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of studies being performed in the outpatient setting. Only two of the 21 studies utilized in-home interventions, and none examined telerehab interventions.

**Conclusions:** Over the past four years scholarly work investigating activity-based interventions for SCI rehabilitation has increased significantly in quantity and breadth. However, this area of research is still significantly lacking in rigorous study designs and home-based or telehealth studies.

**Author(s) Disclosures:** None.

**Key Words:** Activity-Based Upper Extremity Rehabilitation, Scoping Review, Spinal Cord Injury

#### Research Poster 1710174

##### COVID-19 has Affected Activities of Daily Living in Older Adults?

Suyeong Bae (Yonsei University), Sanghun Nam

**Research Objectives:** To investigate that Coronavirus disease (COVID-19) has affected to performed activities of daily living, we analyzed the association between confirmation of COVID-19 and help in activities of daily living.

**Design:** Our study was a cross-sectional study using secondary data.

**Setting:** The participants were living in the general community and residential care and nursing home.

**Participants:** We used 3119 adult observations in the 2020 COVID-19 National Health and Aging Trends Study (NHATS). We are separate the group by confirmed of COVID-19.

**Interventions:** Not applicable.

**Main Outcome Measures:** The dependent variable of study was the frequency of help in activity of daily living. In the NHATS survey, the question is follow as "During the COVID-19 outbreak, has anyone ever helped you with sub-item relative activities of daily living?". The answer was yes or no. We summed the number of yes and used it as the dependent variable. The independent variable was confirmed of COVID-19.

**Results:** We applied multiple imputation methods due to missing data. When removing the missing data, Yes-COVID-19 group was 26 and No-COVID-19 group was 2091. The Yes-COVID-19 group was composed of 18 males (45.00%) and 22 females (55.00%). The No-COVID-19 group was composed of 1299 males (42.20%) and 1779 (57.80%). The Yes-COVID-19 group was living in general community (n=32, 80.00%), residential care (n=5, 12.50%) and nursing home (n=3, 7.50%). The No-COVID-19 group was living in general community (n=2889, 93.86%), residential care (n=161, 5.23%) and nursing home (n=28, 0.91%). The frequency of help in activity of daily living was Yes-COVID-19 group higher than No-COVID-19 group. In addition, the relative risk of help in activity of daily living was Yes-COVID-19 group higher than No-COVID-19 (relative risk=1.84, 95% confidence level=1.59-2.08,  $p < .0001$ ).

**Conclusions:** Our study is confirmed COVID-19 is affected activity of daily living in older adults. Our finding is suggested that the need for the rehabilitation program after confirmation of COVID-19. Also, we need to investigate the research of demand in a rehabilitation program.

**Author(s) Disclosures:** All authors declares that he has no conflict of interest.

**Key Words:** COVID-19, Rehabilitation, Activities Of Daily Living

#### Research Poster 1710176

##### Effect of Branched Chain Amino Acid Supplementation on Prevention of Sarcopenia after Stroke

Sook Jung Lee (The Catholic University of Korea, College of Medicine), Min Kyu Park

**Research Objectives:** To investigate the effect of branched chain amino acid (BCAA) supplement on prevention of sarcopenia after stroke. We also

evaluate the BCAA effect on functional improvement during intensive rehabilitation period after stroke.

**Design:** Age, stroke-lesion matching study.

**Setting:** Rehabilitation Center in University Hospital.

**Participants:** Subacute stroke patients who had stroke-related disabilities and need to undergo intensive rehabilitation intervention were prospectively enrolled. Age, stroke lesion matched control group were enrolled retrospectively medical record review.

**Interventions:** Patients with study group were administered dietary supplement containing 6g of BCAA twice a day for 1 month. Control group received only conventional rehabilitation therapy.

**Main Outcome Measures:** Functional status relating stroke were evaluated using the Modified Barthel index, berg balance scale, functional ambulatory category, manual function test, and videofluoroscopic swallowing study. Sarcopenia status were evaluated by using grip strength, and dual energy X-ray absorptiometry (DEXA). Skeletal muscle index (SMI) was defined as appendicular lean mass, assessed by DEXA divided by height in meter squared. All evaluations were measured every 1 month.

**Results:** Study group showed significantly increased SMI after BCAA supplementation and intensive rehabilitation therapy compared with control group. Both group exhibited functional improvement over time, but the improvement in the study group was more significant than the improvement in control group. 56% of patients who were unable to walk due to stroke, able to walk again with assist after treatment in study group. Univariate analysis revealed that patients with osteoporosis and lower functional status showed decreased SMI after stroke rehabilitation therapy despite of BCAA supplementation.

**Conclusions:** Our results presented positive effect of BCAA supplement on prevention of sarcopenia after stroke. We also found that nutritional support helps functional improvement on neurologic recovery. Stroke leads to complex systemic metabolic changes, thus loss of muscle mass and malnutrition frequently occurs after stroke. These results suggest that comprehensive rehabilitation intervention with BCAA supplement could be a helpful option during the critical period for post-stroke neurologic recovery.

**Author(s) Disclosures:** The author reports no conflicts of interest in this work.

**Key Words:** Stroke, Sarcopenia, Branched Chain Amino Acid

#### Research Poster 1710178

##### The Relationship Between Decreased Ankle Range of Motion and Dysfunction of the Muscle-Venous Pump of The Lower Leg In Patients With Lymphedema of the Lower Extremities

Tatiana Apkhanova (National Medical Research Center for Rehabilitation and Balneology of the Ministry of Health of Russia), Elena Styazhkina, Michael Eremushkin, Tatiana Konchugova, Detelina Kulchitskaya, Sergey Sapelkin, Alexander Razvolyaev

**Research Objectives:** To determine the relationship between Ankle Range of Motion (AROM) and dysfunction of the muscle-venous pump (MVP) in patients with lower limb lymphedema.

**Design:** In pilot project included 10 patients with lymphedema of the lower extremities (LLL) I-III stages. Patients underwent goniometry (AROM dorsiflexion) and isokinetic dynamometry (IKDM) of the muscles of the lower extremities. The limbs of 10 healthy volunteers were tested.

**Setting:** The study was carried out at Clinic of National Medical Research Center for Rehabilitation and Balneology of the Ministry of Health of Russia, which provides specialized inpatient and polyclinic medical care.

**Participants:** 10 patients with stage I-III of LLL, average age - 62.0 years and 10 healthy volunteers, average age - 27.0 years.

**Interventions:** Each participant performed 10 repetitions of flexion / extension of the lower limb at a slow (0.1 m / s) extension speed. AROM (dorsiflexion) were measured using a goniometer in degrees. IKDM were