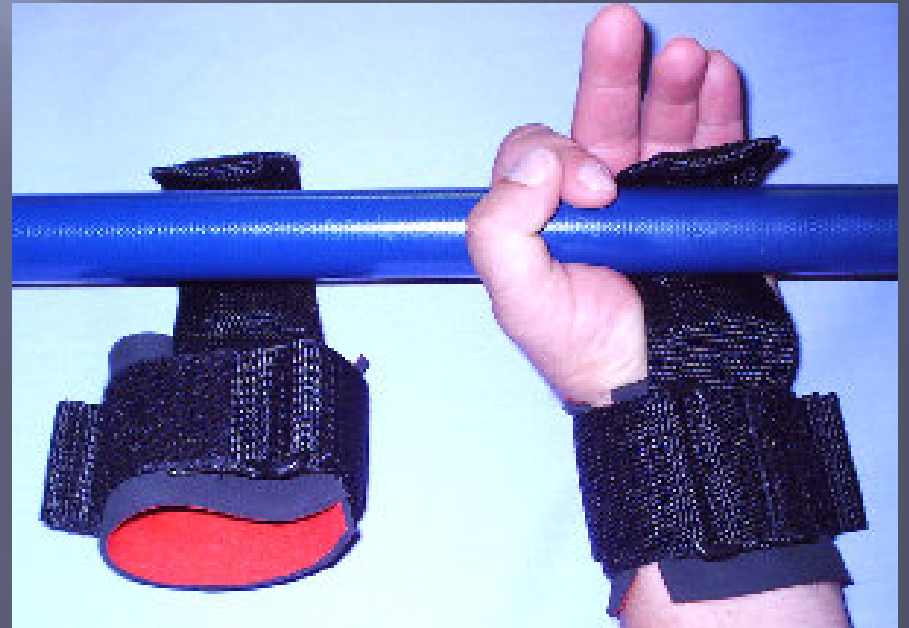


Adaptation for Upper Limbs



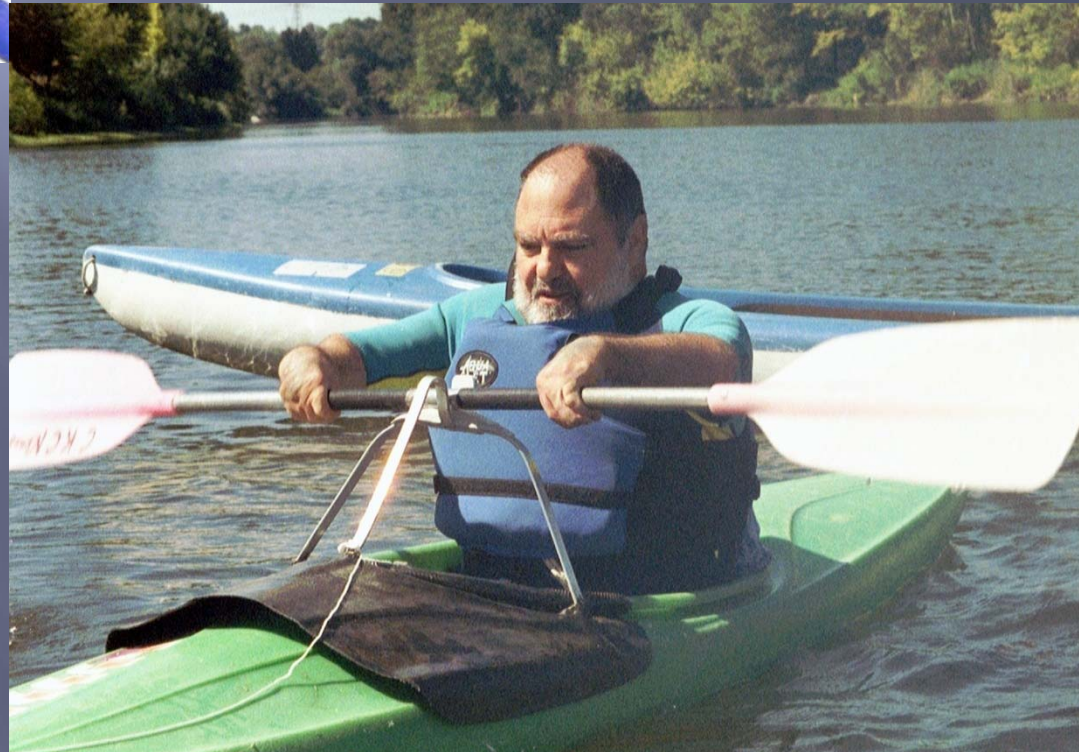








