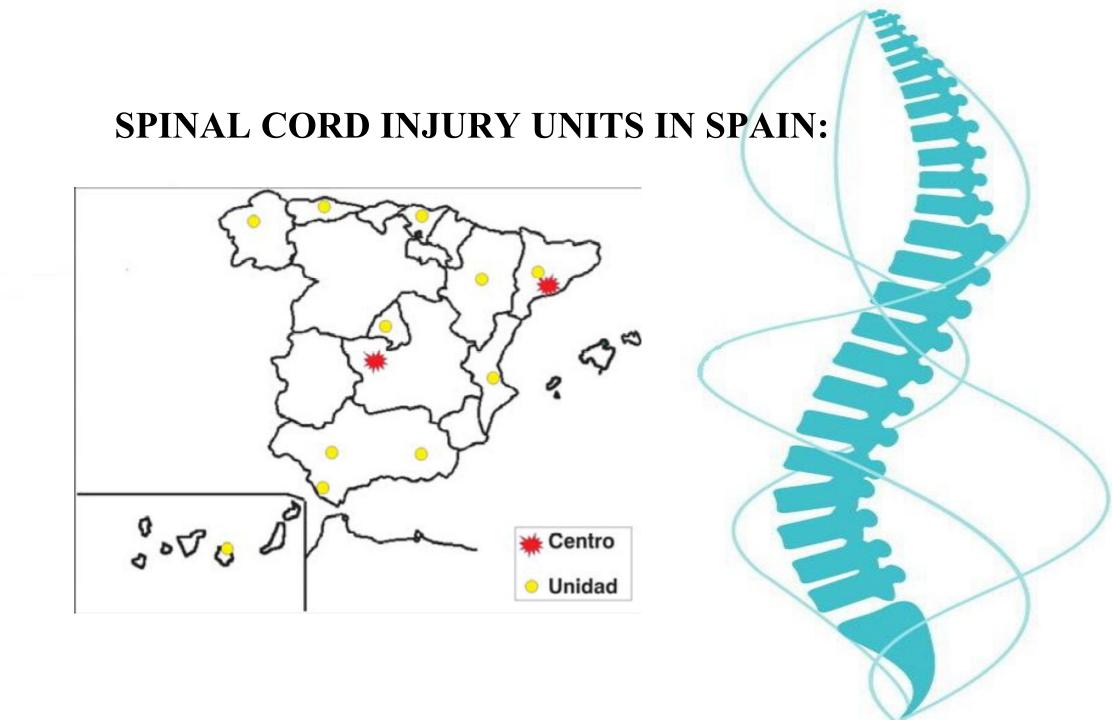
EVIDENCE BASED PHYSIOTHERAPY IN SPINAL CORD INJURY: AN INTERDISCIPLINARY APPROACH.

