Main Outcomes	Author, Year Country Study Design Sample Size	Study Characteristics	Results
	TRUNK		
ABT	Argetsinger et al. (2020) USA Case Study N=1	**Population:** Age=35mo; Gender: males=0, females=1; Level of injury: C5-C7; Level of severity: tetraplegia; Time since injury=32mo. **Intervention:** Activity-based therapy (ABT) for 8 months **Outcome Measures:** Neuromuscular capacity (Segmental Assessment of Trunk Control (SATCo))	1. Neuromuscular capacity improved significantly, especially for head and trunk control – allowed for major improvements in respiratory health, novel engagement with her environment, and improved physical abilities
ABT	(A. L. Behrman et al., 2019) USA Pre-Post N=26	**Population:** Age: 5.0±3.0 yr; Gender: 15 males, 11 females; Etiology: 12 traumatic, 14 non-traumatic; Time since injury: 1.4±1.3 yr; Level of Injury: cervical=9, thoracic=15, lumbar=2; AIS: A (n=6), B 9 (n=4), C (n=3), D (n=1); Chronicity: 13 acute, 13 chronic. **Intervention:** Activity-based locomotor training (AB-LT), 5 times per week for 60 sessions, 1.5 hr per session. Body weight support (1 hr) followed by overground walking with supports, as necessary. Integration of training principles encouraged in daily activities. Neuromuscular electrical stimulation (40-100 Hz) provided 1-1.5 hr per week, 5 days per week, for 4 participants only. **Outcome Measures:** Segmental Assessment of Trunk Control (SATCo), Pediatric Neuromuscular Recovery Scale (Pediatric NRS) at baseline, sessions 20, 40, and 60 and/or discharge.	1. Pediatric NRS scores improved significantly from baseline to session 20 ($p<0.05$), from session 20 to 40 ($p<0.05$); while scores improved from session 40 to 60, they were not significant 2. On average, the inter-evaluation change in Pediatric NRS score was 3.7 ($p<0.05$) 3. SATCo scores improved significantly from baseline to session 20 ($p<0.05$), from session 20 to 40 ($p<0.05$); while scores improved from session 40 to 60 they were not significant 4. On average, the inter-evaluation change in SATCo score was 1.7 ($p<0.05$) 5. There was no significant difference in Pediatric NRS or SATCo scores by chronicity of SCI
ABT	(Argetsinger et al., 2019) USA Prospective Study N=21	**Population:** Mean age=63.3±27.2mo.; Gender: males=10, females=11; Level of injury: cervical=9, thoracic=12; Level of severity: Not reported; Time since injury=18.3±18mo. **Intervention:** Activity-based locomotor training (AB-LT) with outcomes reported with regards to chronicity, initial score, ad injury level **Outcome Measures:** Segmental Assessment of Trunk Control (SATCo); Pediatric Balance Scale; Modified Functional Reach (MRF-Forward-Right-Left); Timed Short Sit; Timed Long Sit; Timed Stand.	1. SATCo scores increased significantly ($p<0.05$) regardless of chronicity, injury level, or initial score 2. Significant difference from first to last evaluations for MRF-Forward-Right-Left, Timed Short Sit, Timed Long Sit and Timed stand scores 3. No significant change in Pediatric Balance Scale from first to last evaluation.