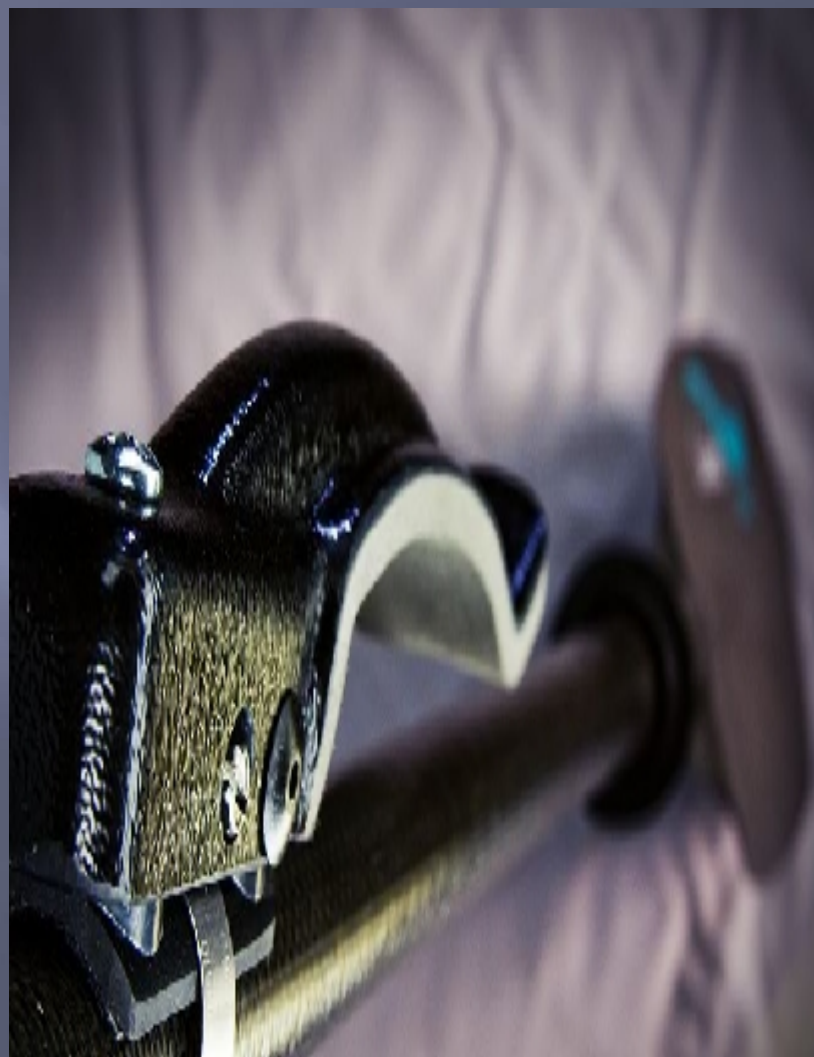
Special glove or cuff to help keep hold of the paddle