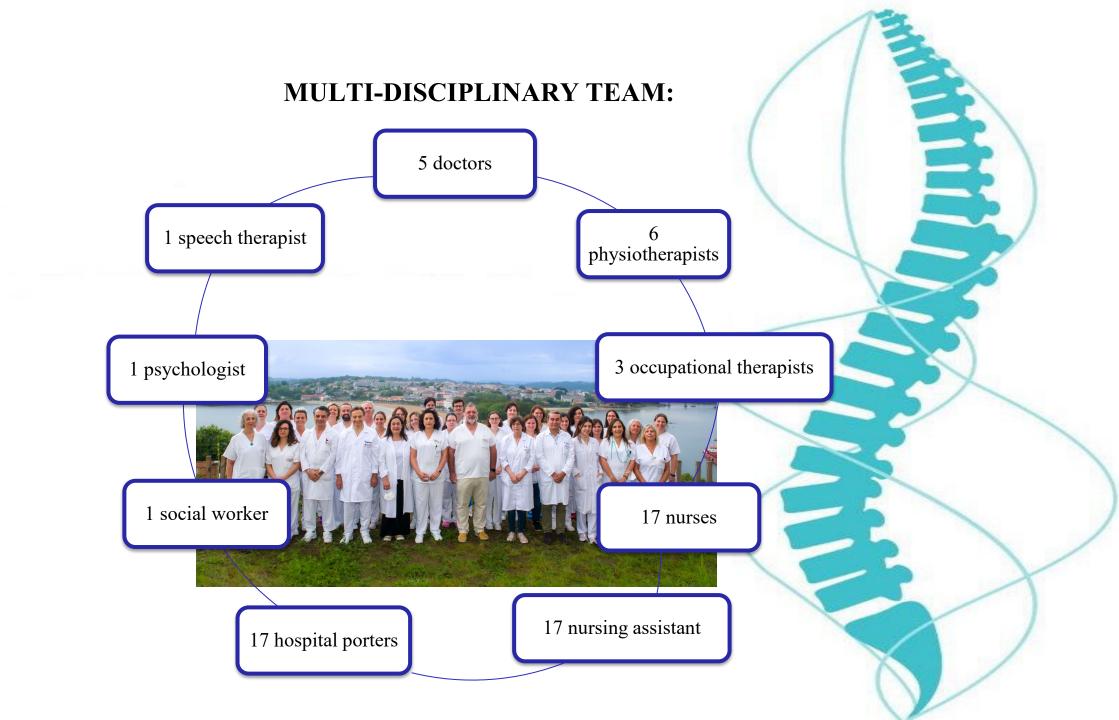
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Prague, 21-25 de Octubre de 2024









A spinal cord injury involves damage to any parts of the spinal cord. It often causes permanent changes in strength, feeling and other body functions below the site of the injury.



lombre del Paciente	Fecha/Hora del Examen
lombre Examinador	Firma

DERECHO MOTOR SENSITIVO PUNTOS SENSITIVO PUNTOS SENSITIVOS CLAVE Tacto Fino (TFD) Pinchazo (PPD)	SENSITIVO PUNTOS SENSITIVOS CLAVE Tacto Fino (TFI) Pinchazo (PPI) MOTOR MÚSCULOS CLAVE IZQUIERDO
ESD Flexores del codo C5 (Extremidad Extensores de muñeca C6 Superior Derecha) Extensores de codo C7 Flexores de los dedos de la mano C8 Abductores del dedo meñique T1 Comentarios (No músculo clave? Razón para NE?) Dolor?, Condición No-LME?): Table T1 T	C2 C3 C4 C5 Flexores del codo ESI C6 Extensores de muñeca (Extramidad Superior Izquierda) C7 Extensores de codo C8 Flexores de los dedos de la mano T1 Abductores del dedo meñique MOTOR T3 (RESULTADOS EN EL REVERSO) T4 T5 2 Movimiento activo, contra gravedad T6 3 Movimiento activo, contra gravedad T7 S Movimiento activo, contra gravedad T7 S Movimiento activo, contra resistencia moderada T8 C7 T2 T3 T4 T5 T5 T5 T6 T6 T6 T6 T7 T7 T7 T7
EID Flexores de Cadera L2 (Extremidad Extensores de rodilla L3 Inferior Derocha) Dorsiflexores de tobillo L4 Extensores del dedo gordo del pie L5 Plantiflexores de Tobillo S1 S2 AV) Contracción Anal Voluntaria	L2 Flexores de cadera EII L3 Extensores de rodilla (Extramidad Inferior Equierda) L4 Dorsiflexores de tobillo L5 Extensores del dedo gordo del pie S1 Plantiflexores de tobillo S2 S3 (PAP) Presión Anal Profunda
(SI/No) S4-5	S4-5 (SI/No)
TOTALES DERECHA (MAXIMO) (50) (55) (56)	(56) (56) (50) (50) (50)
PARCIALES MOTORES PARCIALES S	
ESD $+$ ESI $=$ RMES TOTAL $=$ EID $+$ EII $=$ RMEI TOTAL $=$ TFD $+$ TTD $+$	
NIVELES NEUROLOGICOS 1. SENSITIVO NEUROLOGICO Passos 1-6 para ciasificación como en el reverso NEUROLOGICO DE LA LESION (NLI) 4. COMPLETA O INC Incompleta - Cualquier función motoro o se DE LA LESION (NLI) 5. ESCALA DEFICIENCIA DE	sensitiva en S4-5 6. ZONA DE SENSITIVO

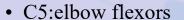
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Este formulario puede ser copiado líbremente pero no puede ser alterado sin permiso de la American Spinal Injury Association.

