Objectives: The primary endpoint evaluates the effectiveness of ventosaterapy on quadriceps muscle pain and the secondary endpoints investigate the effectiveness of the technique on muscle fatigue, performance, overall perceived effect after running.
Methods: This is a randomized controlled trial study, with a follow-up period of 72 hours, registered in the REBEC platform. The runners will be distributed in experimental or control group in a randomized manner. The experimental group will receive vacuum therapy in the quadriceps muscle belly after running and the control group will receive non-effective joint mobilization in the hip and knee joints. Both interventions will last 5 minutes. Allocation will be concealed using opaque, sealed, and numbered envelopes. The runner and the assessor will be blinded to the interventions. Intent-to-treat analysis will be used. Sample selection will be by convenience. Runners will be recruited after running street races in the city of Juiz de Fora and will be instructed not to perform vigorous physical activity 24 hours before and 72 hours after data collection. Inclusion criteria: running at least 6km, adult, running for at least 1 year, and having the habit of practicing running at least twice a week. The intervention or placebo will be performed on the leg that is most sore after running. If participants report the same level of pain in both legs or no pain at all, the side to be evaluated and treated will be randomly selected. The endpoints will be measured: Pain and fatigue (EVAN), muscle performance (unipodal vertical jump) and overall affect (perceived global affect scale).
Keywords: Runner, Recovery, Cupping

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ANALYSIS OF SURVIVAL TIME AND FUNCTIONAL PROGRESSION IN PATIENTS WITH AMYOTROPHIC LATERAL SCLEROSIS: A LONGITUDINAL STUDY

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Background: Amyotrophic lateral sclerosis (ALS) is a disease that causes progressive degeneration of neurons present in the spinal cord and cerebral cortex. It is a disease with a progressive course, with worsening disability and death 3 to 5 years after diagnosis. However, some patients seem to have a slower progression, while others maintain a rapid progression, which may influence the clinical course of the disease and accelerate death.
Objectives: To evaluate the survival time of patients with ALS, according to the progression of the disease in rapid or slow, and to compare the level of functionality between two evaluations.
Methods: A longitudinal case series study that followed patients with a confirmed diagnosis of ALS from August 2018 to February 2022. Data were collected from medical records of periodic evaluations, in which pulmonary function tests were performed and the ALS Functional Assessment Scale (ALSFRS-r) was applied. From the values obtained in the scale, the progression rate was calculated, where the patients were divided into slow or rapid progression and followed for 3.5 years for statistical analysis of survival, later performed by the Kaplan-Meyer test. The results of the scores of the first and second evaluation of each patient were compared using the paired t-test.
Results: 11 patients were followed, 7 with rapid progression (63%) and 4 slow (37%) with a mean age of 61.64 years and forced vital capacity (FVC): 62.2 (38.7-85.7)%pred. In the functionality evaluation, it was observed that there was a significant reduction ($p<0.01$) in the total scale score compared to the first evaluation. The survival percentage was 0%, where all patients died at the end of the study, but the median survival of the slow progression group from the first evaluation until the final outcome was 46 months, while the rapid progression group was 28 months, with no significant difference between the survival curves (HR = 0.42; CI 0.12 - 1.48).
Conclusion: The present study was able to demonstrate that after the second evaluation ALS patients may have significant losses of functionality by the decline of the ALSFRS-r functional score. Also, it can determine the evolution of the disease and assist in identifying the speed of progression of the pathology.
Implications: Regular use of the ALS functional assessment scale and calculation of the rate of progression in the outpatient clinical setting becomes essential to chart a better short- and long-term prognosis and follow-up of the disease.
Keywords: Prognosis, ALS, Survival

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USE OF SHAPING METHODS WITH FOCUS ON 1ST DORSAL INTEROSSEOUS' STRENGTHENING FOR TREATMENT OF INDIVIDUALS WITH RHIZARTHROSIS: CASE REPORT

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Background: Rhizoarthrosis is a chronic health condition characterized by progressive degeneration of the trapeziometacarpal joint. This implies a decreased range of motion, muscle weakness, and pain in the thumb base. Thus, the loss of structure and function of the hand can interfere with the characteristics of activities and participation of these subjects. These, however, can be minimized by the 1st dorsal interosseous muscle strengthening, an important trapeziometacarpal joint dynamic stabilizer. This strengthening is not usually included in physical rehabilitation, which also does not detail the exercises' load, progression, and number of repetitions.
Objectives: To reduce the impact of rhizoarthrosis on activities and the social participation of affected subjects, this study aimed to investigate the effect of an intervention with a shaping method focused on the 1st dorsal interosseous' strengthening.
Methods: Subjects with rizoarthrosis, diagnosed according to the Eaton- Littler -Burton criteria, were included. These were evaluated before, after 4 weeks, and at the end of treatment. For the evaluation of aspects of body structure and function, the pain was assessed using the Numerical Pain Scale, handgrip and pinch strength, and the Nine-Hole Peg Test (NHPT). Activity and participation were assessed using the Australian/Canadian Hand