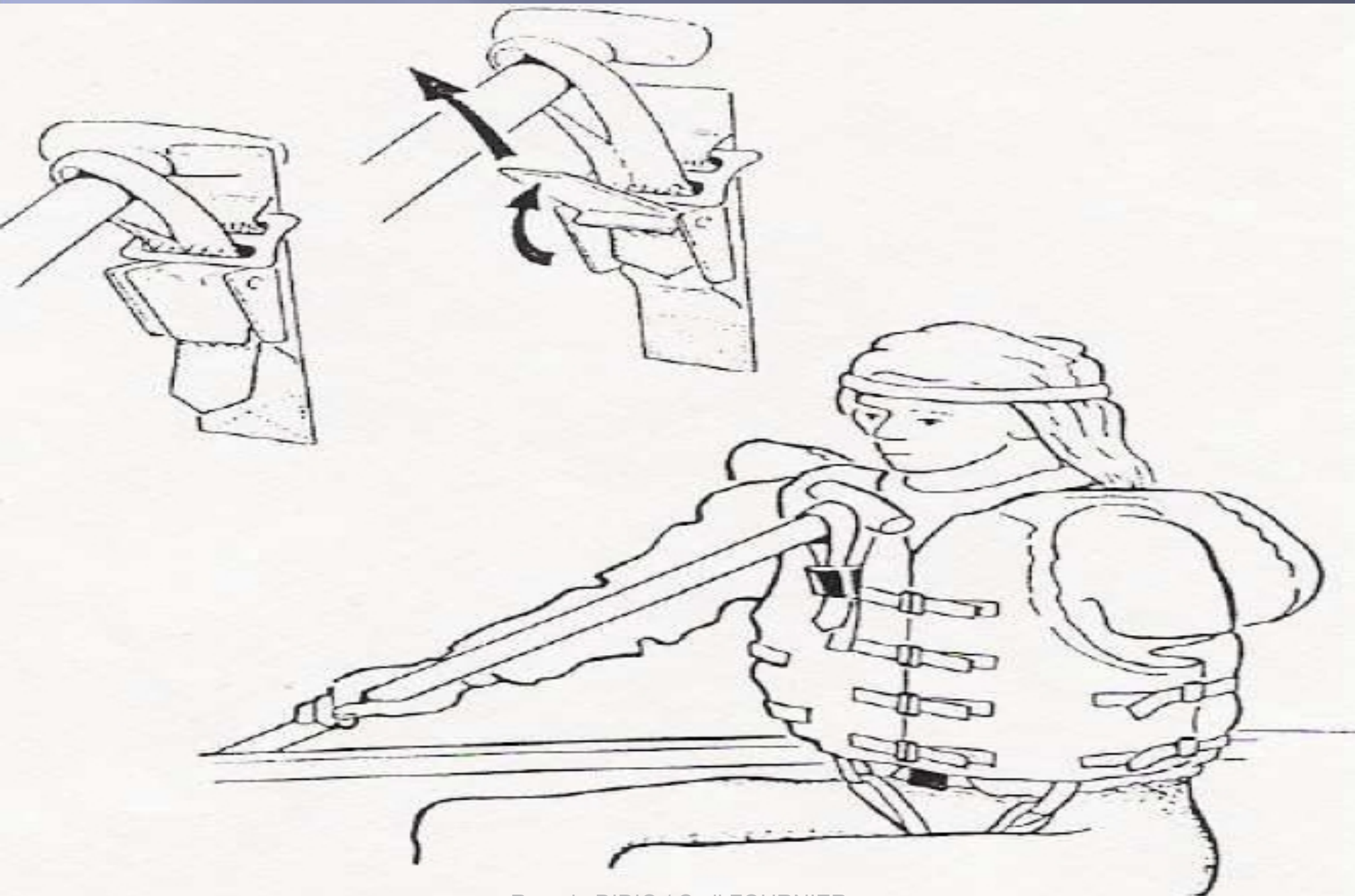
Aids for maintaining grip
www.creatingability.com



