<table>
<thead>
<tr>
<th>NCT ID</th>
<th>Sponsor</th>
<th>Intervention</th>
<th>Criteria</th>
<th>Status</th>
<th>Target Enrollment</th>
<th>Study Phase &amp; Design</th>
<th>Primary Intervention Type</th>
<th>Primary Potential Benefit</th>
<th>Outcome Measures and Follow Up</th>
<th>Study Start Date</th>
<th>First Posted</th>
<th>Last Updated</th>
<th>Location(s)</th>
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</thead>
<tbody>
<tr>
<td>NCT04577638</td>
<td>University of Louisville</td>
<td>Intrathecal administration of 5-Hydroxytryptophan in combination with Carbidopa</td>
<td>Age ≥ 18 yrs - Traumatic SCI - AIS A, B, C, D - SCI ≤ 24 months - No history of seizures/epilepsy - No history of tumors</td>
<td>Recruiting</td>
<td>25</td>
<td>Saline, Placebo</td>
<td>Drug</td>
<td>General Health</td>
<td>Adverse events and Motor function</td>
<td>July 15, 2020</td>
<td>August 20, 2020</td>
<td>Louisville, KY, USA</td>
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<tr>
<td>NCT04577647</td>
<td>Osigo Pharma, Inc.</td>
<td>Intrathecal administration of KP-Allan Dietz</td>
<td>Age ≥ 18 yrs - Traumatic SCI - AIS A - No contraindication to MRI scan</td>
<td>Recruiting</td>
<td>25</td>
<td>Phase 3</td>
<td>Drug</td>
<td>General Health</td>
<td>Improvement of at least two AIS levels</td>
<td>July 9, 2020</td>
<td>July 17, 2020</td>
<td>Osaka, Osaka, Japan/ Hyogo, Japan/ Tokyo, Japan</td>
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<tr>
<td>NCT04577656</td>
<td>North Florida Foundation for Research and Education, Brooks Rehabilitation</td>
<td>Treadmill and overground walking training and biofeedback exercise during an i.m. injection (100 mg/week)</td>
<td>Male - Age ≥ 18 yrs - SCI = 70 hours - Level C3-C8 - AIS A,B,C,D - No history of epilepsy or head trauma</td>
<td>Not yet recruiting</td>
<td>21</td>
<td>Phase 2</td>
<td>Drug</td>
<td>General Health</td>
<td>Improvement of at least two AIS levels</td>
<td>January 2021</td>
<td>July 8, 2022</td>
<td>Gainesville, FL, USA/ Jacksonville, FL, USA</td>
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<tr>
<td>NCT04577664</td>
<td>Earle Haas</td>
<td>Intravenous (IV) administration of drug (Glioxalam) and Placebo</td>
<td>Age ≥ 18 yrs - Traumatic SCI - AIS A, C, D (KLS)</td>
<td>Recruiting</td>
<td>54</td>
<td>Phase 2</td>
<td>Drug</td>
<td>Amputation Function</td>
<td>Upper Extremity Motor Score (BEMO)</td>
<td>June 2020</td>
<td>March 4, 2020</td>
<td>multicenter: USA, Japan (Kagawa), Japan</td>
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<tr>
<td>NCT04577673</td>
<td>Kobayashi University</td>
<td>Kas is a study comparing combined upper extremity nerve transfer/tenodesis with only tenodesis surgery</td>
<td>Age ≥ 18 yrs - Level C5-C7</td>
<td>Recruiting</td>
<td>50</td>
<td>Phase 1</td>
<td>Surgery</td>
<td>Arm Hand Function</td>
<td>Upper and lower (pyramidal test and GRT) - Grip strength</td>
<td>October 2020</td>
<td>February 18, 2020</td>
<td>Osaka, Osaka, Japan</td>
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<tr>
<td>NCT04577682</td>
<td>The First Affiliated Hospital of Dalian Medical University</td>
<td>Intravenous, subcutaneous or local administration of NUC-MSCs(Cu_CB MSCs) and routine rehabilitation treatment.</td>
<td>Age ≥ 21 yrs - SCI 1 yr - AIS A/D - Non-muscle internal events/alternate literature (with or without a pseudocyst or a neoplasm)</td>
<td>Recruiting</td>
<td>45</td>
<td>Phase 2</td>
<td>Cell-based</td>
<td>General Health</td>
<td>ASIA sensory and Motor function</td>
<td>January 2018</td>
<td>December 30, 2019</td>
<td>Beijing, China</td>
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<tr>
<td>NCT04577691</td>
<td>NCSG Corporation</td>
<td>Autologous bone marrow-derived stem cells (Neuro-Cab)</td>
<td>Age ≥ 18 yrs - Level C5-C6</td>
<td>Recruiting</td>
<td>75</td>
<td>Phase 1</td>
<td>Cell-based</td>
<td>General Health</td>
<td>ASIA sensory and Motor function</td>
<td>September 2020</td>
