in the last month (VAS), subjective function (AKPS), quality of life (SF-36), and maximum isometric strength of knee extensors and flexors (isokinetic dynamometer) at 60° of knee flexion. A multivariate analysis of covariance (ANCOVA) was used to compare the groups, controlling for the influence of sex on the dependent variables.
Results: The traumatic PFP group had worse pain levels (95%CI=.65; 18.92) and lower levels of subjective function (95%CI=-12.01; -4.17) compared to the insidious PFP group. The groups with traumatic and insidious PFP had lower subjective function compared to the asymptomatic groups with (95%CI=-27.65; -19.62 | -19.84; -11.23) and without trauma (95%CI=-26. 37; -15.52 | -18.49; -7.21), respectively. The traumatic PFP group had lower knee extensor strength compared to the asymptomatic group with trauma (95%CI=-67.26; -3.02) and without trauma (95%CI=-52.76; -3.59) in the knee, while there was a trend towards the insidious PFP group (95%CI=-51.25; .67). There were no differences between groups for duration of symptoms, quality of life, and isometric knee flexor strength.
Conclusion: Individuals with traumatic PFP have a worse perception of their clinical condition (e.g., worse level of pain and subjective function) compared to individuals with insidious PFP, and lower strength of the knee extensors when compared to asymptomatic individuals with and without a history of trauma to the knee. In general, these findings may indicate a cumulative effect of knee trauma and PFP, which could affect the individual's perception of their condition.
Implications: It is possible that individuals with traumatic PFP could benefit from specialized education interventions regarding the perception of their condition, whereas there does not seem to be necessary to give greater emphasis to knee strengthening for this subgroup.
Keywords: Anterior knee pain, Traumatic injury, Weakness

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ISOKINETIC EVALUATION OF MUSCULAR STRENGTH AFTER DIFFERENT ISCHEMIC PRECONDITIONING PRESSURES: A PLACEBO-CONTROLLED RANDOMIZED CLINICAL TRIAL

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Background: Ischemic preconditioning (IPC) is characterized as a procedure consisting of intermittent applications of cycles of non-lethal and short-duration vascular occlusion in a target limb, followed by reperfusion through inflation and deflation of a pressure cuff. Because it is a method of easy administration, usability, non-invasive, and low cost, it currently presents as an attractive ergogenic resource that has been used for performance enhancement. Despite its notoriety in the literature in recent years, there are gaps regarding the most efficient protocol to be used to obtain significant results, especially for increasing muscular strength.
Objectives: to compare the effect of different IPC occlusion pressures on muscular strength through maximum voluntary isometric contraction (MVIC).
Methods: eighty healthy men (22.10±2.86 years) were randomly divided into four groups: IPC using total occlusion pressure (TOP) [IPC-TOP], IPC with 40% more than TOP (IPC-40%), placebo (10 mmHg), and control. The IPC protocol used consisted of four cycles of ischemia and reperfusion of five minutes each, totaling 40 minutes, while the placebo underwent an intervention like IPC but with four cycles of five minutes of placebo occlusion (10mmHg) alternated with four cycles of five minutes of reperfusion (0 mmHg). In the control group, individuals remained at rest for 40 minutes. Initially, TOP evaluation was performed, followed by baseline evaluation of MVIC on an isokinetic dynamometer. Next, participants underwent the previously randomized intervention protocol. Finally, MVIC evaluation was performed again. Descriptive statistical methods and analysis of variance for repeated measures were used with a significance level of 5%.
Results: all analyzed groups showed a significant difference in the final evaluation compared to the baseline ($p<0.05$), where the levels of muscular strength decreased. Regarding the magnitude of the losses, it was observed that the IPC-40% group (Δ = -14.01Nm) presented the lowest reduction, which was statistically significant compared to the control, placebo, and IPC-TOP groups (Δ = -29.46Nm; -32.71Nm and -26.44Nm, respectively).
Conclusion: IPC with 40% more than the TOP was able to attenuate the reduction of muscular strength evaluated by the MVIC.
Implications: the present study brings important results providing an alternative technique that can be used in training and competition routines to minimize the loss of muscular strength.
Keywords: Vascular occlusion, Muscular strength, Functional physical performance

Conflict of interest: The authors declare no conflict of interest.
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EFFECTIVENESS OF IMPLEMENTATION STRATEGIES TO REDUCE THE PROPORTION OF LOW-COST CARE FOR LOW-BACK PAIN MANAGEMENT: A SYSTEMATIC REVIEW WITH META-ANALYSIS

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Background: Low back pain (LBP) is the most common occupational disorder in North America. In the period from 2012 to 2016, indirect costs were US$2.2 billion for LBP in Brazil, accounting for approximately 67% of medical expenses. Previously published studies lacked major interventions, requiring further research to improve the