ABT	(Goode-Roberts et al., 2021) Switzerland Case Report N=1	**Population:** Age:2.7yr; Gender: males=1; Level of injury: C1-Sacrum; Severity of injury: Not reported; Time since injury=2.7 yr.	1. The patient's resting respiratory rate steadily declined over a 4-month period from 60 to 30 BPM 2. The number of times the patient required to be suctioned during

		Intervention: The patient received 144 sessions of Activity-Based Locomotor Training (AB-LT) and 90 sessions of Activity-Based Neuromuscular Electrical Stimulation (AB-NMES) over a seven-month period. AB-LT was provided for 1.5h/day, 5 days per week, followed by 1h/day, 5 days per week of AB-NMES. **Outcome Measures:** Resting respiratory rate, Segmental Assessment of Trunk Control (SATCo), Bayley-III Assessment.	therapy sessions declined overall, with the exception of periods of viral respiratory illness 3. The patient's SATCo score increased from 0/20 to 5/20 4. Bayley-III assessment at discharge revealed dramatic developmental changes; non-verbal cognitive abilities improved from that of a 16-day old to a 9-month developmental level and social/emotional skills from 0-3 month to 15-18 developmental level
ABT	(Fox et al., 2010) USA Case Report N=1	**Population:** 3.5 yr, male, C8 AIS C SCI. **Intervention:** Description of child's walking function and musculoskeletal growth and development during the 2 yr after locomotor training **Outcome Measures:** Walking Index for Spinal Cord Injury II (WISCI II), gait speed, cadence, step length, stride length, daily steps activity at home and in the community, musculoskeletal growth and development, gross motor function measure (GMFM-66).	1. Walking independence remained unchanged with WISCI score staying at 13/20 as he still used a reverse rolling walker to ambulate 2. Fastest gait speed increased from 0.45m/s at baseline (1 month post LT) to 0.67m/s at 2 yr follow-up • After 2 yr., gait pattern was improved • Able to generate reciprocal stepping with noticeable absence of shoulder and trunk compensations, particularly on his left side • Despite being able to step reciprocally, he could not walk backwards, side step, or maintain balance without upper-extremity support 3. Cadence increased from 63.35 steps/min at baseline to 70.75 steps/min at 2 yr follow-up 4. Step length increased in both legs: • Left leg: increased from 42.25cm at baseline to 51.31cm at 2 yr follow-up • Right leg: increased from 44.07cm at baseline to 63.55cm at 2 yr follow-up 5. Stride length increased in both legs: • Left leg: increased from 85.95cm at baseline to 114.79cm at 2 yr follow-up • Right leg: increased from 87.19cm at baseline to 114.47cm at 2 yr follow-up 6. Daily steps increased from about 1600 steps/day at baseline to 3000 steps/day at 2 yr follow-up 7. Over the 2-yr. period the child was not diagnosed with scoliosis, but mild coxa valga was noted at both hip joints and radiology reports indicated all findings stable 8. GMFM-66 scores remained stable over the 2-yr. period
ABT	Felter et al. (2018) USA Case Report N=1	**Population:** Age: 3yr; Gender: female; Level of injury: tetraplegia; Severity of injury: Not reported; Time since injury=3yr. **Intervention:** The effectiveness of activity-based therapies (ABT) in a	1. Developmental milestones in functional mobility included rolling supine to side-lying, sitting for five mins wearing a trunk orthosis, social interactions, and upper extremity function

		tetraplegic 3-yr.-old girl born with intrauterine spinal cord infarcts (IUSCI). **Outcome Measures:** Gross Motor Function Measure-88 (GMFM-88) and Physical Abilities and Mobility Scale (PAMS).	2. Body weight supported treadmill training combined with transcutaneous spinal cord stimulation improved ambulation and stepping 3. ABT did not restore function, rather, the neurological and musculoskeletal system were trained to function as intended
	STAND		
ABT	(A. L. Behrman et al., 2019) USA Pre-Post N=26	**Population:** Age: 5.0±3.0 yr; Gender: 15 males, 11 females; Etiology: 12 traumatic, 14 non-traumatic; Time since injury: 1.4±1.3 yr; Level of Injury: cervical=9, thoracic=15, lumbar=2; AIS: A (n=6), B 9 (n=4), C (n=3), D (n=1); Chronicity: 13 acute, 13 chronic. **Intervention:** Activity-based locomotor training (AB-LT), 5 times per week for 60 sessions, 1.5 hr per session. Body weight support (1 hr) followed by overground walking with supports, as necessary. Integration of training principles encouraged in daily activities. Neuromuscular electrical stimulation (40-100 Hz) provided 1-1.5 hr per week, 5 days per week, for 4 participants only. **Outcome Measures:** Segmental Assessment of Trunk Control (SATCo), Pediatric Neuromuscular Recovery Scale (Pediatric NRS) at baseline, sessions 20, 40, and 60 and/or discharge.	1. Pediatric NRS scores improved significantly from baseline to session 20 ($p<0.05$), from session 20 to 40 ($p<0.05$); while scores improved from session 40 to 60 they were not significant 2. On average, the inter-evaluation change in Pediatric NRS score was 3.7 ($p<0.05$) 3. SATCo scores improved significantly from baseline to session 20 ($p<0.05$), from session 20 to 40 ($p<0.05$); while scores improved from session 40 to 60 they were not significant 4. On average, the inter-evaluation change in SATCo score was 1.7 ($p<0.05$) 5. There was no significant difference in Pediatric NRS or SATCo scores by chronicity of SCI.