Paddling with One Arm







Romain DIDIO / Cyril FOURNIER
FRANCE

Create a fixed point to allow
paddling with one arm



Floats

www.creatingability.com





Inflatable floats

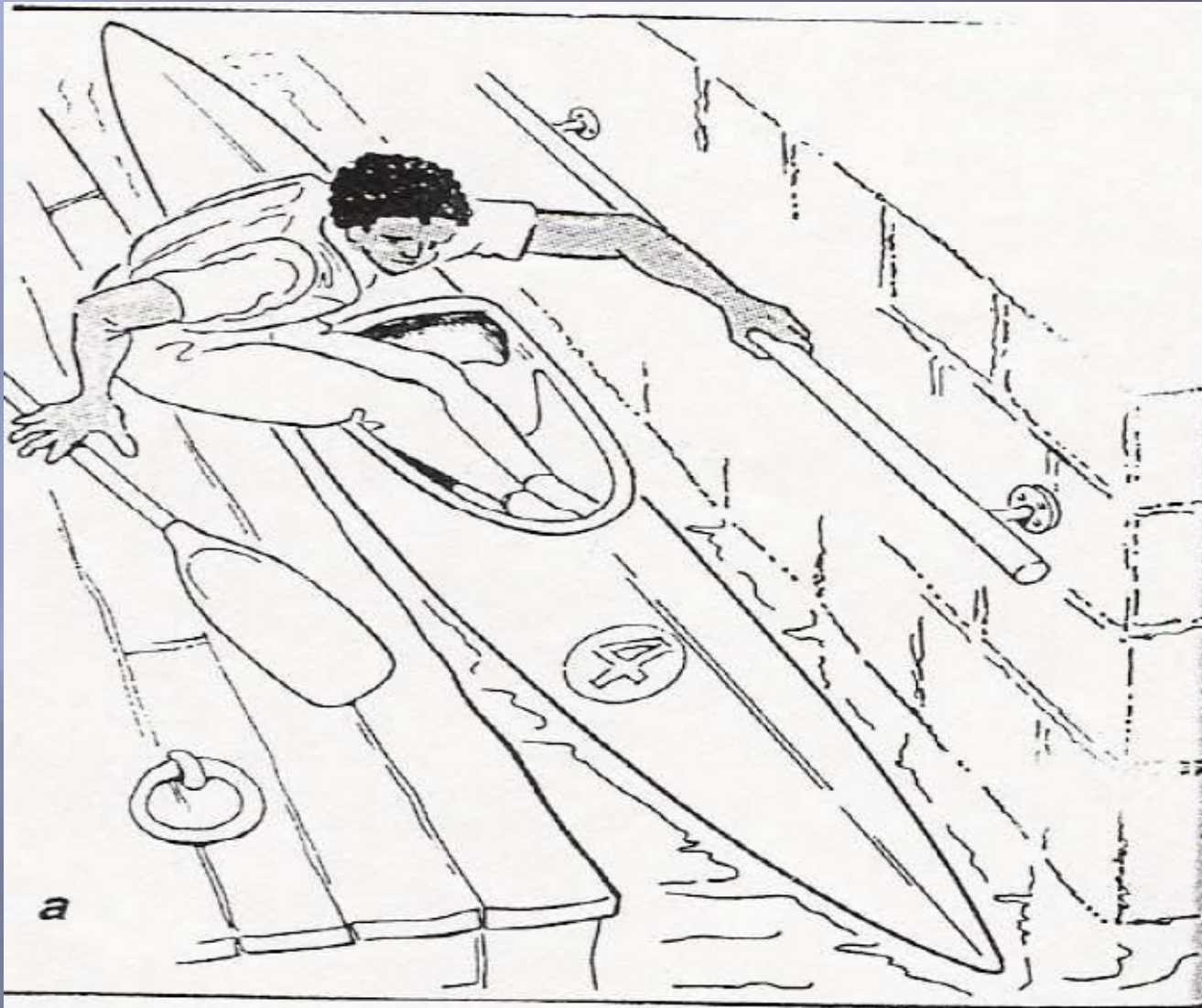


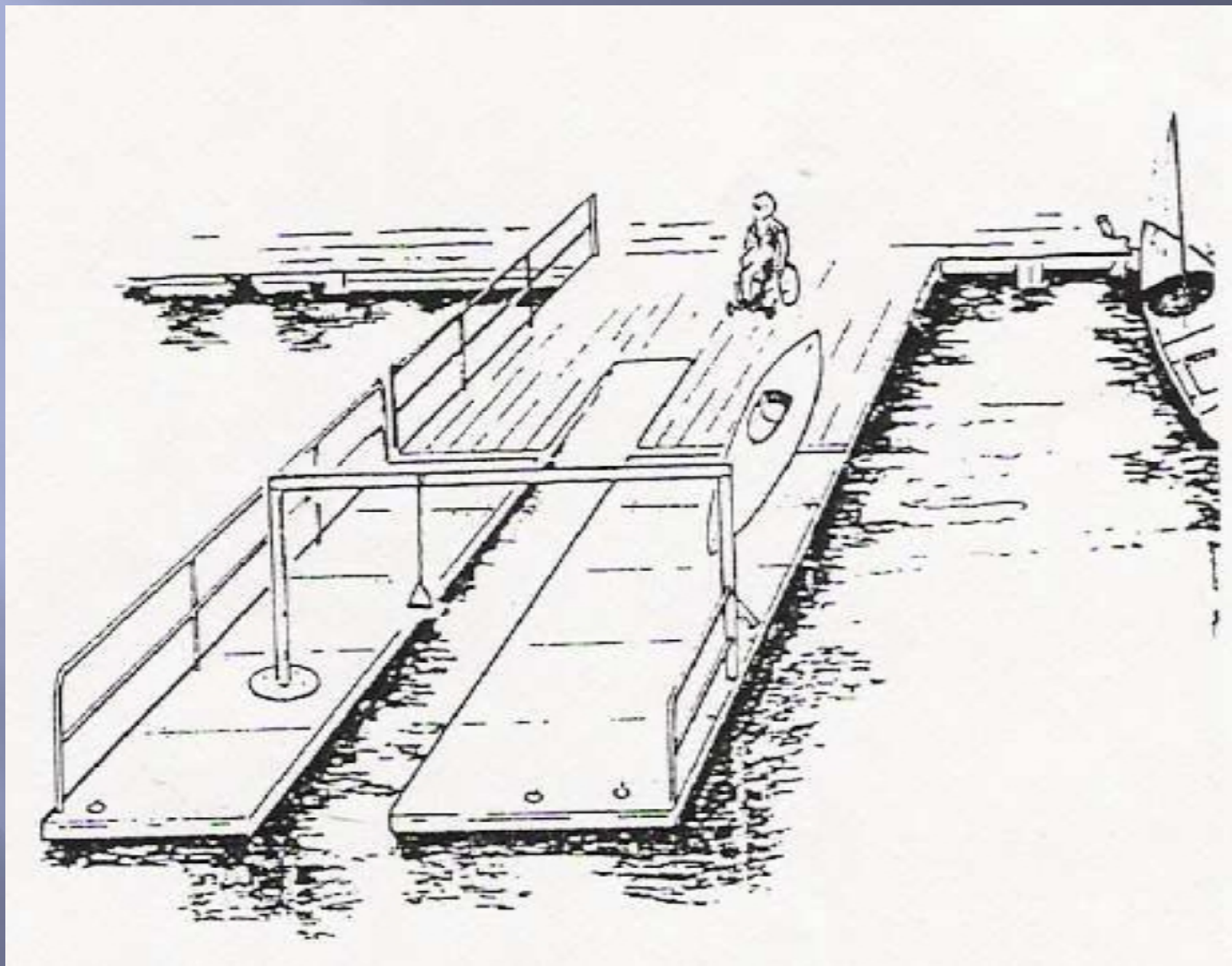
Access to the Water



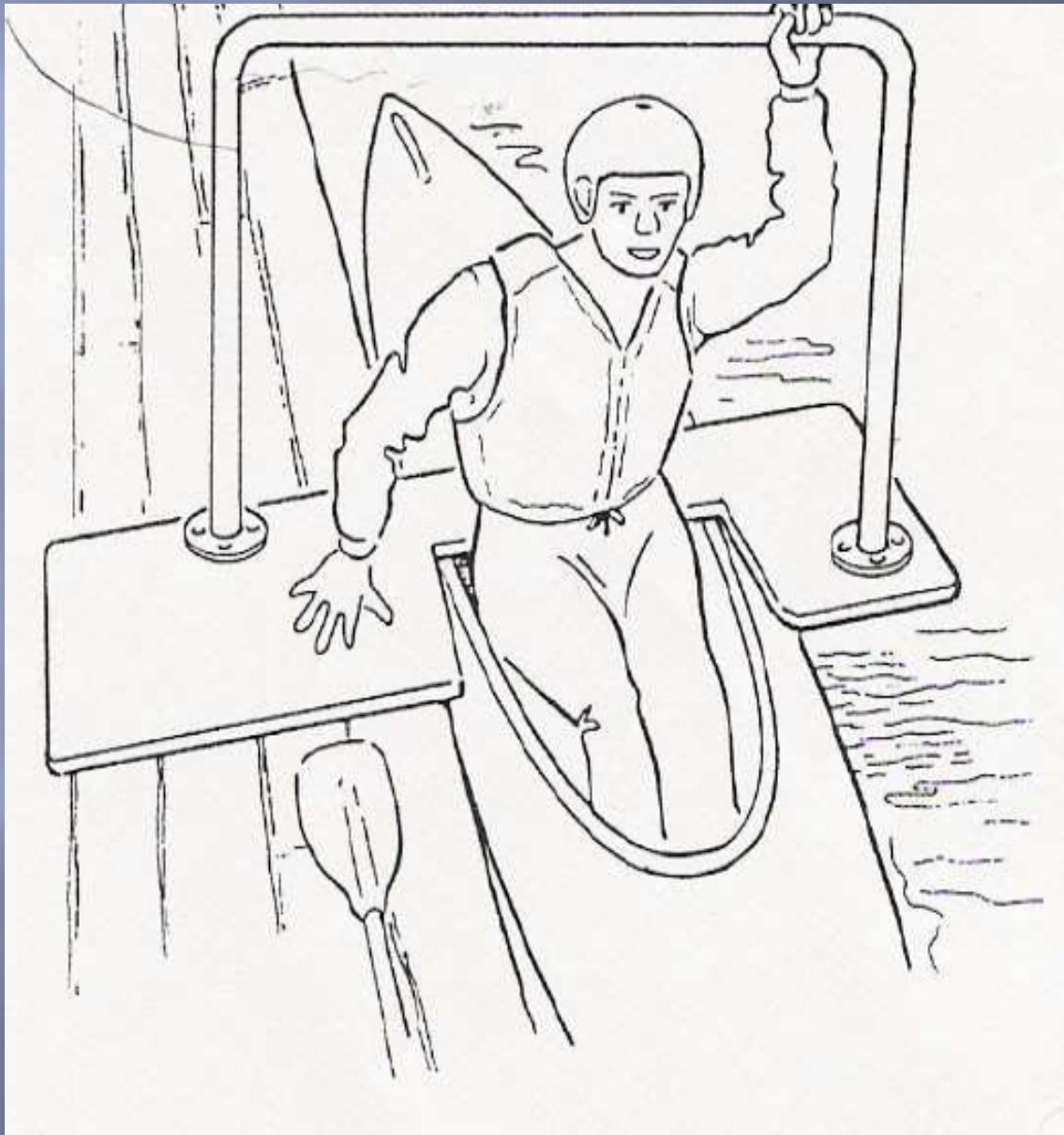
The Seahorse Chair
www.vipamat.fr

Boarding Adjustments





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FRANCE



