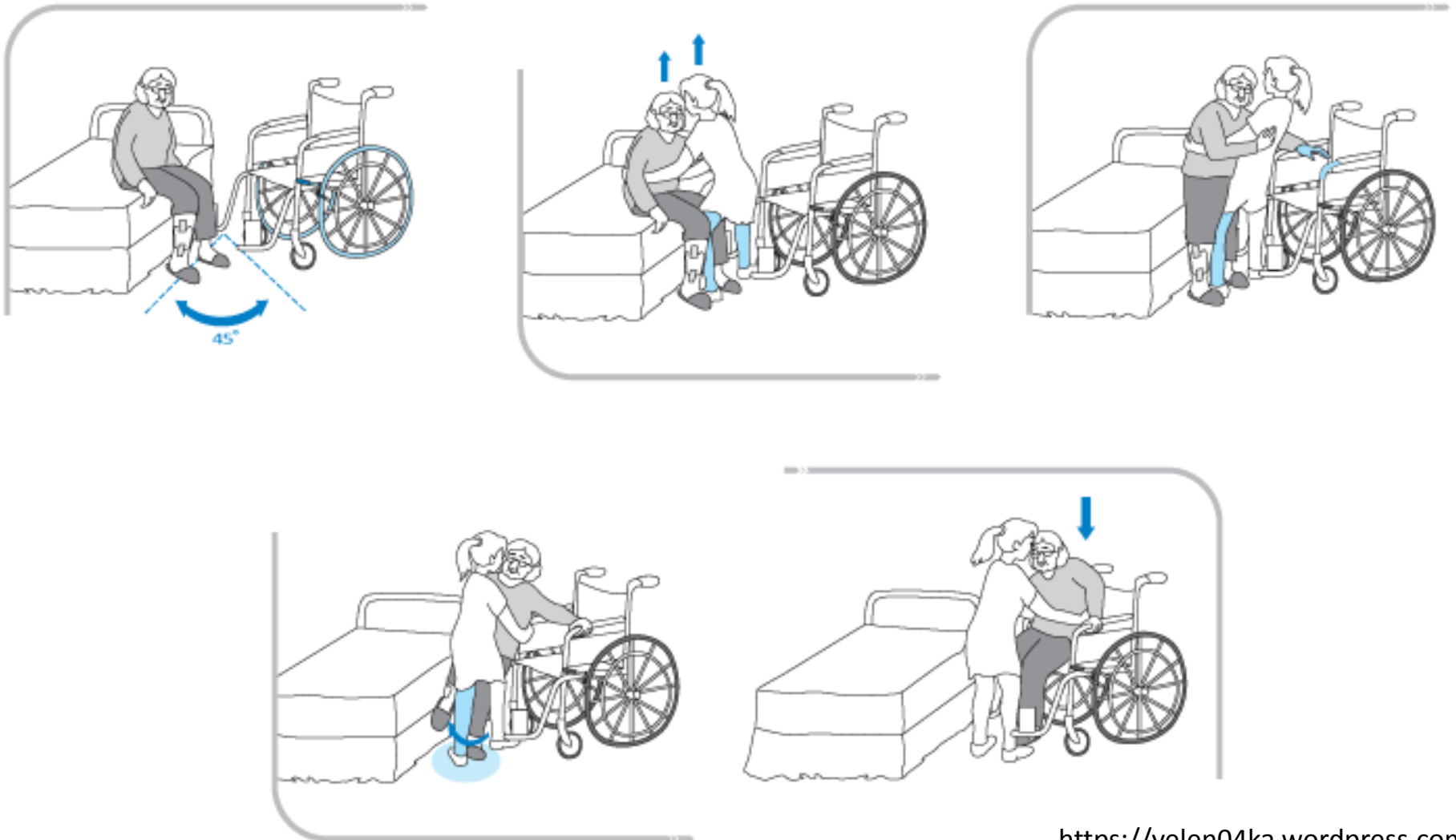


Transfer to wheelchair (pivot)



- Wheelchair to bed

Assisted transfer to wheelchair (pivot)



Ambulation

- Adjusting the cane

TO MEASURE YOUR CANE

1. Turn the cane upside down and put the handle on the floor.
2. Stand with your arms at your sides.
3. The tip of the cane should be at the level of your wrist.