Osteoarthritis Index (AUSCAN) and Canadian Occupational Performance Measure (COPM) questionnaires, in addition to some of the tasks of the Bilateral Upper Limb Function Test (TEBIM). Data was presented in mean and standard deviation. To verify the effects of the treatment, the delta of change for each variable was calculated and the percentage change was presented before and after evaluations.
Results: An increase of 4.35% in handgrip strength, 2.88% in pulp-pulp pinch strength and 14.93% in lateral pinch strength were observed. There was a reduction only in tripod pinch strength (10.35%). An improvement of 14.95% was also observed in the execution time of the NHPT and of up to 64.08% in the selected TEBIM activities. The AUSCAN and COPM questionnaires showed a 16.67% reduction in the difficulty of performing ADLs, a 37.5% reduction in stiffness and a 60.98% in pain, in addition to a 7.94% improvement in performance perception and 43.36% in satisfaction performing activities.
Conclusion: The data obtained so far suggest that the use of the shaping method in a treatment protocol focused on strengthening the 1st ID has effects on pain, function, dexterity, and grip and pinch strength in individuals with rizoarthrosis.
Implications: The results of the study may contribute to future physiotherapy studies regarding the intervention protocols for the population with thumb osteoarthritis. The existing clinical trials that focus on exercise-based rehabilitation for hand function in patients with OA at the base of the thumb describe this protocol with poor-quality information. In addition, this study provides preliminary results on the importance of including strengthening of the 1st dorsal interosseous bone in the rehabilitation of patients with rizoarthrosis.
Keywords: Hand joints, Osteoarthritis, Physical therapy

Conflict of interest: The authors declare no conflict of interest.
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Ethics committee approval: The study was approved by the Ethics Committee for Research on Human Beings of the Federal University of São Carlos (CAAE: 02932818.8.0000.5504).

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FACTORS ASSOCIATED WITH THE PRESENCE OF PERSISTENT SYMPTOMS IN THE 6 MONTHS AFTER HOSPITALIZATION DUE TO COVID-19

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Background: At the peak of the pandemic, there was a great need for hospitalization of some of the infected according to the World Health Organization (WHO) about 20% of those infected require hospitalization. The hospitalized have impairment in functionality and cognitive aspects. When looking at COVID-19 survivors, there is an increasing number of patients with prolonged symptoms, a condition called Long COVID, defined as the persistence of symptoms for weeks or months after the resolution of the acute illness. The sum of these factors leads to a complex picture of the health of patients. It is extremely important to understand the recovery process of post-COVID individuals at a time when the world is dealing with the consequences left by the pandemic and many people struggle with the difficulty of returning to their daily activities and dealing with the associated financial losses.
Objectives: To identify and evaluate the factors associated with the presence or absence of persistent symptoms in the 6 months after discharge in individuals hospitalized for COVID-19.
Methods: This is a prospective cohort study of individuals who were hospitalized for COVID-19. This research is based on ethical principles, with appreciation by the Ethics Committee and with an Exceptional Free and Informed Consent Form from all participants. To assess the persistence of symptoms in the 6 months after discharge, an evaluation instrument was created based on previous articles. Pearson's chi-square test was used for the univariate association between the presence or absence of symptoms in general and the prevalence of the most frequent symptoms and possible risk factors.
Results: There was no association between the presence of persistent symptoms in general and possible risk factors. Analyzing the association between the presence of the most prevalent symptoms (joint pain, fatigue, dyspnea and myalgia) and possible risk factors (gender, severity, ICU stay, age$\geq$60 years and BMI), some significant associations were found. Joint pain and gender, where more than half of those who reported this symptom were women (57.1%; p=0.03). The age of individuals hospitalized with COVID-19 ($\geq$60 years) was statistically associated with the presence of Myalgia (p =0.003). Obesity was associated with the presence of the symptom fatigue (BMI$\geq$30; p=0.02). No association was found between severity and ICU stay with the analyzed symptoms.
Conclusion: As for risk factors, association analyzes indicated that: joint pain was more significant in females, myalgia was more pronounced in elderly individuals, and fatigue was closely related to obesity.
Implications: Essential information were found about the post-hospitalization recovery process due to COVID-19, demonstrating important particularities of each group, which contributes to offering specific health care to the demands of the region.
Keywords: COVID-19, Hospitalization, Symptoms

Conflict of interest: The authors declare no conflict of interest.
Acknowledgment: Not applicable.
Ethics committee approval: The Ethics Committee for Research with Human Beings (CEPSH-UFSC) approved the research under the Certificate of Presentation of Ethical Appreciation (CAAE) 33485120.4.0000.0121

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EFFECT OF BODY LATERALIZATION ON PULMONARY AERATION AND REGIONAL VENTILATION DISTRIBUTION IN HEALTHY INDIVIDUALS

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Background: Therapeutic body positioning has often been used in the hospital to improve oxygenation. Among the different positions, lateralization therapy is suggested to improve local pulmonary function by positioning the region of interest in the chest upwards to reduce the effect of gravity. However, there is still a gap in describing the physiological effects of lateralization between gravity-dependent and gravity-independent lung regions.