ABT	(McCain, Farrar, & Smith, 2015) USA Case Report N=1	**Population:** 11 yr, female, T4 AIS C non-traumatic ischemic spinal cord stroke, 6 mo post-injury. **Intervention:** Strengthening, Standing Activities, Body weight support treadmill training, overground walking, functional electrical stimulation, walking 2 Conditions: Condition 1: FES on left quads, bilateral ankle foot orthoses (AFOs), back brace, reverse walker, level surfaces and walking independently Condition 2: Reverse walker, left AFO, back brace, level surfaces and walking independently **Outcome Measures:** Walking index for spinal cord injury (WISCI II), Lower extremity motor score (LEMS), myotomes for light touch (LT) and pinprick (PP) scores, 6-minute walk test (6MWT), cadence, step length.	1. Subjects WISCI score was calculated at her highest possible level at discharge 2. Total LEMS score increased from 16 at baseline to 22 at 18mo. 3. LT scores remained at 55 from baseline to 18mo. 4. PP scores increased from 16 at baseline to 33 at 18mo. 5. 6MWT at 16mo. was 166ft. with 6 brief standing rests in condition 1 and improved to 368ft. with 2 brief standing rests at 18mo. in condition 2 6. Cadence at 16mo. was 32.4steps/min in condition 1 and improved to 42.3steps/min in condition 2 at 18mo. 7. Step length was measures in both legs • Right leg at 16mo. was 31.1cm in condition 1 and improved to 46.8cm at 18mo. in condition 2 • Left leg at 16mo. was 39.9cm in condition 1 and improved to 53.9cm at 18mo. in condition 2
ABT	(Murillo et al., 2012) Spain	**Population:** 15 yr, female, T6 AIS B, traumatic SCI, 24 mo post-injury.	10MWT at the end of 3 months of training yielded the following results 1. Cadence was 29.1 steps/min

	Case Report N=1	**Intervention:** Functional Electrical Stimulation-assisted Lokomat, Overground walking with Dynamico walker, with and without Functional Electrical Stimulation. **Outcome Measures:** 10-Meter Walk Test (10MWT), cadence, stride length, distance.	2. Stride length was 0.63m 3. Walking speed was 0.15m/s 4. Stance times were 2.94 s (right) and 2.84 s (left). 5. Energy expenditure not measured, but patient was nearly exhausted after completing a distance of 200m
	GAIT		
ABT	(Prosser, 2007) USA Case Report N=1	**Population:** 5 yr. 10 mo., female, C4 AIS A SCI and mild traumatic brain injury. **Intervention:** Activity Based Restorative Therapy including body weight support treadmill training, overground walking, inpatient rehabilitation with aquatic therapy. **Outcome Measures:** Functional Independence Measure for Children II (WeeFIMII), Walking Index for Spinal Cord Injury II (WISCI II), home activities.	1. WeeFIM score improved from 5/35 to 21/35 over 5 months of locomotor training 2. WISCI score improved from 0 to 12 over 5 months of locomotor training 3. At home, she walked most of the time and walked up the stairs to her bedroom with a handrail and minimal assistance
ABT	(Behrman et al., 2017) USA Not reported N=Not reported	**Population:** Not reported **Intervention:** Basic scientific findings that legs to locomotor training (LT) and activity-based therapies (ABT). **Outcome Measures:** Neuromuscular recovery scale (NRS), Berg Balance Scale (BBS).	1. BBS over time revealed scores that spanned the entire breadth of the scale and his variation did not reduce when this sample was divided into groups by AIS classification 2. NRS has been found to have strong test-retest reliability (Spearman correlation coefficients of 0.92–0.99) as well as high inter-rater reliability (Kendall coefficient of concordance ≥0.90) 3. The construct validity of the original NRS was established using Rasch analysis, which revealed that the NRS stratifies individuals with all AIS classifications into 5 distinct strata 4. No floor or ceiling effects were found for the NRS, and the scale also demonstrated a logical order of item difficulty 5. NRS was found to be a stronger predictor of recovery than AIS classification when measuring the change in performance of persons with motor-incomplete SCI on the BBS, 6MWT and 10MWT 6. Pediatric Neuromuscular Recovery Scale (Peds NRS) was developed by clinicians and researchers with pediatric expertise and consists of 13 items graded on a 12-point scale 7. The use of the adult NRS and Peds NRS in other neurological populations is also being investigated
ABT	(Andrea L Behrman et al., 2019) USA Observational $N_{(HCP)}$=14	**Population:** (SCI-P) Mean age=6.0±3.0yr.; Gender: males=17, females=15; Level of injury: C1-L5; Level of severity: AIS A=6, B=5, C=2, D=5, N/A=14 (younger than 6yr.); Time since injury: Not reported.	1. Interrater reliability coefficient was determined to be near 1 overall for Pediatric NRS score (ICC=0.966; 95% CI, 0.89-0.98)

	$N_{(SCI-P)}$=32 HCP – Healthcare Professional SCI-P – Spinal Cord Injury - Pediatric	**Intervention:** None – observational. **Outcome Measures:** Interrater reliability.	2. 12 of 16 individual items exhibited high concordance coefficients (Kendall's W ≥0.8) 3. 4 items were found to have concordance coefficients <0.8 and >0.69. 4. Interrater reliability was equal among groups defined by neurological level and age, but lower among non-ambulatory individuals.