ASIA classification (=Standard neurological classification of spinal cord injury).

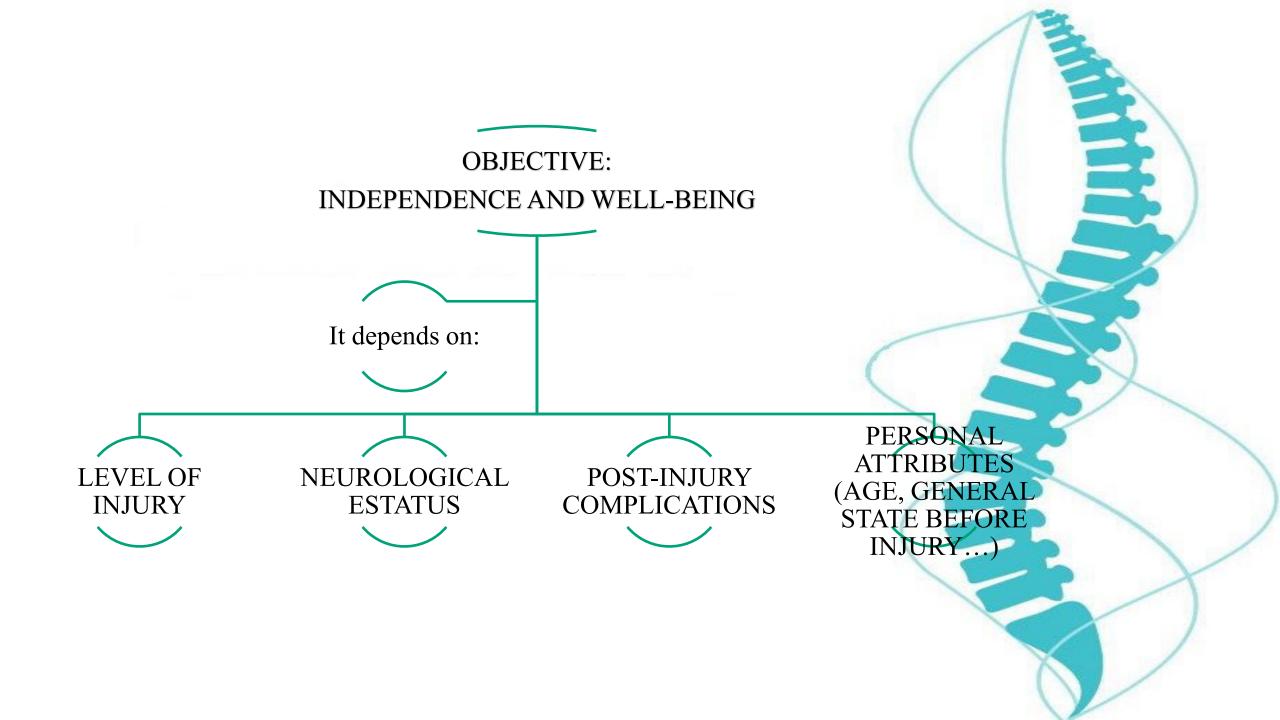
- Sensory assessment: light touch and pinprick sensation.
- Motor assessment.
- A:.no motor or sensory function in S4-S5.
- **B**: preservation of sensory function in S4-S5.
- C: preservation of sensory function in S4-S5 provided there is also motor function more tan 3 levels below the motor level or just preservation of motor function in S4-S5. In addition, less than grade 3/5 strengh in more than half the key muscles below the neurological level.
- **D**:preservation of sensory function in S4-S5 provided there is also motor function more than 3 levels below the motor level or preservation of motor function in S4-S5. In addition, grade 3/5 or more strength in at least half the key muscles below the neurological level.
- E:normal motor and sensory function.