<td>September 19, 2020</td>
<td>Tokyo, Japan</td>
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<td>NCT ID</td>
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<td>Target Enrollment</td>
<td>Primary Intervention Type</td>
<td>Primary Potential Benefit</td>
<td>Outcome Measures and Follow Up</td>
<td>Study Start Date</td>
<td>First Posted</td>
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<td>Location(s)</td>
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<tr>
<td>NCT03521336</td>
<td>Shirley Ryan AbilityLab</td>
<td>Neurological spinal cord stimulation (SCS) during walking rehabilitation</td>
<td>AIS A, B, C, D</td>
<td>Recruiting</td>
<td>150</td>
<td>Phase 2: Parallel Assignment</td>
<td>Walking/Mobility</td>
<td>F/U 12 months</td>
<td>August 2019</td>
<td>April 11, 2019</td>
<td>September 11, 2020</td>
<td>Mexico City, Mexico</td>
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<tr>
<td>NCT03643770</td>
<td>Sun Yat-Sen University</td>
<td>Intravesical BCG vaccination</td>
<td>Adverse Events</td>
<td>Not recruiting</td>
<td>36</td>
<td>Phase 1: Single Group</td>
<td>Other</td>
<td>F/U 4 weeks</td>
<td>July 2020</td>
<td>February 1, 2019</td>
<td>September 11, 2020</td>
<td>Guangdong Province, China</td>
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<tr>
<td>NCT03644277</td>
<td>University of British Columbia</td>
<td>Anterior transverse lumbar interbody fusion (XLIF) surgery</td>
<td>Adverse Events</td>
<td>Not recruiting</td>
<td>150</td>
<td>Phase 3: Single Group</td>
<td>Walking</td>
<td>F/U 12 months</td>
<td>November 4, 2019</td>
<td>April 30, 2019</td>
<td>September 1, 2020</td>
<td>Vancouver, BC, Canada</td>
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<tr>
<td>NCT03762655</td>
<td>University of Florida</td>
<td>Intravenous saline or placebo</td>
<td>Pain</td>
<td>Recruiting</td>
<td>120</td>
<td>Phase 2: Parallel Assignment</td>
<td>Walking/Mobility</td>
<td>F/U 12 months</td>
<td>July 2019</td>
<td>April 11, 2019</td>
<td>September 11, 2020</td>
<td>Jacksonville, FL, USA</td>
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<tr>
<td>NCT03774043</td>
<td>University of Miami</td>
<td>Intrathecal baclofen pump</td>
<td>Pain</td>
<td>Recruiting</td>
<td>150</td>
<td>Phase 3: Parallel Assignment</td>
<td>Other</td>
<td>F/U 60 days</td>
<td>August 2020</td>
<td>February 1, 2019</td>
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<td>Miami, FL, USA</td>
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<td>NCT03833674</td>
<td>University of Miami</td>
<td>Acute intermittent hypoxia (AIH)</td>
<td>Pain</td>
<td>Recruiting</td>
<td>150</td>
<td>Phase 3: Parallel Assignment</td>
<td>Other</td>
<td>F/U 12 weeks</td>
<td>February 2020</td>
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<td>NCT03922802</td>
<td>University of Miami</td>
<td>Intrathecal baclofen pump</td>
<td>Pain</td>
<td>Recruiting</td>
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<td>Phase 2: Parallel Assignment</td>
<td>Other</td>
<td>F/U 3 months</td>
<td>July 2018</td>
<td>April 11, 2018</td>
<td>September 11, 2020</td>
<td>Chicago, IL, USA</td>
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<tr>
<td>NCT03833674</td>
<td>University of Miami</td>
<td>Acute intermittent hypoxia (AIH)</td>
<td>Pain</td>
<td>Recruiting</td>
<td>90</td>
<td>Phase 2: Parallel Assignment</td>
<td>Other</td>
<td>F/U 4 weeks</td>
<td>November 2018</td>
<td>August 23, 2018</td>
<td>September 11, 2020</td>
<td>Chicago, IL, USA</td>
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<tr>
<td>NCT03762655</td>
<td>University of Florida</td>
<td>Intravenous saline or placebo</td>
<td>Pain</td>
<td>Recruiting</td>
<td>84</td>
<td>Phase 2: Single Group</td>
<td>Walking/Mobility</td>
<td>F/U 12 months</td>
<td>September 2019</td>
<td>May 11, 2019</td>
<td>September 11, 2020</td>
<td>Guangzhou, Guangdong Province, China</td>
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</tbody>
</table>