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FRANCE

2. PATHOLOGY

a. Motor disorders

⇒ Wheelchairs:
powered
manual

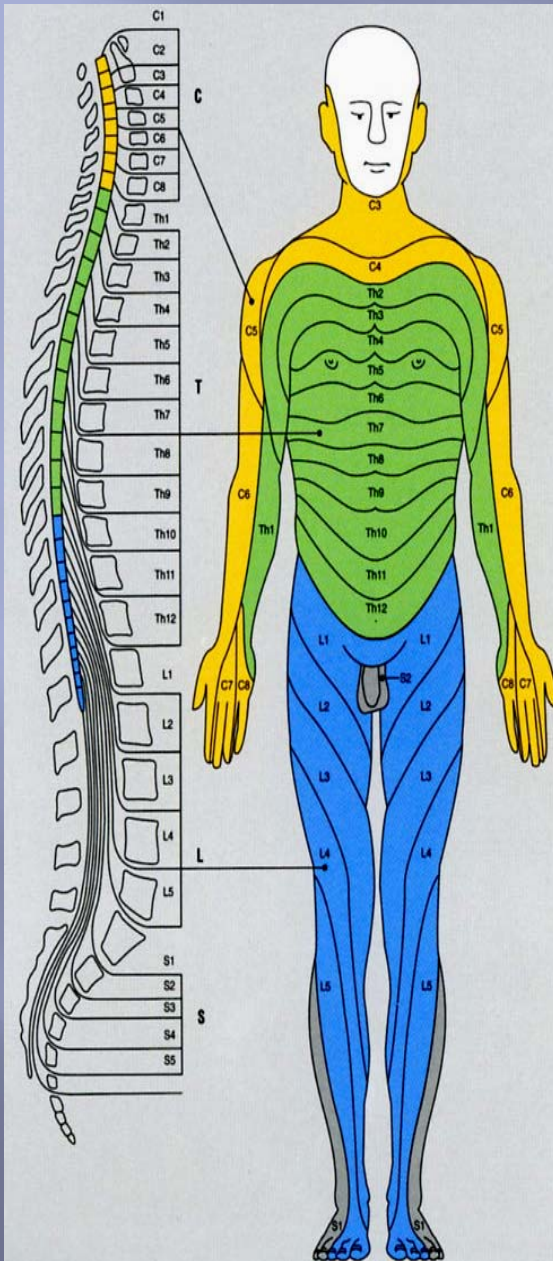
⇒ Users :
amputees, MI/MS, part paralysis, cerebral palsy, para/quadruplegic

b. Visual Impairment

=> total
=> partial

c. Hearing Impairment

=> total
=> partial



PARAPLEGIC AND QUADRIPLEGIC:

METAMERIC SENSORY LEVEL:

- Which?
- Complete or incomplete?
- Functional consequences?

SPASTIC PARAPLEGIA:

Contractions, hypertonia, defence reflex uncontrolled

PARAPLEGIA:

Weak muscles, muscle atrophy, tendon reflexes abolished.

Paraplegic and quadraplegic:

Peripheral neurological disability

NEUROLOGICAL LEVEL

- Numbering = spinal nerves \neq vertebrae
- C5 to T1 = quadraplegia
- Below T2 = paraplegia

GENERALLY DEPENDS ON THE VERTEBRAE

- Cervical = quadraplegic
- Dorsal = upper body paralysis
- Lumbar = lower body paralysis
- Coxics = lower body paralysis