ABT	Melicosta et al. (2019) USA Case Series N=31	**Population:** Children with acute flaccid myelitis; Age range: 17mo-16yr; Gender: males=17, females=14; Level of injury: Not reported; Severity of injury: Not reported; Time since injury: 0.5-77mo. **Intervention:** Participants underwent an intensive Activity Based Restorative Therapy (ABRT) program between March 2005 and January 2017. Participants completed weight bearing daily through lower and upper limbs as appropriate for their presentation. Locomotor training was completed 3-5x/wk when applicable, including treadmill and over-ground retraining using a body weight supported system. Task-specific practice and massed practice were completed daily with the goal of completing as many repetitions as possible for neurological and daily function restoration. Seventeen of the participants received inpatient treatment, and fourteen received solely outpatient interventions. **Outcome Measures:** Spinal Cord Independence Measure (SCIM), Physical Ability and Mobility Scale (PAMS), Functional Independence Measure for Children (WeeFIM), assessment of mobility and transfers, balance, ambulation, activities of daily living (ADLs), hand function (strength and skills), durable medical equipment, and orthotic use.	1. SCIM scores improved significantly from baseline to post-intervention among participants who had admission and discharge scores (p=0.007). 2. PAMS improved significantly from baseline to post-intervention (p<0.001) 3. Significant improvements were observed in the self-care (p<0.001), mobility (p=0.001), cognition domains of WeeFIM (p=0.039), as well as total WeeFIMR developmental quotient (DQ) scores (p<0.001)
ABT	Hagen et al. (2020) USA Case Series N=29	**Population:** Age:6.47±4.14yr; Gender: males=22, females=7; Level of injury: C1-Sacrum; Severity of injury: Not reported; Mean time since injury= 253.59 days. **Intervention:** Activity-based restorative therapy (ABRT) was administered to children with acute flaccid myelitis (AFM). The therapy consisted of 1-2h of occupational therapy and 2-3h of physical therapy, which were structured to include interventions of ABRT: functional electrical stimulation (FES),	1. On the WeeFIM, significant change was seen from admission to discharge across all subdomains, including self-care (p<0.001), mobility (p<0.001), and cognition (p<0.05) 2. Significant change from admission to discharge was seen across all muscle groups on the MMT, with effect sizes ranging from p<0.05 (ankle dorsiflexion, knee extension) to p<0.001 (elbow flexion/extension) 3. Most muscle groups tested showed a moderate effect size 4. More than a third (39%) of the group improved in mRS rating over the course of admission, with eight

		locomotor gait training (LT), massed and task specific practice, and weight loading. **Outcome Measures:** Functional Independence Measure for Children (WeeFIM), Manual Muscle Testing (MMT), the Spinal Cord Independence Measure (SCIM), the Physical Abilities and Mobility Scale (PAMS), Modified Rankin Scale for Neurologic Disability (mRS).	individuals improving by 1 point and three individuals improving by 2 points 5. Overall, children showed significant improvements across all outcome measures, with effect sizes ranging from moderate to large
ABT	(Behrman et al., 2008) USA Case Report N=1	**Population:** 4.5 yr, male, C8 AIS C traumatic SCI, 16 mo post-injury. **Intervention:** Body weight support overground walking. **Outcome Measures:** American Spinal Injury Association Impairment Scale (AIS), Lower extremity motor score (LEMS), gait speed, walking independence, walking index for spinal cord injury II (WISCI-II), number of steps.	1. AIS score remained the same after session 74 2. LEMS score remained at 4/50 at session 74 3. From session 51 to 76 gait speed increased from 0.19m/s to 0.29m/s 4. From session 51 to 76 fastest walking speed increased from 0.3m/s to 0.48m/s 5. WISCI score increased from 0/20 to 13/20 6. At session 33 the child showed multiple non-cued steps 7. From session 49 to 74 the child increased from 926 steps per day to 2488 steps per day