**Intervention Type**
- Drug
- Drug
- Drug
- Drug
- Drug
- Drug
- Drug
- Drug
- Drug
- Drug

**Potential Benefit**
- Walking/Mobility
- Walking/Mobility
- Walking/Mobility
- Walking/Mobility
- Walking/Mobility
- Walking/Mobility
- Walking/Mobility
- Walking/Mobility
- Walking/Mobility
- Walking/Mobility

**Outcome Measures and Follow Up**
- F/U 12 months
- F/U 12 months
- F/U 12 months
- F/U 12 months
- F/U 12 months
- F/U 12 months
- F/U 12 months
- F/U 12 months
- F/U 12 months
- F/U 12 months

**Study Start Date**
- August 2019
- February 1, 2019
- July 2019
- May 2019
- February 2020
- March 16, 2020
- July 2018
- August 23, 2018
- September 2019
- May 11, 2019

**First Posted**
- April 11, 2019
- February 1, 2019
- April 11, 2019
- April 11, 2019
- April 11, 2019
- April 11, 2019
- April 11, 2019
- April 11, 2019
- May 1, 2019
- May 1, 2019

**Last Updated**
- September 11, 2020
- September 11, 2020
- September 11, 2020
- September 11, 2020
- September 11, 2020
- September 11, 2020
- September 11, 2020
- September 11, 2020
- September 11, 2020
- September 11, 2020

**Location(s)**
- Mexico City, Mexico
- Vancouver, BC, Canada
- Jacksonville, FL, USA
- Miami, FL, USA
- Multicenter, USA
- Chicago, IL, USA
- Guangzhou, Guangdong Province, China
- Shanghai, China
SCI Trials Finder.net - SCI Trials of Drug, Cell, and Surgical Interventions to Improve Functional Outcomes

Revised Sept 11, 2020 - Listing of 60 Trials

NCT ID  Sponsor Intervention Criteria Status Target Enrollment Study Phase & Design Primary Intervention Type Primary Potential Benefit Outcome Measures and Follow Up Study Start Date First Posted Last Updated Location(s)

NCT02094532 Nona Affiliated Hospital, Sun Yang Sen University Intravascular cord mesenchymal stem cells per kg, every month for 4 months • Age 18-95 yrs • SCI Level not stated • AIS A, B, C, D • Early Chronic SCI (2-12 months) Recruiting 66 Phase 2 Primary Purpose: Treatment. Intervention Model: Parallel Assignment, Masking: Single Control-based General Health • SCG • SCIM Score • ASIA Motor Index • 6MWT • 10MWT • TUG • EMG • Maximum Inspiratory Pressure • MRI • Blood Testing • Somatosensory Evoked Potentials • EMG • Change in Residual Urine (US) • Adverse Events F/U 12 months September 2015 May 11, 2018 May 11, 2018 Gainesville, FL, USA

NCT03071393 Nona Affiliated Hospital, Sun Yang Sen University Intravascular cord mesenchymal stem cells per kg, every month for 4 months • Age 18-95 yrs • SCI Level not stated • AIS A, B, C, D • Early Chronic SCI (2-12 months) Recruiting 43 Phase 2 Primary Purpose: Treatment. Intervention Model: Single Group Assignment, Masking: None (Open Label) Control-based General Health • SCG • SCIM Score • ASIA Motor Index • 6MWT • 10MWT • TUG • EMG • Maximum Inspiratory Pressure • MRI • Blood Testing • Somatosensory Evoked Potentials • EMG • Change in Residual Urine (US) • Adverse Events F/U 12 months September 2015 April 23, 2018 April 23, 2018 Guangzhou, Guangdong Province, China

NCT03505034 The University of Texas Health Science Center, Houston Upper extremity nerve translocate surgery to retain motor skills • Age 18-95 yrs • SCI Level not stated • AIS A, B, C, D • Chronic SCI (≥ 6 months) Recruiting 10 Phase Not Applicable Primary Purpose: Treatment. Intervention Model: Single Group Assignment, Masking: None (Open Label) Surgery Arm/Hand Function • Grip Strength • 9 Hole Peg Test • Pinch Strength • Elbow Strength • Box and Block Test • GRASSP • CUE-C F/U 12 weeks April 2018 March 1, 2018 March 1, 2018 Houston, TX, USA

NCT03521323 Shirley Ryan AbilityLab, U.S. Department of Education Acute Intermittent Hypoxia (AIH) exposures to low oxygen (9-10%) inspirated O2 alternating with brief (60-90 sec) exposures of ambient room air vs. ambient (Room Air) in combination with training either with Exercise Response glove or standard UE Rehab training or no training • Age 18-95 yrs • SCI Level not stated • AIS C, D Recruiting 120 Phase Not Applicable Primary Purpose: Treatment. Intervention Model: Parallel Assignment, Masking: Double Control-based General Health • SCG • SCIM Score • ASIA Motor Index • 6MWT • 10MWT • TUG • EMG • Maximum Inspiratory Pressure • MRI • Blood Testing • Somatosensory Evoked Potentials • EMG • Change in Residual Urine (US) vs. blood sample F/U 12 weeks December 2017 October 12, 2017 October 12, 2017 Rochester, MN, USA

NCT03598050 Alan Shek Acute receptive apical mesenchymal stem cells • Age ≤ 35 yrs • AIS A, B, C, D • Traumatic SCI - SCI for 2 weeks to 1 year - No contraindication to MRI Active, not recruiting 10 Phase 1 Primary Purpose: Treatment. Intervention Model: Parallel Assignment, Masking: Double Control-based General Health • SCG • SCIM Score • ASIA Motor Index • 6MWT • 10MWT • TUG • EMG • Maximum Inspiratory Pressure • MRI • Blood Testing • Somatosensory Evoked Potentials • EMG • Change in Residual Urine (US) F/U 12 weeks July 2017 August 31, 2017 August 31, 2017 Chicago, IL, USA