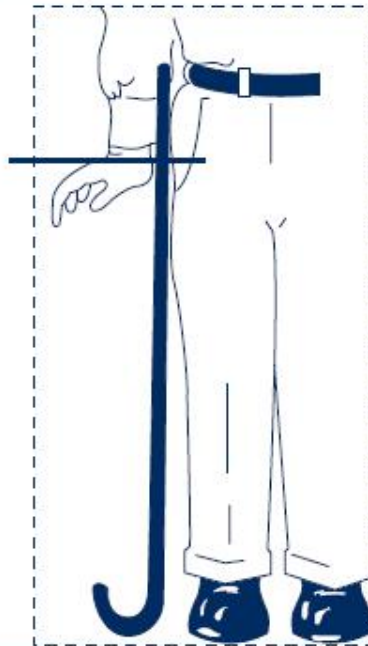


Figure 1



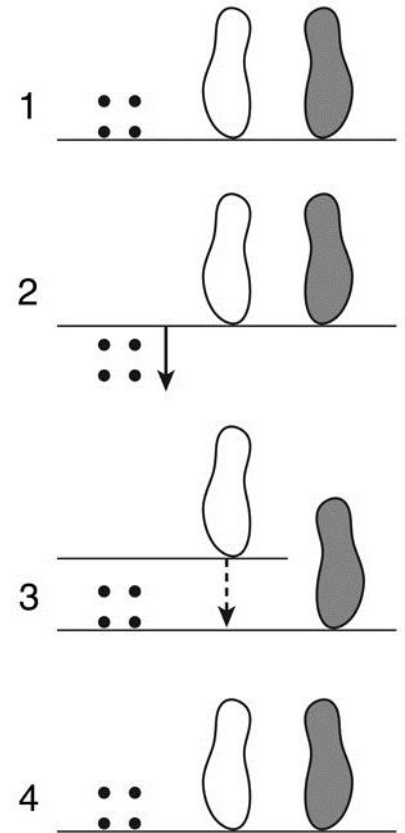
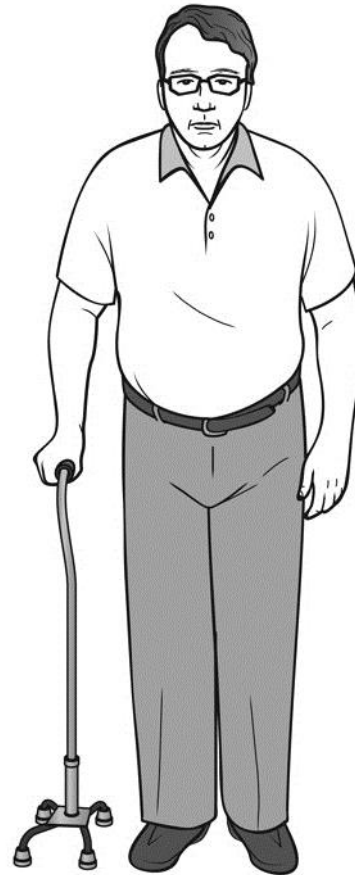
Ambulation

- Adjusting the cane



Ambulation

- Walking with cane



 = Stronger leg  = Weaker leg

B

Ambulation

- Foot drop (AFO: ankle foot orthosis)



Propelling wheelchair



Assignment from rehabilitation team

Tips in variety of stroke impairments

Tips in variety of stroke impairments

Communication (Aphasia)

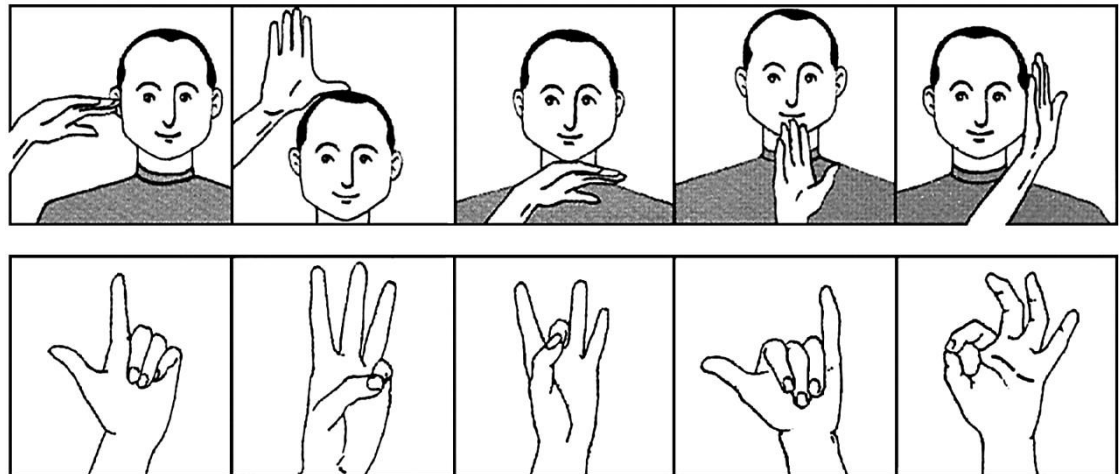
- Concise and slow order
- Use gesture and picture to help
- Don't blame
- Prevent "learned non-used"