ABT	(Fox et al., 2010) USA Case Report N=1	**Population:** 3.5 yr, male, C8 AIS C SCI. **Intervention:** Description of child's walking function and musculoskeletal growth and development during the 2 yr after locomotor training **Outcome Measures:** Walking Index for Spinal Cord Injury II (WISCI II), gait speed, cadence, step length, stride length, daily steps activity at home and in the community, musculoskeletal growth and development, gross motor function measure (GMFM-66).	1. Walking independence remained unchanged with WISCI score staying at 13/20 as he still used a reverse rolling walker to ambulate 2. Fastest gait speed increased from 0.45m/s at baseline (1 month post LT) to 0.67m/s at 2 yr follow-up • After 2 yr., gait pattern was improved • Able to generate reciprocal stepping with noticeable absence of shoulder and trunk compensations, particularly on his left side • Despite being able to step reciprocally, he could not walk backwards, side step, or maintain balance without upper-extremity support 3. Cadence increased from 63.35 steps/min at baseline to 70.75 steps/min at 2 yr follow-up 4. Step length increased in both legs: • Left leg: increased from 42.25cm at baseline to 51.31cm at 2 yr follow-up • Right leg: increased from 44.07cm at baseline to 63.55cm at 2 yr follow-up 5. Stride length increased in both legs: • Left leg: increased from 85.95cm at baseline to 114.79cm at 2 yr follow-up • Right leg: increased from 87.19cm at baseline to 114.47cm at 2 yr follow-up 6. Daily steps increased from about 1600 steps/day at baseline to 3000 steps/day at 2 yr follow-up 7. Over the 2-yr. period the child was not diagnosed with scoliosis, but mild coxa valga was noted at both hip joints and radiology reports indicated all findings stable

			8. GMFM-66 scores remained stable over the 2-yr. period
ABT	(Behrman et al., 2012) USA Case Reports N=3	**Population:** *Case 1:* 15 yr, male, T5 SCI, AIS D. *Case 2:* 14 yr, male, T5 AIS C ruptured arteriovenous malformation; *Case 3:* 14 yr, male, C2 AIS D SCI. **Intervention:** Locomotor Training (Body weight support treadmill training, overground walking), community integration. **Outcome Measures:** 10-meter walk test (10MWT),6-minute walk test (6MWT), Berg Balance Scale (BBS),	*Case 1* 1. 10MWT with initial rolling walker (RW) device improved from 0.16m/s at initial evaluation to 1.12m/s at discharge and declined to 1.06m/s at 12mo. follow-up 2. 10MWT with current bilateral single point canes (BSPCs) devices improved from 0.77m/s at session 20 (started use of BSPCs) to 1.22m/s at discharge and declined to 1.01m/s at 12mo. follow-up (use of BSPCs stopped after session 40) 3. 6MWT with initial rolling walker (RW) device improved from 53.07m at initial evaluation to 291.69m at discharge and improved further to 298.4m at 12mo. follow-up 4. 6MWT with current bilateral single point canes (BSPCs) devices improved from 242.32m at session 20 (started use of BSPCs) to 308.15m at discharge and improved further to 316.11m at 12mo. follow-up (use of BSPCs stopped after session 40) 5. BBS score improved from 8/56 at initial evaluation to 48/56 at discharge and declined to 47/56 at 12mo. follow-up *Case 2* 1. 10MWT with initial rolling walker (RW) device improved from 0.12m/s at initial evaluation to 0.22m/s at session 80 and improved further to 0.38m/s at session 200 2. 10MWT with current bilateral loftstand crutches (BLCs) devices remained at 0.1m/s from session 40 (started use of BLCs) session 80 and improved to 0.45m/s at session 200 (use of bilateral single point canes (BSPCs) at session 200) 3. 6MWT with initial rolling walker (RW) device improved from 25.6m at initial evaluation to 44.8m at session 80 and improved further to 117.3m at session 200 4. 6MWT with current bilateral loftstand crutches (BLCs) devices declined from 13.6m at session 40 (started use of BLCs) to 7.6m at session 80 but improved to 123.8m at session 200 (use of bilateral single point canes (BSPCs) at session 200) 5. BBS score increased from 7/56 at initial evaluation to 23/56 at session 80 and improved further to 31/56 at session 200 *Case 3* 1. 10MWT increased from 1.3m/s at initial evaluation to 1.5m/s at session 20 and increased further to 1.72m/s at discharge

