TACSM Abstract

Tribulus Terrestris: A Study of its Effects on Strength, Body Composition, and Cardiovascular Health

WILLIAM KAING, MIKE CEDENO, and JENNIFER BLEVINS-McNAUGHTON

Department of Kinesiology; Tarleton State University; Stephenville, TX

Category: Professional-in-Training

ABSTRACT

The study of ergogenic aids and their influence results in many uncertainties that have yet to be answered or explained. There is speculation about the effectiveness of Tribulus terrestris as an ergogenic aid. The use of Tribulus terrestris has been reported to build strength and power by increasing testosterone, according to previous studies performed on elite athletes. Little research has been completed to monitor the effects that it can have on cholesterol and blood pressure. Therefore, the purpose of this study was to evaluate the effects of Tribulus terrestris on its supposed ergogenic effect on muscular strength in a sedentary population, while also monitoring the changes that may have occurred in blood pressure and cholesterol responses. This study used 18 males aged 18-24 and trained them for eight weeks. The males were randomly divided into two categories for double blind testing; experimental versus placebo in all three variables. Each group either ingested a 650mg Tribulus pill or a wheat grass equivalent pill with no change in diet. The first variable tested, strength, was performed by having the participants perform a 10-rep max strength test. The second variable, body fat measurements, were performed using Lange calipers and calculating a 7-site skinfold. The last variable, cholesterol, was performed by a finger prick blood test and analyzing the blood using the Cholestech LDX machine. The training protocol used for strength measurements were based on four strength variables including the Smith machine bench press, Smith machine squat, Hammer Strength lat pulldown, and Hammer Strength seated bicep curl with a ten percent progressive overload rate each week. Baseline body composition, cardiovascular health including cholesterol, and strength were not significantly different. Although changes did exist such as weight loss and increase in strength, no significant differences existed after 8 weeks between groups for body composition or overall strength. There was however, a significant difference in overall cholesterol ($F = 10.24$; $P = .006$). Individual variables of cholesterol such as LDL, HDL, and triglycerides were not significantly different between groups. The results indicated no significant interaction due to Tribulus terrestris use for all measurements in a sedentary population while under an 8-week resistance training program. Suggestions for future studies should focus on long term intervention such as a twelve to fifteen week study.