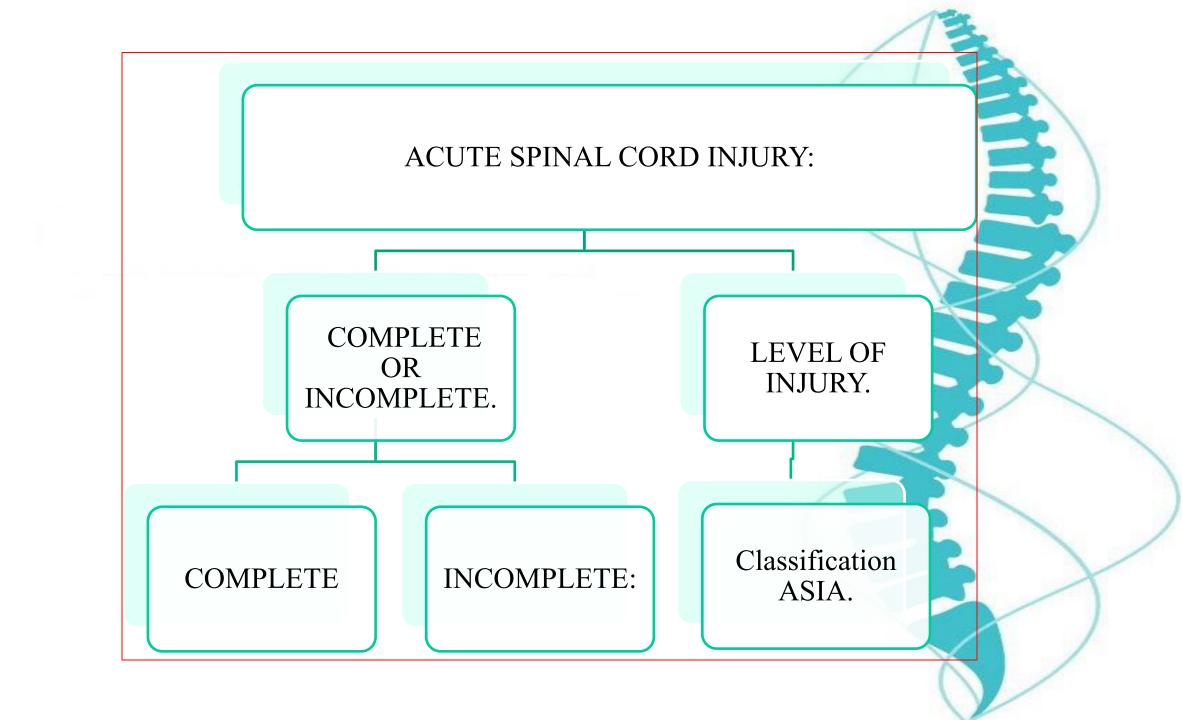
- 0:no muscle contraction
- 1:a flicker of muscle contraction
- 2:full range of motion with gravity eliminated
- 3:full range of motion against gravity
- 4:full range of motion with added resistence.
- 5:normal strengh



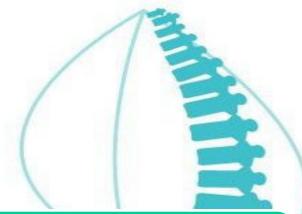
- C6:wrist extensors
- C7:elbow extensors
- C8:finger flexors
- D1:little finger abductors
- L2:hip flexors
- L3:knee extensors
- L4:ankle dorsiflexors
- L5:long toe extensors
- S1:ankle plantarflexors