Paraplegia: lower body paralysis depending on which vertebrae is damaged

Quadraplegia: condition affects the upper body

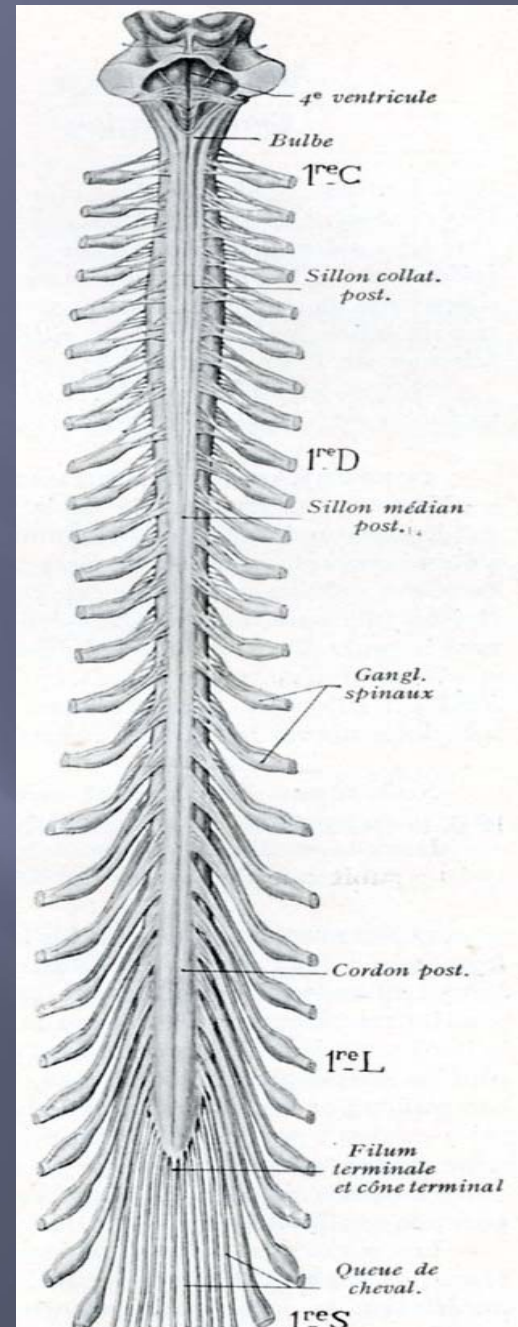


Fig. 389. — Moelle épinière et racine rachidiennes, vue postérieure.

Paraplegic and quadraplegic

COMPLICATIONS AND PRECAUTIONS:

- ✓ incontinence
- ✓ vegetative
- ✓ Skin complications
- ✓ Complications with tendons
- ✓ Increased spasticity



Paraplegic and quadraplegic

CONCLUSION:

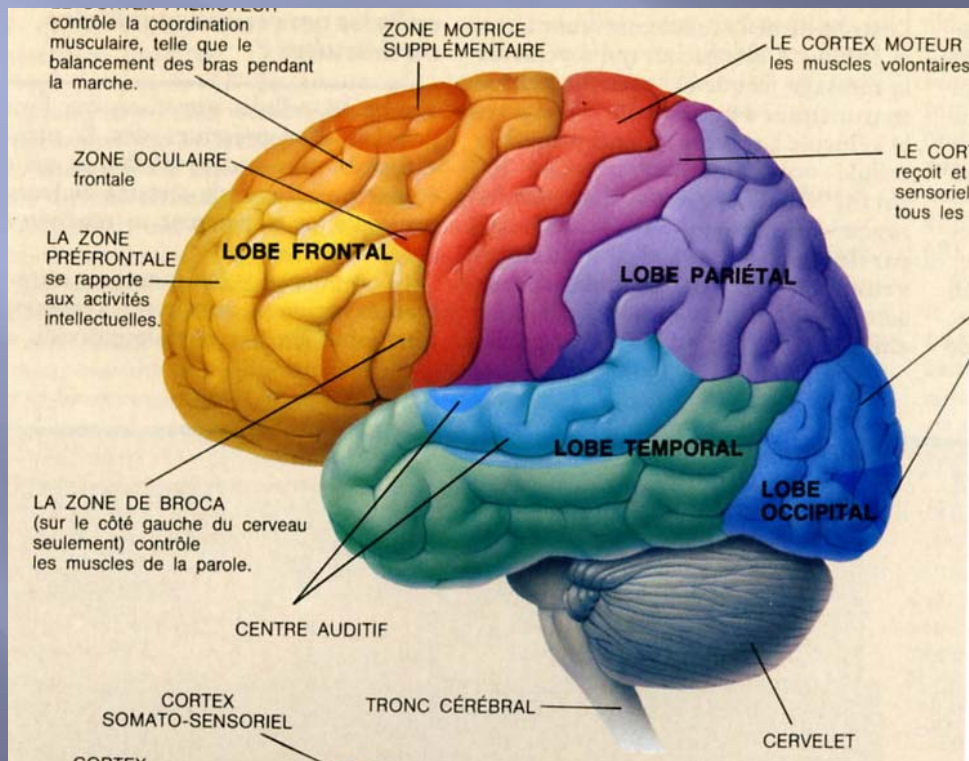
- It's highly variable
- Must ask for information of their condition
- Complications are very specific to each sport
- Prevention is essential (fatigue, tendinitis...)



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Hemiplegia: Paralysis of half the body

Lesion or water on the brain of the frontal lobe or of the nerve endings



The damaged side of the brain limits the opposite half of the body.

