

Additional Studies

There is still much to learn about ALS. As such, we have several ongoing studies evaluating various aspects of this disease.

Substrate Utilization

This study investigates the utilization of sugar, fat and protein by using a metabolic cart to measure the calories an individual needs and whether these calories are coming from sugar, fat or protein. Our goal is to understand shifts in substrate utilization through the progression of ALS, helping patients attain a healthier lifestyle and quality of life. This study will also clarify the influence of improved nutrition via PEG tube feeding.

GI Dysmotility

Studies have shown delayed gastric emptying may be associated with ALS, possibly due to involvement of the autonomic nervous system. This may be the cause of the abdominal discomfort and constipation common in ALS. This study will examine the small bowel transit time in a large cohort of patients and controls in an effort to gain further insight into the extent and severity of GI dysmotility in ALS. Companion studies are also underway in autopsied material that examine the pathology underlying the delay in GI motility.

Work of Breathing

We are evaluating how many calories are used by people with ALS while at rest; while using non-invasive positive pressure ventilation (NIPPV); and while breathing against resistance. This data will aid in calculating the work of breathing and effects of NIPPV on the work of breathing. In addition, this study will help to resolve mismatches between caloric intake and nutritional needs.

Quality of Life (QoL) Questionnaire

The current ALS Quality of Life Questionnaire is a 59-item survey used nationally to evaluate QoL. Our goal is to develop a shorter, more easily administered 46-item version to gain an overall better understanding of the QoL in people with ALS. We anticipate this will be valuable in ALS clinical management and future clinical studies.

Inflammation and ALS

The process of inflammation may have a critical role in the progression of neurodegenerative disorders like ALS. The enzyme sPLA2 is thought to be either directly or indirectly involved in this process. The purpose of this study is to measure the activity levels of sPLA2 in people with ALS and controls to determine if this protein is altered in ALS. Our hope is that this study will help to understand inflammation in ALS and identify targets for treatment.

Tissue Donation

In a disease like ALS in which the cause is unknown, no animal models of ALS can substitute for understanding how it affects humans. We are currently collecting blood, urine, CSF and autopsy materials from people with ALS and other motor neuron diseases to look for clues in the human tissue. All samples are tied to de-identified clinical information in a database to help maximize the usefulness of this precious resource. This includes demographic information; environmental exposures; and medical history. This will increase availability of human tissue for research with pertinent corresponding clinical information.



Clinical Trials,
Studies,
and
Upcoming
Technology

ALS Hope
Foundation 
Hope is on the horizon

Clinical Studies

The MDA/ALS Center of Hope at Drexel University College of Medicine is conducting with several sponsored clinical trials.

Zenvia

This clinical trial will evaluate the safety, tolerability and efficacy of Zenvia, a combination drug consisting of dextromethorphan and quinidine for the treatment of patients with pseudobulbar affect (PBA). PBA is a condition characterized by frequent episodes of abnormal laughing or crying (not matching a person's emotions). This drug was successful in reducing PBA episodes in preliminary studies.

Lithium

This study will determine whether lithium carbonate is safe for use in people with ALS and whether it has any potential to slow the progression of the disease. The study is being conducted in the United States after a small pilot study in Italy showed promising results. Lithium carbonate has been FDA-approved since the early 1970s for treatment of bipolar disorder. It has neuroprotective properties in models of acute brain injury and chronic neurodegenerative diseases and prolonged the survival of the mutant SOD1G93A transgenic mouse model of ALS. Lithium may work by blocking cell death or inactivating receptors for glutamate.

Ceftriaxone

This study will examine whether chronic intravenous treatment with ceftriaxone prolongs survival with ALS. Ceftriaxone may increase the level of a transport protein that decreases glutamate levels near nerves. Researchers think that increased levels of glutamate may be related to motor neuron death.

Validation of ALS Biomarkers

The purpose of this study is to learn more about the underlying cause of ALS, as well as find unique biological markers that can be used to diagnose ALS and monitor disease progression. We will do this by collecting and comparing blood samples from healthy subjects, and both blood and cerebrospinal fluid (CSF) samples from people with classic ALS and other neurodegenerative diseases.



If you have any questions regarding these studies, please don't hesitate to contact us at:

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ALS and Technology

Technological developments are giving people with disabilities alternate means of communication and environmental control. The following are projects aimed at evaluating the effectiveness of some of these new technologies for individuals with ALS.

Assistive Technology

Through grants and donations, we have developed a "library" of equipment that is available for demonstration, education and trial. Individuals with ALS have the opportunity to try assistive technology options including access to computers and communication devices. We will also provide information on purchasing devices that can help with environmental control and access.

EEG-Based Brain-Computer Interface

By turning EEG (brain wave) signals detected from the scalp into an electrical instruction, the Brain-Computer Interface (BCI) allows people to make selections from a computer screen. The study is intended to evaluate both the complexity of the system and the degree to which each participant will be able to communicate. Trials will consist of asking the subject to follow a series of simple instructions and to complete certain tasks while using the BCI. We now have a home-based study underway.