			2. 6MWT increased from 435m at initial evaluation to 467m at session 20 and increased further to 500m at discharge 3. BBS score increased from 55/56 at initial evaluation to 56/56 at session 20 and sustained a score of 56/56 at discharge LEMS • LEMSs for the three reported cases were 29, 22, and 46, respectively • Only the adolescent in Case 1 demonstrated significant change (17 points) in his LEMS post-LT that could also account for improvement in function • For the other two instances, the LEMS change was relatively minor
ABT	(Heathcock et al., 2014) USA Case Report N=1	**Population:** 15 mo, male, T11-L4 in-utero spinal cord tumour resulting in SCI with subsequent removal at 5.5 wk of age. **Intervention:** Treadmill Step Training Program **Outcome Measures:** Number and pattern of walking steps, gait speed, observational gait analysis, standing.	1. An increase in the percentage of alternating steps and a matching decrease in the percentage of single steps over the 20-month intervention period were observed 2. At 30 months of age, a pattern of alternating stepping on the treadmill occurred more than 80% of the time, in sharp contrast to the initial 6 months of training when alternating steps comprised fewer than 10% of the total steps 3. Number of steps increased from 1 step at 16mo to 10 steps at 22mo. 4. At 22mo. of age, steps were measured in distance and increased from 3m at 22mo. to about 6m at 31mo. 5. Gait speed varied over the 20mo. period (0.48m/s at 31mo. and 0.40m/s at 35mo.) 6. Only the right leg accounted for most of the stepping rate from 15 through 20 months of age because there were few or no independent steps on the left 7. Over the 20-month intervention period, stepping with the right and left legs increased, with a greater rate of improvement being observed for the left leg, suggesting improvements in symmetry and bilateral function 8. Static standing improved from standing with an arm support on the walker for 30s with contact guard assistance (CGA) at 15mo. to static standing for 20s with standby assistance
TM and OG walking	(O'Donnell & Harvey, 2013) Australia Case Report N=1	**Population:** 17 yr, male, T6 AIS C traumatic SCI, 16 mo post injury. **Intervention:** Body weight support treadmill training, overground walking **Outcome Measures:** Lower extremity motor score (LEMS), Walking index for spinal cord	1. LEMS score improved from 16 to 17 from pre- to post-training and from 17 to 18 from post-training to follow-up 2. WISCI score improved from 6 to 9 from pre- to post-training and remained at 9 at follow-up

		injury (WISCI II), 6-min walk test (6MWT), 10-m walk test (10MWT), Timed up and go (TUG), Pediatric Quality of Life Inventory (PedsQL).	3. 6MWT score improved from 67m (1 rest) at pre-training to 76m (no rests) at post-training and further improved to 80m (no rests) at follow-up 4. 10MWT score improved from 32.2s at pre-training to 30.3s at post-training but declined to 33.6s at follow-up 5. TUG score improved from 44.6s at pre-training to 40.1s at post-training but declined to 42.0s at follow-up, remaining improved compared to pre-training 6. Overall PedsQL score improved from 38/92 at pre-training to 23/92 at post-training and remained at 23/92 at follow-up
Compared SCI to non-SCI	Fox et al. (2013) USA Pre-Post N=5	**Population:** Mean age:8.6±2.7yr; Gender: males=4, females=1; Level of injury: C1-C7=2, T1-T12=3; Time since injury>1yr. **Intervention:** Modular control of patients with incomplete spinal cord injury (ISCI) was examined via locomotor tasks including treadmill training, overground walking, pedaling, stair climbing, supine lower extremity flexion/extension, and crawling. **Outcome Measures:** Lower extremity motor score (LEMS), variance accounted for (VAF), electromyogram (EMG) recordings.	1. Fewer modules were needed to account for muscle activation in the lower extremities of children with ISCIs compared with controls ($p<0.05$) 2. An average of 2.11±0.71 modules was required to account for the EMG data recorded in lower extremities of children with ISCI 3. With the use of the muscle weightings from treadmill walking and task-specific timing profiles, the VAF exceeded 86% for all locomotor tasks 4. The VAF exceeded 90% for all tasks performed by the children with ISCI 5. Modularity is constrained in children with ISCIs.