ETIOLOGY:

- head trauma
- AVC
- tumours
- infections
- malformations
- diving accident
- Cerebral Palsy

Hemiplegia

PRINCIPAL CHARACTERISTICS OF HEMIPLEGIA:

- Left or right side of the body
- Complete or incomplete
- Predominantly brachio-facial
- Spasticity
- Most common problems:
 - sensory disorders
 - visual disorders
 - language disorders
 - epilepsy

HEAD TRAUMA:

- Neuropsychological disorders
- Epilepsy
- Cerebral disorders (balance)
- Orthopaedic disorders



CEREBRAL PALSY:

- Causes: suffered during or after birth, or if born prematurely (generally from not enough oxygen at birth)
- Non-hereditary, non-progressive
- Problems associated:
 - hypertonia
 - abnormal movements
 - disturbed motor patterns
 - problem with seeing and hearing
 - spatiotemporal disorder
 - epilepsy
 - orthopaedic problems
 - possible intellectual deficiency to a variable degree, in just one third of the cases



Amputees:

- Due to congenital reasons, trauma or tumour
- It can be on the lower body, upper body, or both
- Progress of prosthetic limbs has helped
- There can be problems with the residual limb (hygiene is very important)
- Athletes can practice the sport with or without their prosthetic limb
- Complications are possible due to friction, humidity, salty water



Progressive Neurological Disability:

- Myopathy (Duchenne de Boulogne, Becker,...)
 - respiratory assistance
 - orthopaedic problems
 - cardiac problems
- Hereditary Spino-Cerebral Degeneration (Friedreich, Charcot-Marie...)
- Spinal muscular atrophy

Problems with progressive disabilities:

- Aggravated with fatigue
- Aggravated with lack of movement
- Must find a compromise between physical activity and rest
- Frequent medico-technique assistance is necessary
- Materials constantly being improved
- Social and psychological benefits have a positive impact
- Do not propose a long-term objective

Visual Impairment:

- Etiology: congenital, traumatic, tumour
- Precautions:
 - frequently develops or improves
 - fragility of the eyeballs, avoid trauma
 - frequently knocked out of the boat and collide with others
 - take care of water in the eye



Hearing Impaired

- Etiology:

- chronic pain
- blocked ears
- otosclérose
- otosclerosis: calcification reduces the mobility of the stirrups

- exposed to high loud noise
- taken toxic medicine
- fractured skull

conductive
deafness

(outer and middle ear,
never complete)

sensorineural
hearing

(inner ear)

- Precautions:

- must take out hearing aids
- be careful of knocking hearing implants

3. IMPORTANT POINTS

- * Be sympathetic with your guest:
his or her pathology, his or her sports experience,
his or her expectation regarding the activity.
- * Check their medical certificate and that all medical forms
have been completed so you know what to expect
(functioning abdominals, easily tired...)
- * The right support is very important
- * Be careful of skin problems
- * Be careful of the climate (hot/cold), there can be problems
with thermoregulation (for paraplegics and quadraplegics)

- Problems linked with the length of trip and caring for the paddler's needs such as his or her catheter.
- * The aids for transferring into and out of the boat, take care of the athlete and the helper.
- With the adapted seats, ensure there is no risk of getting stuck in the boat so they can get out in an emergency.
- Comfort and support: try beforehand, both the athlete and the helper need to validate the support and the adapted equipment. Very important this is done together.
- Try all the various stages of learning: escaping from the boat, boarding, secured seating, choice of material etc.

IMPORTANT POINTS FOR THE CLUB

- Give a good welcome: washrooms, common space must be easily accessible for everyone
- Do not hesitate to close certain exits, if you feel it is unsafe
- Inform and communicate with other members of the club
- Inform people how to access the water
- Ensure good communication with the paddler
- The long-term goal depends on their needs and pathology
- Contact specialists and ask for their help and advice

RECOMMANDATIONS FOR EVENTS

PROPOSED SITE DEVELOPMENT

- It is essential to designate someone in the organising committee to answer all the questions posed by physically challenged paddlers before beginning. This person should also guide the committee on accessibility.
- Disabled parking spaces should be relatively close to the athlete's village.
- Pathways from carpark to athlete's village, from village to boarding area, from village to the ceremony area must be accessible. This maintains a steady flow of movement for those in wheelchairs or on crutches.
- Consider the access to washrooms.
- Ensure the boarding area is reserved, boarding is longer and takes more space.

- The height of the pontoon should be 20 cm from the surface of the water. The minimum width of the pontoon should be 1.5 m.
- If there is a ramp to the pontoon, the width can be less than 1 m and the slope gradient should be about 10%.
- PaddleAbility races in the programme should be no earlier than 10 am, to allow athletes time to prepare.

Ensure there is:

- A storage area for the boats near the pontoon.
- A cloakroom near the boarding area to store not just clothes, but wheelchairs, crutches, prostheses as well.

CONCLUSION

THE BENEFITS OF CANPOEING FOR PEOPLE WITH DISABILITIES

Physical Aspects

- Rediscovery of body image
- Helps to establish compensation and muscle function
- Preserves and enhances the cardiorespiratory capacity
- Development of balance

Etc..

Socio-Psychological Aspects

- Social interaction increased through life at the club
- Feeling of equality with the able-bodied on the water
- Feeling of freedom (apparatus not visible or not on the boat at all)

Etc...

=> ENHANCES AUTONOMY AND SELF-ESTEEM