Tips in variety of stroke impairments

Apraxia

- Impaired motor planning
- Functional training
- Encourage automatic behaviour (singing)
- Explain to family



Tips in variety of stroke impairments

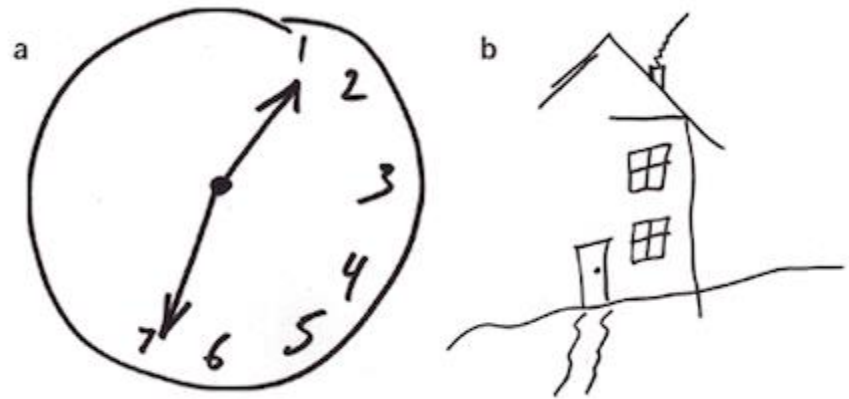
Dysphagia

- Oral hygiene care
- Feed by patient

Tips in variety of stroke impairments

Neglect

- Approach from neglect side



Tips in variety of stroke impairments

Bladder (uninhibited)