NCT03656296 Shirley Ryan AbilityLab, U.S. Department of Education Acute intermittent hypoxia (AIH) 90 seconds of 10-15% O2, alternating with 60 seconds of 21% (normal) O2, repeated up to 18 times per session (up to 45 minute sessions). Testing 4 combinations of therapy: 1) AIH-alone 2) AIH and upper lip training; 3) sham AIH and upper lip training; 4) sham AIH alone. Upper lip training with Ames Spring spasticity device. Daily sessions for 5 days. • Age 18-95 yrs • SCI Level not stated • AIS C, D Recruiting 50 Phase Not Applicable Primary Purpose: Treatment. Intervention Model: Parallel Assignment, Masking: Double Control-based General Health • SCG • SCIM Score • ASIA Motor Index • 6MWT • 10MWT • TUG • EMG • Maximum Inspiratory Pressure • MRI • Blood Testing • Somatosensory Evoked Potentials • EMG • Change in Residual Urine (US) vs. blood sample F/U 6 months August 2017 April 6, 2017 April 6, 2017 Beijing, China

NCT03685272 Peixing University People's Hospital Acute intermittent hypoxia (AIH) exposure to low oxygen (9-15%) inspirated O2 alternating with brief (60-90 sec) exposures of ambient room air vs. ambient (Room Air) in combination with training either with Exercise Response glove or standard UE Rehab training or no training • Age 18-95 yrs • SCI Level not stated • AIS C, D Recruiting 200 Phase Not Applicable Primary Purpose: Treatment. Intervention Model: Parallel Assignment, Masking: Single Control-based General Health • SCG • SCIM Score • ASIA Motor Index • 6MWT • 10MWT • TUG • EMG • Maximum Inspiratory Pressure • MRI • Blood Testing • Somatosensory Evoked Potentials • EMG • Change in Residual Urine (US) vs. blood sample F/U 6 months December 2019 April 5, 2017 April 5, 2017 Graz, Austria

NCT03698161 Medical University of Graz Continuous hypoxia alternating with 24 hours of SCI given 2 consecutive daily sessions at Medical University of Graz. Standard of Care Control subjects admitted to Paracelsus Medical University Salzburg. • Age 18-95 yrs • SCI Level not stated • AIS A, B, C, D Recruiting 100 Phase Not Applicable Primary Purpose: Treatment. Intervention Model: Parallel Assignment, Masking: None (Open Label) Drug General Health • SCG • SCIM Score • ASIA Motor Index • 6MWT • 10MWT • TUG • EMG • Change in Residual Urine (US) vs. blood sample F/U 1 year December 2019 May 15, 2020 May 15, 2020 Graz, Austria

NCT03746777 University of Florida Acute Intermittent Hypoxia (AIH) exposures of 15 brief (60-120 sec) exposures to low oxygen (9-15%) inspirated O2 alternating with brief (60-90 sec) exposures of ambient room air vs. ambient (Room Air) in combination with training either with Exercise Response glove or standard UE Rehab training or no training • Age 18-95 yrs • SCI Level not stated • AIS A, B, C Recruiting 35 Phase Not Applicable Primary Purpose: Treatment. Intervention Model: Parallel Assignment, Masking: Single Control-based General Health • SCG • SCIM Score • ASIA Motor Index • 6MWT • 10MWT • TUG • EMG • Change in Residual Urine (US) vs. blood sample F/U 6 months July 2017 March 5, 2020 March 5, 2020 Jacksonville, FL, USA

NCT03785052 University of Alberta, United States Department of Defense Hypoxia (20% inspired oxygen) inspired via Anesthesia by custom made catheter inserted into the femoral vein. Patients will be cooled at a maximum rate of 2.2-2.7°C/hr until reaching target temp. (20°C) which will be maintained for 48hrs, then warmed at 0.1°C/hr until returned to normal temp. vs. Standard of Care control group • Age 18-95 yrs • SCI Level not stated • AIS A, B, C Recruiting 120 Phase Not Applicable Primary Purpose: Treatment. Intervention Model: Parallel Assignment, Masking: None (Open Label) Control-based General Health • SCG • SCIM Score • ASIA Motor Index • 6MWT • 10MWT • TUG • EMG • Change in Residual Urine (US) vs. blood sample F/U 12 months August 2019 December 13, 2018 December 13, 2018 Multicenter, USA