PHYSIOTHERAPY PROGRAMME



IE STAGE

- assessment

-respiratory management

-postural treatment

-initial mobility

EN

-sitting

-improve strength

-mobilility

-tranfers

-wheelchair mobility

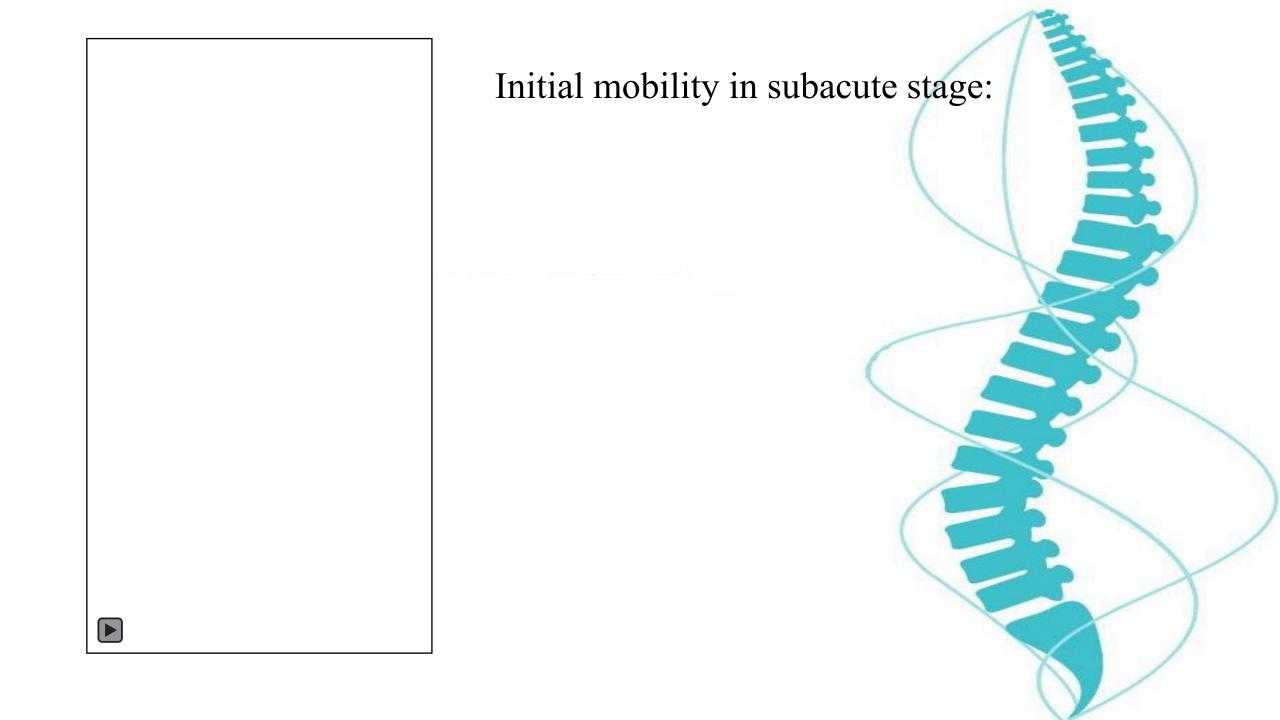
standing and walking

BEFORE HOME

-improve participation

-patient + family

-reintegration into their environment



Spinal cord injury: prognosis

• Neurological assessment:

72 hours

1 month

3 months

- 60% of motor recovery is in the next 2 months post-injury (incomplete injuries).
- Delayed motor recovery is usually smaller and less functional.

FUNCTIONAL EVOLUTION.

