Clinical Studies

Medical breakthroughs are made possible through clinical research. With the combination of our surgeons’ expertise and the Center’s state-of-the-art facilities, they are able to conduct various clinical trials, bringing them closer to discovering the next groundbreaking treatment option. Because of their heavy involvement in clinical research, they are able to provide patients with the best possible care.

1. **Nerve Graft Transplantation Using Allograft/Autograft for the Functional Restoration of Extremities in Paraplegics after Spinal Cord Injury, Central Nervous System Insult or Stroke**
   
   To improve the quality of life for paraplegic and tetraplegic patients with paralysis due to stroke or spinal cord injuries. Nerve transfer, with or without nerve grafting, is a technique that has been successfully applied to treat brachial plexus injuries.
   
   - Patients experiencing paralysis due to stroke or injury
   - Between the ages of 18-65
   - Overall good health

2. **Nerve Transfer after Central Nervous System Insult for Restoration of Extremity Function**
   
   To improve the quality of life for paraplegic and tetraplegic patients with paralysis due to stroke or spinal cord injuries. Nerve transfer, with or without nerve grafting, is a technique that has been successfully applied to treat brachial plexus injuries.
   
   - Patients experiencing paralysis due to stroke or injury
   - Anatomically suitable areas for nerve transfers

3. **Intercostal Nerve Transfer to Restore Protective Sensibility In SCI Patients**
   
   To improve the quality of life for paraplegic patients with chronic decubitus ulcers (pressure sores) and prevent wound recurrence by restoring protective sensibility (feeling to the buttocks area).
   
   - Paraplegic patients with recurring chronic decubitus ulcers (pressure sores)
   - 50 years of age or older
   - No medical contraindications to immunosuppressive therapy (in cases utilizing allograft)

   
   To improve the quality of life for patients with uncontrollable bladders that was caused by complete spinal cord injury.
   
   - Paraplegic or tetraplegic patient
   - 18 years of age or older
   - No medical contraindications to immunosuppressive therapy
   - Ability and motivation to follow up appropriately
   - Stable sequelae of initial CNS insult
   - Minimal medical co-morbidities and otherwise in good health

5. **HUD Study: Diaphragm Reinnervation for Ventilator Dependent Patients – Diaphragm Pacemaker**
6. **Diaphragm Reinnervation for Amyotrophic Lateral Sclerosis patients – Diaphragm Pacemaker with Spinal Accessory Neurotization**

Phrenic nerve pacing has been performed previously on hundreds of ventilator dependent patients worldwide with success rates of greater than 80%.

- Subjects will include those patients dependent upon ventilators for respiratory support as a result of spinal cord injury, head injury, brain tumor, central sleep apnea, or certain neuromuscular diseases
- 18 years of age and older
- No medical contraindications to immunosuppressive therapy
- Ability and motivation to follow up appropriately
- Stable sequelae of initial CNS insult
- Minimal medical co-morbidities and otherwise in good health

7. **Repair of Complex Incisional Hernias with the Bony Anchoring Reinforcement System (BARS)**

To improve the quality of the standard hernia repair and attempt to decrease the rate of recurrence and reoperation by using a synthetic mesh to reinforce the entire abdominal wall.

- Patients with incisional hernia resulting from intraabdominal surgeries
- 18 years of age or older
- No medical contraindications to immunosuppressive therapy (in cases utilizing allograft)
- Ability and motivation to follow up appropriately
- Ability and motivation to adhere to rehabilitation regimen

8. **Phrenic Nerve Surgery**

To improve the quality of life in patients suffering from unilateral (one sided) diaphragm paralysis. We use well established peripheral nerve surgery techniques on the phrenic nerve to restore function to the diaphragm.

- Patients with unilateral diaphragm paralysis
- 18 years of age or older
- No medical contraindications to immunosuppressive therapy (in cases utilizing allograft)
- Ability and motivation to follow up appropriately
- Ability and motivation to adhere to rehabilitation regimen
9. **Tendon Transfer for Foot Drop Correction**

To improve the function of the ankle and toe in patients who suffer from footdrop syndrome. The surgery retasks tendons of the lower leg to the nonfunctional tendons of the ankle, allowing the patient to voluntarily flex the ankle and improve ability to walk.

- 18 years of age or older
- No medical contraindications to immunosuppressive therapy (in cases utilizing allograft)
- Ability and motivation to follow up appropriately
- Ability and motivation to adhere to rehabilitation regimen

10. **Trapezius to Deltoid Tendon Transfer**

To improve the function of the shoulder in patients who suffer brachial plexus injury. The surgery involves transfer of the shrugging muscles of the trapezius to the deltoid of the shoulder to restore arm abduction to reduce risk of dislocation and associated pain.

- Patients with shoulder paralysis following brachial plexus insult or injury
- Stable sequelae of initial cause of injury
- 18 years of age or older
- No medical contraindications to immunosuppressive therapy (in cases utilizing allograft)
- Ability and motivation to follow up appropriately
- Ability and motivation to adhere to rehabilitation regimen

11. **Surgical Treatment of Compression Neuropathy**

To improve the quality of life in patients suffering from lower leg compression neuropathy by using nerve decompression techniques to reduce pain and restore both function and feeling.

- 18-80 years of age or older
- No medical contraindications to immunosuppressive therapy (in cases utilizing allograft)
- Ability and motivation to follow up appropriately
- Ability and motivation to adhere to rehabilitation regime
- Adequate circulation
- Positive Tinel sign at 2/3 sites on the lower extremity
12. Surgical Treatment of Dysphagia and Laryngeal Dysfunction Following Stroke or Brain Injury

To improve the quality of life of patients suffering from dysphagia and laryngeal dysfunction after stroke. This surgery applies well established peripheral nerve techniques to the vagus nerve to restore function in the voice and swallowing muscles of the throat.

- Stroke patients that suffer from dysphagia and laryngeal dysfunction due to vagus nerve damage
- Stable sequelae of initial stroke
- 18 years of age or older
- No medical contraindications to immunosuppressive therapy (in cases utilizing allograft)
- Ability and motivation to follow up appropriately
- Ability and motivation to adhere to rehabilitation regimen