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<th>Intervention</th>
<th>Criteria</th>
<th>Status</th>
<th>Target Enrollment</th>
<th>Study Phase &amp; Design</th>
<th>Primary Intervention Type</th>
<th>Primary Potential Benefit</th>
<th>Outcome Measures and Follow Up</th>
<th>Study Start Date</th>
<th>First Posted</th>
<th>Last Updated</th>
<th>Location(s)</th>
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<tr>
<td>NCT02687272</td>
<td>NeuroRecovery, Inc.</td>
<td>Single intramedullary injection of FGF1-CT, a medicinal product.</td>
<td>- Age 18-70 yrs, level T11-L2 (Phase 1) - FGF1-CT (Phase 2) - AIS A (Phase 1) - Acute SCI (Phase 1): 6-24 hours, Phase 2: 24-72 hours</td>
<td>Recruiting</td>
<td>48</td>
<td>Phase 1: Pharmacology, Treatment, Intervention Model, Parallel Assignment, Masking: Blinded</td>
<td>Cell-based</td>
<td>General Health</td>
<td>Safety / Adverse Events U.S.</td>
<td>December 2015</td>
<td>September 28, 2016</td>
<td>March 11, 2020</td>
<td>Multicenter: U.S.</td>
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<td>NCT02574572</td>
<td>Ferrer Internacional S.A.</td>
<td>Single intramedullary injection of FGF1-CT, a medicinal product.</td>
<td>- Age 18-70 yrs, level T11-L2 (Phase 1) - FGF1-CT (Phase 2) - AIS A (Phase 1) - Acute SCI (Phase 1): 6-24 hours, Phase 2: 2-96 hours</td>
<td>Recruiting</td>
<td>152</td>
<td>Phase 1: Pharmacology, Treatment, Intervention Model, Parallel Assignment, Masking: Single</td>
<td>Cell-based</td>
<td>General Health</td>
<td>SF-36 / ISNCSCI Motor / Sensory Scores</td>
<td>April 2017</td>
<td>August 25, 2016</td>
<td>July 14, 2020</td>
<td>Multicenter: USA</td>
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<td>NCT02490501</td>
<td>BioArctic AB</td>
<td>Single intramedullary injection of FGF1-CT, a medicinal product.</td>
<td>- Age 18-70 yrs, level T11-L2 (Phase 1) - FGF1-CT (Phase 2) - AIS A (Phase 1) - Acute SCI (Phase 1): 6-24 hours, Phase 2: 2-96 hours</td>
<td>Recruiting</td>
<td>27</td>
<td>Phase 1: Pharmacology, Treatment, Intervention Model, Parallel Assignment, Masking: None (Label)</td>
<td>Cell-based</td>
<td>General Health</td>
<td>Safety / Adverse Events U.S.</td>
<td>June 2015</td>
<td>September 3, 2015</td>
<td>July 3, 2015</td>
<td>Stockholm, Sweden</td>
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<td>Criteria</td>
<td>Status</td>
<td>Eligibility</td>
<td>Intervention Type</td>
<td>Primary Potential Benefit</td>
<td>Outcomes Measures and Follow Up</td>
<td>Study Start Date</td>
<td>First Posted</td>
<td>Last Updated</td>
<td>Location(s)</td>
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</table>
| NCT01279811  | Chinese Academy of Sciences | Neuroregen scaffold with bone marrow mononuclear cells (BM-MNCs) or mesenchymal stem cells (MSCs) transplantation. Combined with comprehensive rehabilitation, psychological and nutritional measures | Age 18-75 yrs  
- Level C5-T2  
- AIS A  

either Acute SCI (≤ 48 hours)  
- Chronic SCI ≥ 12 months  
- AIS C, D  

either with or without walking practice will be compared to AIS with/without walk-Extensive tissue practice | Enrolling by invitation | 30 Phase | Primary Phase I:  
- Primary Purpose: Treatment  
- Intervention Model: Single Group  
- Assignment: Blinding: Name (Open Label)  
- Primary Intervention Type: Cell-based  
- Primary Potential Benefit: General Health  
- Outcome Measures and Follow Up: Safety / Adverse events  
- Neuropharmacological Measures  
- Somatosensory Evoked Potentials (SEP)  
- Motor Evoked Potentials (MEP)  
- Quality of Life Questionnaire (EQ-5D)  
- Pain intensity  
- Upper and Lower Motor Function | January 2015 | February 3, 2015 | January 10, 2020 | Beijing, China  
Jiangsu Sheng, China  
Heding, China |
| NCT01676441  | Spaulding Rehabilitation Hospital | Effect of acute intermittent hypoxia (AIH, breathing air with low oxygen) on Leg Function following SCI.  
- Arm without walking practice will be compared to AIS with/without walk-Extensive tissue practice | Age 18-75 yrs  
- Level C2-T4  
- AIS C, D  

either Acute SCI (≤ 12 hours)  
- Chronic SCI ≥ 6 months | Recruiting | 44 Phase | Not Applicable:  
- Primary Purpose: Treatment  
- Intervention Model: Single Group  
- Assignment: Blinding: Name (Open Label)  
- Primary Intervention Type: Drug  
- Primary Potential Benefit: Walking / Mobility  
- Outcome Measures and Follow Up:  
- Walking speed 10MWT  
- Walking speed 10MWT | October 2014 | December 24, 2014 | July 31, 2020 | Cambridge, MA, USA |
| NCT01772810  | Spaulding Rehabilitation Hospital | Effect of acute intermittent hypoxia (AIH, breathing air with low oxygen) on Leg Function following SCI.  
- Arm without walking practice will be compared to AIS with/without walk-Extensive tissue practice | Age 18-75 yrs  
- Level C2-L4  
- AIS C, D  