- AIS A: 3% of the patients regain strength in the lower limbs
- AIS B: 50% of the patients can walk if pinprick sensation is preserved.
- AIS C: 75% of the patients can walk



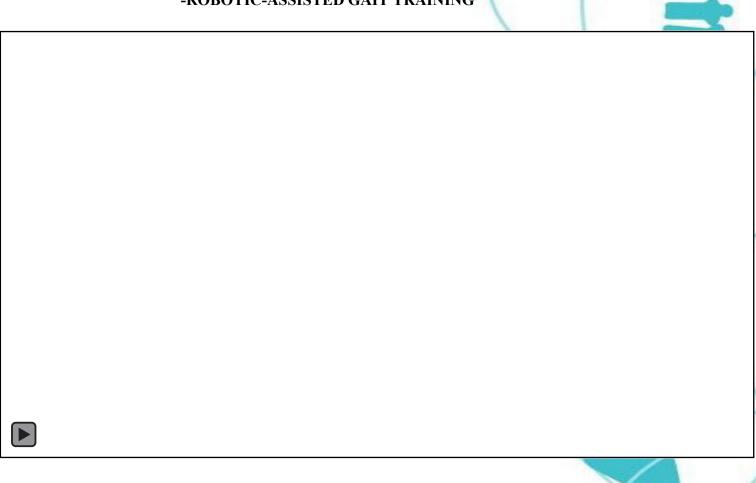
Gait training

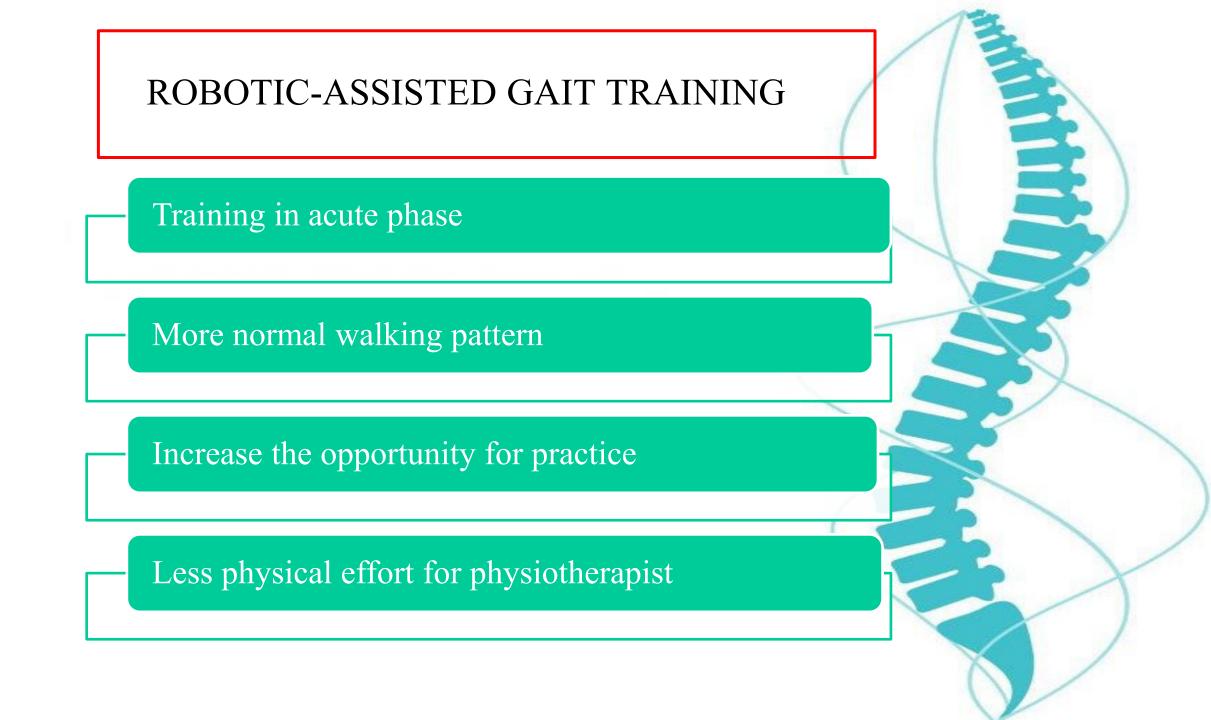
TRADITIONAL PHYSIOTHERAPY TREATMENT.