BWSTT	(Nymark, 1998) Canada Case Report N=1	**Population:** Mean age=33.2±17.6yr.; Gender: males=3, females=2; Level of injury: C2-T10; Severity of injury: AIS A=0, B=1, C=3, D=1; Time since injury=36.8±7.0d. **Intervention:** Body Weight Support Treadmill Training (BWSTT) **Outcome Measures:** Clinical Outcome Variables Scale (COVS), treadmill speed, cadence, stride length, Range of Motion (ROM) hip and knee sum, Electromyography (EMG) summed indices.	1. Mean COVS scores significantly increased from pre- to post-training ($p=0.03$) 2. Mean treadmill speed significantly increased from pre- to post-training ($p=0.001$) 3. Mean cadence significantly increased from pre- to post-training ($p=0.001$) 4. Mean stride length (m) increased from pre- to post-training but not significantly ($p=0.16$) 5. Mean ROM (degrees) increased from pre- to post-training but not significantly ($p=0.07$) Mean summed indices of ROM increased from pre- to post-training but not significantly ($p=0.09$)
TMNOG Walking	(Hornby et al., 2005) USA Case Reports N=3	**Population:** Case1: 13 yr., female, C6 AIS B traumatic SCI, 6 mo. post-injury. Case 2: 40 yr., male, T2 AIS B spinal vascular accident, 5wk. post-injury. Case 3: 43 yr., male, C6 AIS C, 18 mo. post-injury. **Intervention:** Robotic- or therapist-assisted body weight support treadmill training. **Outcome Measures:** American Spinal Cord Injury (AIS)	Case 1 1. AIS score improved from class C at initial evaluation to class D at final evaluation 2. LEMS score increased from 6 at initial evaluation to 48 at final evaluation 3. FIML subscale increased from 0 at initial evaluation to 6 at final evaluation 4. WISCI score increased from 0 at initial evaluation to 16 at final evaluation

		classification, Lower Extremity Motor Score (LEMS), Functional Independence Measure Locomotor (FIML) subscale, Walking Index for Spinal Cord Injury II (WISCI II), gait speed, gait endurance, Timed Up and Go (TUG) tests, Standing Functional Reach Test (FRT), Sitting Functional Reach Test (FRT).	5. Gait speed increased from 0.29m/s at transition evaluation to 0.55m/s at final evaluation 6. Gait endurance increased from 243ft at transition evaluation to 480ft at final evaluation 7. TUG score not evaluation in case 1 8. Sitting FRT remained >10in at both transition and final evaluation 9. Standing FRT increased from 4in at transition evaluation to 7in at final evaluation Case 2 1. AIS score improved from class C at initial evaluation to class D at final evaluation 2. LEMS score increased from 19 at initial evaluation to 50 at final evaluation 3. FIML subscale increased from 0 at initial evaluation to 6 at final evaluation 4. WISCI score increased from 0 at initial evaluation to 13 at final evaluation 5. Gait speed increased from 0.36m/s at transition evaluation to 0.58m/s at final evaluation 6. Gait endurance increased from 460ft at transition evaluation to 632ft at final evaluation 7. TUG score improved (decreased) from 30.6s at transition evaluation to 18.5s at final evaluation 8. Sitting FRT remained >10in at both transition and final evaluation 9. Standing FRT increased from 6in at transition evaluation to >10in at final evaluation Case 3: 1. AIS score remained at class C from initial to final evaluation 2. LEMS score decreased from 31 at initial evaluation to 30 at transition evaluation, but increase back to 31 at final evaluation 3. FIML subscale increased from 5 at initial evaluation to 6 at final evaluation 4. WISCI score remained at 13 from initial to final evaluation 5. Gait speed increased from 0.11m/s at transition evaluation to 0.21m/s at final evaluation 6. Gait endurance increased from 100ft at transition evaluation to 204ft at final evaluation 7. TUG score not evaluation in case 3 8. Sitting FRT remained at >10in from initial to final evaluation 9. Standing FRT decreased from 10in at initial evaluation to 6in at final evaluation