either Acute SCI (≤ 12 hours)  
- Chronic SCI ≥ 6 months | Recruiting | 20 Phase | Not Applicable:  
- Primary Purpose: Treatment  
- Intervention Model: Single Group  
- Assignment: Blinding: Name (Open Label)  
- Primary Intervention Type: Drug  
- Primary Potential Benefit: Walking / Mobility  
- Outcome Measures and Follow Up:  
- Walking speed 10MWT  
- Walking speed 10MWT | October 2014 | December 23, 2014 | July 31, 2020 | Cambridge, MA, USA |
| NCT02274116  | University of California, Los Angeles | Study of implanted epidural electrical array for spinal cord stimulation in combination with a drug (repurposed) to improve arm and hand function in subjects with non-progressive SCI following acute SCI | Age 18-75 yrs  
- SCI above C3  
- Chronic SCI ≥ 1 year | Recruiting | 12 Phase | Not Applicable:  
- Primary Purpose: Treatment  
- Intervention Model: Single Group  
- Assignment: Blinding: Name (Open Label)  
- Primary Intervention Type: Drug  
- Primary Potential Benefit: Arm / Hand Function  
- Outcome Measures and Follow Up:  
- Assessment of arm and hand function (motor testing)  
- 10 emg  
- 10 cm  
- 10 MWT  
- 10 MWT  | July 2013 | December 2014 | January 5, 2020 | Los Angeles, CA, USA |
| NCT02313194  | Spaulding Rehabilitation Hospital | Effect of acute intermittent hypoxia (AIH, breathing air with low oxygen) on Leg Function following SCI.  
- Arm without walking practice will be compared to AIS with/without walk-Extensive tissue practice | Age 18-75 yrs  
- Level C2-L4  
- AIS C, D  

either Acute SCI (≤ 12 hours)  
- Chronic SCI ≥ 6 months | Recruiting | 30 Phase | Not Applicable:  
- Primary Purpose: Treatment  
- Intervention Model: Single Group  
- Assignment: Blinding: Name (Open Label)  
- Primary Intervention Type: Drug  
- Primary Potential Benefit: Walking / Mobility  
- Outcome Measures and Follow Up:  
- Change in over ground walking endurance (BAMT) and speed (10MWT)  
- F/U 4 weeks | October 2014 | October 24, 2014 | October 24, 2020 | Cambridge, MA, USA |
| NCT02323698  | Northeastern U. | Surgical resection of Nerve Scar Cells into the area of SCI  
- 300,000 cells in 1ml injectate and 200,000 cells in 10μL injectate  
- patients receive intraoperative treatment for 3 months after implant | Age 18-75 yrs  
- SCI above C3  
- Chronic SCI ≥ 1 year | Recruiting | 8 Phase | Not Applicable:  
- Primary Purpose: Treatment  
- Intervention Model: Single Group  
- Assignment: Blinding: Name (Open Label)  
- Primary Intervention Type: Cell-based  
- Primary Potential Benefit: Walking / Mobility  
- Outcome Measures and Follow Up:  
- Safety  
- Efficacy  
- Incidence of Adverse Events  
- Graft Survival (MRI evidence)  
- Upper and Lower Motor Function | August 2014 | January 21, 2013 | September 11, 2017 | San Diego, CA, USA |
| NCT02323945  | Washington University School of Medicine | Nerve transfer procedure will be rehabilitated to each patient's functional deficit | Age 18-75 yrs  
- At least preserved awake function  
- AIS A, B, or C  
- SCI ≥ 48 months  
- No active infection at the operative site or systemic infection  
- No history of long-term steroid therapy  
- No significant pain | Active, not recruiting | 20 Phase | Not Applicable:  
- Primary Purpose: Treatment  
- Intervention Model: Single Group  
- Assignment: Blinding: Name (Open Label)  
- Primary Intervention Type: Surgery  
- Primary Potential Benefit: Arm / Hand Function  
- Outcome Measures and Follow Up:  
- Upper motor strength  
- Disabilities of Arm, Shoulder, and Hand (DASH) scores  
- Change in Short Form 36 (SF-36) scores | October 2012 | October 24, 2012 | January 18, 2009 | St. Louis, MO, USA |
| NCT03270944  | Pharmaseq Co., Ltd. | Bone Marrow-derived adipose tissue mesenchymal stem cells (collagen-based scaffold) surgically transplanted intrathecally and directly into spinal cord injury following laminectomy:  
Implant followed by 4 weeks of rehabilitation | Age 18-75 yrs  
- Level C2-T4  
- AIS A, B  
- Stable neuro after 1 m rehab  
- Chronic SCI ≥ 12 months | Recruiting | 20 Phase | Not Applicable:  
- Primary Purpose: Treatment  
- Intervention Model: Single Group  
- Assignment: Blinding: Name (Open Label)  
- Primary Intervention Type: Cell-based  
- Primary Potential Benefit: General Health  
- Outcome Measures and Follow Up:  
- Upper and Lower Motor Function | August 2008 | August 31, 2012 | February 5, 2020 | Seoul, South Korea |
| NCT01397672  | ADSpine North America Research Network | Bicapular 1 x 150 mg by mouth or breaking the first 24 hours followed by 2 x 50 mg for the following 15 days  
- in injury vs. placebo in acute SCI | Age 18-75 yrs  
- Level C2-T4  
- AIS A, B, C  
- Acute SCI (≤ 12 hours) | Recruiting | 351 Phase | Not Applicable:  
- Primary Purpose: Treatment  
- Intervention Model: Parallel Assignment  
- Primary Intervention Type: Drug  
- Primary Potential Benefit: General Health  
- Outcome Measures and Follow Up:  
- Efficacy / Safety  
- Change in RINSCI total motor score  
- Change in RINSCI total motor score | October 2013 | May 14, 2012 | July 27, 2020 | Multicenter: USA  
Canada  
Australia |
| NCT01392701  | University of British Columbia | Intravenous vasopressor drugs  
-anaesthetic in dopamine infused  
- to improve spinal cord perfusion pressure, infused within 48 hours of injury and continued for 5 days  
- with a daily 'hit' 'crossover' protocol  
- compare the effectiveness of the two drugs | Age 18-75 yrs  
- Level C2-L1  
- AIS A, B, C  
- Acute SCI (≤ 12 hours) | Recruiting | 100 Phase | Not Applicable:  
- Primary Purpose: Treatment  
- Intervention Model: Single Group  
- Assignment: Blinding: Name (Open Label)  
- Primary Intervention Type: Drug  
- Primary Potential Benefit: Spinal Cord Perfusion Pressure  
- Outcome Measures and Follow Up:  
- Clinical Improvement  
- RINSCI  
- Pain Questionnaire  
- F/U 1 year | January 2012 | January 19, 2011 | September 26, 2019 | Multicenter: USA  
Canada |
This table is abstracted from the clinical trial registration website www.clinicaltrials.gov using the search term "Spinal Cord Injuries" and is updated periodically. The most recent update occurred September 11, 2020 at which time the www.clinicaltrials.gov search found a total of 1235 SCI trials. Of these, there were 382 interventional trials that are enrolling or not-yet-enrolling. Review of these 382 studies for those that are targeting improvement in neurological or related functional outcomes yielded the current list. The table includes 60 SCI trials from the search that:

1) are currently actively recruiting or soon-to-be recruiting subjects; 2) are interventional (testing an intervention/treatment) using drugs, cell therapies, surgery, hypoxia, hypothermia, hyperbaric oxygen, low energy extracorporeal shock wave therapy, or near infrared laser light; and 3) targeted sensorimotor neurological or related functional improvement of the spinal cord as outcome measures.

Trials meeting these criteria are included if sufficient information is available on the clinicaltrials.gov webpages to adequately determine basic protocol design, the nature of the intervention, its delivery method, and relevant outcome measures.

Interventional clinical trials are routinely registered on www.clinicaltrials.gov based on legal requirements* and because scientific journals may require registration for publication of the trial results. The clinicaltrials.gov website is the largest repository of current and past clinical trials for all diseases and disorders as of September 11, 2020 the registry contained information on 351,337 trials including research conducted in all 50 states in the USA and 216 countries. Investigators may choose not to register some early phase trials and those testing behavioral interventions, even though they may be important and scientifically rigorous studies.

*U.S. Public Law 110-85 requires the registration and reporting of results of “certain applicable clinical trials,” i.e., controlled interventional clinical trials that are subject to FDA regulation and that involve a Drug or Biologic (other than Phase I investigations), or Device (other than small feasibility studies).

More detailed information on individual trials may be accessed by using the NCT number found in the first column of the table. All trials registered with www.clinicaltrials.gov are assigned a registration number that begins with NCT (e.g. NCT01321333). When an electronic version of the tables is used (e.g. when downloaded as a pdf file from www.scope-sci.org), the webpages describing a specific trial can be directly accessed by using the hyperlink (left Click to follow the link) of the NCT number in the table.

Before volunteering to participate in a clinical trial, patients are urged to discuss all options with their healthcare provider and other trusted advisors.

<table>
<thead>
<tr>
<th>NCT ID</th>
<th>Sponsor</th>
<th>Intervention</th>
<th>Criteria</th>
<th>Status</th>
<th>Target Enrollment</th>
<th>Study Phase &amp; Design</th>
<th>Primary Intervention Type</th>
<th>Primary Potential Benefit</th>
<th>Outcome Measures and Follow Up</th>
<th>Study Start Date</th>
<th>First Posted</th>
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</thead>
</table>

Listing of a clinical trial on the clinicaltrials.gov website does not reflect an endorsement by SCOPE or the National Institutes of Health. Information appearing on clinicaltrials.gov is provided by study sponsors/investigators and is not verified by SCOPE or clinicaltrials.gov for scientific validity or relevance.
Sponsor

Phase 2 trials follow successful completion of Phase 1. Phase 2 trials are used to develop information on intervention... timing (when and how long to give), effect of the intervention on the body (what does it do, beneficial or harmful).

Status

Criteria

Phase 3 trials are conducted using the refined protocols developed from Phase 2 trials. They are often termed “pivotal”... rigorous conducted that their results, if positive, can be used for regulatory approval (e.g. FDA approval).

First Posted

Study Phase & Design

Revised Sept 11, 2020 - Listing of 60 Trials

SCITrialsFinder.net - SCI Trials of Drug, Cell, and Surgical Interventions to Improve Functional Outcomes

NCT ID

• 6MWT: 6 minute walk test. An assessment of the distance that the subject can walk in 6 minutes.