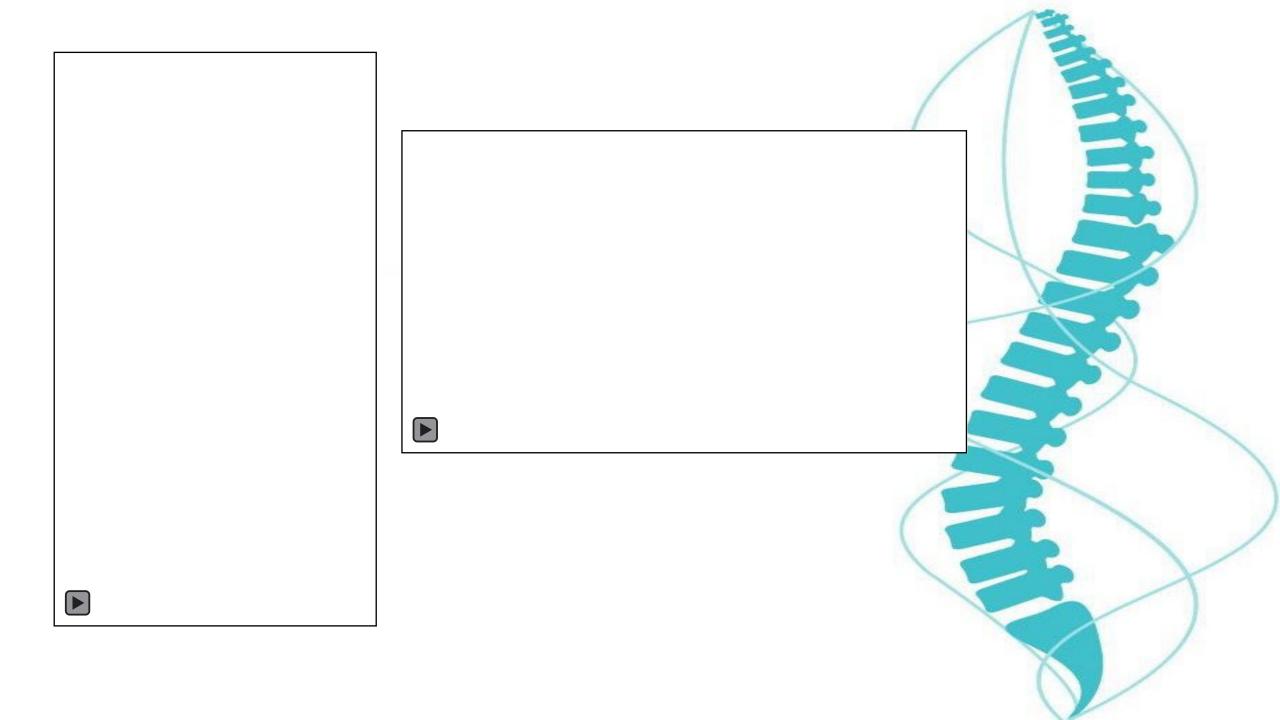
- MANUAL TREADMILL TRAINING WITH PARTIAL SUSPENSION.

-ROBOTIC-ASSISTED GAIT TRAINING









INDICATIONS:

- Incomplete injuries AIS C and AIS D.
- AIS A and B if they have voluntary hip mobility.

TRAINING PROTOCOL:

- 8 WEEKS
- 5 days/week
- 45 minutes/session
- With conventional physiotherapy treatment
- Treatment is completed when they reach WISCI II 20 or after 8 weeks.

ASSESSMENT TOOLS FOR MEASURING

- Spinal Cord Independence Measures (SCIM).

<u>Spinal Cord Independence Measure (SCIM) - SCIRE</u> <u>Professional (scireproject.com)</u>

Walking Index for Spinal Cord Injury (WISCI).

Walking Index for Spinal Cord Injury | RehabMeasures
Database (sralab.org)

– 10m Walk Test.

10 Meter Walk Test | RehabMeasures Database (sralab.org)

