Informed consent form

Official Title：The effect of blood flow restriction training on chronic ankle instability symptoms in sports dance athletes

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Dear classmates

After passing five tests including Balance Test - Single Leg Stance, Trendelenburg Test, Balance Test - Dynamic Balance Test, Anterior Drawer Test, and Y-Balance Test, two or more tests met the positive test, indicating chronic ankle instability. We have determined that you meet the inclusion criteria for the trial. We invite you to participate in this pilot study, This is an applied study on auxiliary soft tissue release for the treatment of patellofemoral joint pain. This research plan has been approved by the Medical Ethics Committee of Wuhan Sports University. Approval acceptance number. two million twenty-three thousand one hundred and two.

1. The purpose of this study

Through experimental observation of exercise intervention (blood flow restriction training combined with low load ankle muscle strength training and balance training) combined with instrument tool therapy (Instrument Soft Tissue Release Technique, IASTM), the intervention effect on ankle function, strength, and joint range of motion of sports dance athletes with ankle instability was observed.

2. Inclusion or exclusion criteria for research

Select students majoring in sports dance who have chronic ankle instability and undergo five tests, including balance test, single leg standing, Trendelenburg test, balance test, dynamic balance test, Anterior Drawer test, and Y-Balance test. If two or more tests meet the positive test, it is determined that chronic ankle instability is present, Can be included in the experimental subjects. This experiment has been approved by the Ethics Review Committee of the Medical College of Wuhan Sport University. The specific inclusion and exclusion criteria for subjects are shown in Table 1

Table 1 Inclusion and Exclusion Criteria

Standard	Inclusion Criteria	Exclusion Criteria
Age	118-35 years old	under 18 years old or above 35 years o
Course Of Disease	Suffering from chronic ankle instability symptoms that last for at least 3 months	Acute ankle injury or no joint injury

CAIT score	The CAIT score is 24 points or less.	CAIT score above 24 points
Functional screening	Two or more tests tested positive for ankle joint function screening before the experiment	Failed ankle function screening
Structural inspection	No structural joint lesions or congenital ankle deformities,	Structural lesions or congenital ankle deformities present in the ankle joint
Medical History	Have not undergone ankle surgery or have external injuries	Have undergone ankle surgery or have obvious injuries or wounds
Health Condition	No serious heart, lung, nervous system or other systemic diseases	Serious heart, lung, nervous system or other systemic diseases
Agree to participate in research	Limited athletic ability, unable to complete research tasks	Disagree to participate in the study, or inability to understand and comply with the research protocol

3.Research method and process

Methods; 30-45 subjects with ankle instability, restriction or discomfort were selected as observation subjects and randomly divided into blood flow restriction training of the ankle joint combined with IASTM group (n=10-15), blood flow restriction training of the ankle joint alone (n=10-15), and traditional ankle strength training (n=10-15). The intervention was conducted once a week for a total of 4-6 weeks. Cumberland ankle instability assessment, FAAM ankle function assessment score, and ankle range of motion measurements were performed for the three groups at three time points: pre-intervention, post-intervention for the first time, and post-intervention for 4 weeks/6 weeks, respectively. And the ankle strength test was only compared and analyzed at two time points before and after the intervention.

Process: This present study was divided into 3 phases: pre-intervention phase, after the first intervention, and post-intervention phase. In the pre-intervention phase, the researcher will conduct the initial assessment and data statistics of the subjects, including the Cumberland ankle

instability assessment, FAAM ankle function assessment score, and ankle range of motion measurement. During the intervention phase, subjects in each group will be given a 6-week exercise intervention with a training frequency of 2 sessions/week of 20-30 minutes each. During the BFRT exercise, subjects will have a cuff wrapped around the proximal 1/3 of the upper extremity to achieve the effect of improving muscle strength and endurance by restricting blood flow, and complete the corresponding ankle training maneuvers (stabilization training, periarticular ankle muscle group training) in this condition

4. Potential benefits of the study

The experimental exercise intervention may improve the subjects' ankle joint stability and increase their ankle strength and range of motion.

5.Risks of the study

The BFRT intervention may cause muscle fatigue and thus exacerbate pain, but the intensity of the exercise is controllable and can be adjusted according to the actual situation

Signature of the subject; Date

Signature of the person in charge of the trial; date