- Timed-void
- Ensure that no retention is present

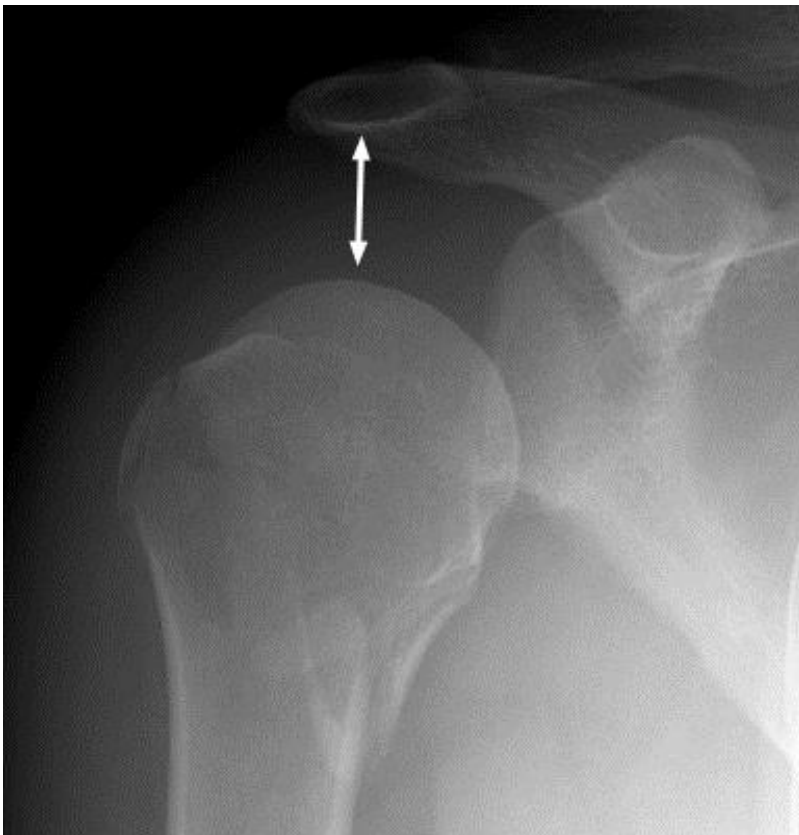
Tips in variety of stroke impairments

Impaired sensation

- Avoid extreme heat and cold

Tips in variety of stroke impairments

Shoulder subluxation



Tips in variety of stroke impairments

Shoulder subluxation

- Bobath sling



- Arm sling



- Support while sitting (the best)

Tips in variety of stroke impairments

Post-stroke depression

- Suspected if poor co-operation
- Early treatment helps



Tips in variety of stroke impairments

Spasticity and contracture

- Positioning device
- Keep ROM for hygiene care



Tips in variety of stroke impairments

Edema

- Elevation

Normal foot



Foot with edema



ADAM.

Right hand



Prevention and detection of complication

Prevention and detection of complication

- CRPS (shoulder-hand syndrome)



Prevention and detection of complication

- Pressure ulcer



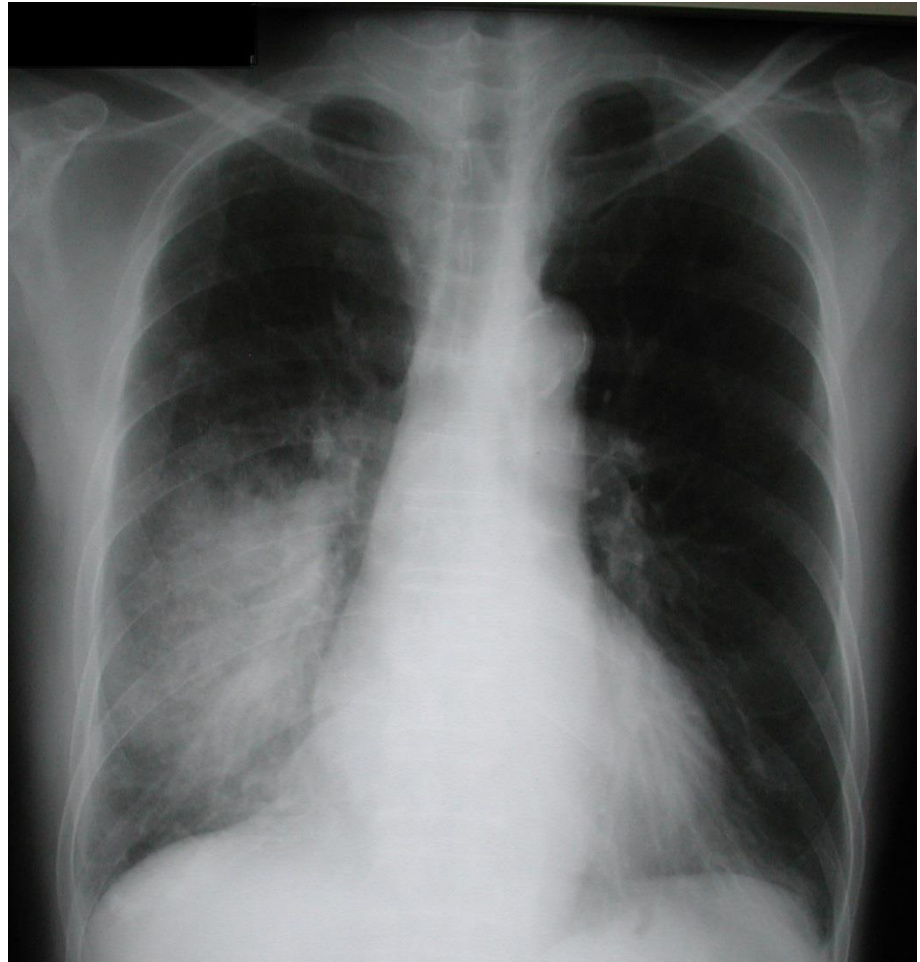
Prevention and detection of complication

- DVT



Prevention and detection of complication

- Pneumonia



Prevention and detection of complication

- Fall



Assistive devices and home adaptation



Assistive devices and home adaptation



Assistive devices and home adaptation





Thank you