• Tardieu Scale: test of spasticity by assessing muscle resistance to passive movement at both slow and fast speed.

• TMS/UEMS/LEMS: Total Motor Score/Upper Extremity Motor Score/Lower Extremity Motor Score are components of the ISNCSCI... Score (the TMS) and the sub-components of the UEMS and the LEMS which are commonly analyzed and reported separately.

• SF-36: the Short Form-36 is a patient-reported survey of health status. The SF-36 is commonly used as a measure of Health-Related Quality of Life.

• Residual Urine: Changes in residual urine measured after voiding by ultrasound test (volume of urine in mL, lower values represent a better outcome).

• Open Label: a trial in which there is no attempt to conceal the identity of the intervention from the subjects; i.e. there is no “masking” of the intervention—the subjects know that they are receiving either an “active ingredient” or a placebo.

• Pharmacokinetics: study of the absorption, distribution, metabolism, and excretion of drugs; commonly involving periodic sampling of bodily fluids (e.g. blood, serum, CSF, urine) to determine drug concentration changes over time.

• N/A: not applicable.

• Kunming Locomotor Scale: a 10-grade Roman numeral locomotion scoring system describing ability to stand, ability to walk, and required support/devices.

• Kinematics: analysis of movement.

• Running Locomotor Scale: a 10-grade Roman numeral locomotion scoring system describing ability to stand, ability to walk, and required support/devices.

• HUD: Humanitarian Use Device is a designation of the U.S. FDA for medical devices intended to benefit patients in the treatment or diagnosis of a disease or condition that affects or is manifested in fewer than 4,000 persons in the United States per year.

• HDE: Humanitarian Device Exemption is a U.S. Food & Drug Administration (FDA) application that, if successful, authorizes the applicant to market a Humanitarian Use Device (HUD) subject to certain profit and use restrictions.

• ISNCSCI: International Standards for Neurological Classification of Spinal Cord Injury-sometimes referred to as the ASIA (American Spinal Injury Association) standards. This refers to the accepted international standards for performing motor/sensory physical examination of persons with SCI and the classification scheme for documenting the neurological level and the severity (completeness) of injury.

• IT: Intrathecal within the subarachnoid space surrounding the spinal cord-e.g. administration of a drug into the subarachnoid space which contains the cerebrospinal fluid (CSF).

• IV: Intravenous-administration of a drug by vein.

• IT: Intrathecal, within the subarachnoid space surrounding the spinal cord e.g. administration of a drug into the subarachnoid space which contains the cerebrospinal fluid (CSF).

• IANR-SCIRFS: the International Association of Neurorestoratology-Spinal Cord Injury Functional Rating Scale. Changes in motor and sensory scores assessed by IANR-SCIRFS scale (total score range from 0 to 51, higher values represent a better outcome).

• AIS: the ASIA (American Spinal Injury Association) Impairment Scale is a component of the ISNCSCI that classifies the degree of motor/sensory sparing below the level of injury. The AIS scale ranges from A (most severe, complete injury without sensory function in the lowest sacral segments) to E (AIS E describes sensory only sparing; AIS C describes sensory and very weak motor sparing; AIS D describes sensory and stronger but not normal motor sparing).

• AIH: Acute Intermittent Hypoxia. Short duration (<2 min) exposure to breathing reduced oxygen concentration levels (~10% inspired oxygen), with alternating exposures to breathing air with normal oxygen content (~21% inspired oxygen).

• RCT: Randomized Controlled Trial. A clinical trial in which subjects are randomly assigned to either receive the active treatment or an alternative (control). Well-designed RCT’s minimize the influence of variables other than the intervention that might have an effect on the desired outcome.

For this reason, they provide the best evidence of efficacy and safety. The most rigorous RCT’s utilize a placebo (inactive) control group and blinding (concealing active vs. control assignment) to minimize bias in the interpretation of study results.

• Residual Urine: Changes in residual urine measured after voiding by ultrasound test (volume of urine in mL, lower values represent a better outcome).

• ROM: Range of Motion.

• SOMS/GSM: SOMS is the Spinal Cord Independence Measure is a measure of a person’s ability to perform certain activities independently.

• SQ: subcutaneous-administration of a drug by injection beneath the skin.

• SF-36: the Short Form-36 is a patient-reported survey of health status. The SF-36 is commonly used as a measure of Health-Related Quality of Life.

• TMS/UEMS/LEMS: Total Motor Score/Upper Extremity Motor Score/Lower Extremity Motor Score are components of the ISNCSCI that include the ASIA Motor Index Score (the TMS) and the sub-components of the UEMS and the LEMS which are commonly analyzed and reported separately.

• Tandem Scale: test of stability by assessing muscle resistance to passive movement at both slow and fast speed.

• VAS: Visual Analogue Scale-a scale commonly used to assess the severity of pain.

• 9 Hole Peg Test: a test of manual dexterity.

• 6MWT: 6 minute walk test. An assessment of the distance that the subject can walk in 6 minutes.

• 10MWT: 10 meter walk test. An assessment of the time required to walk 10 meters.