

The Benefits of Isometric Hand Grip Devices



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Introduction

Hypertension has long been associated with cardiovascular disease and one of the leading causes of health-related mortality. According to the World Health Organization, it is estimated that 17.7 million people died from CVDs in 2015, representing 31% of all global deaths. Of these deaths, approximately 7.4 million were due to coronary heart disease, and 6.7 million were due to stroke [1]. Luckily, numerous studies showed that treatment with hypertension can, among other benefits, reduce the risk of cardiovascular disease [2]. In the past, hypertension patients were refrained from resistance training, which was considered to cause vascular hypertrophy and thus elevating resting arterial pressure. However, studies in the last few decades showed that resistance training such as isometric handgrip exercise can significantly reduce arterial pressure [3-5].

Measuring Instrument



Figure 1: Zona plus.

For instance, one of the most popular isometric hand grip devices is called the Zona Plus (Figure 1). This electronic device first determines a subject's optimal grip strength needed to successfully lower his/her blood pressure. Then the subject squeezes the device based on the instruction. The manufacturer claims that the Zona Plus works well (9 out of 10 people) for those who follow its Zona

Plus protocol, and further asserts that the results of over 20 clinical studies support its effectiveness in reducing 10% or more in systolic and diastolic blood pressures [6]. However, the cost of the Zona Plus is \$599. Most people will have the following question: "Will there be other alternatives if people cannot afford the Zona Plus? According to a research study, the authors compared the Zona Plus with a much cheaper (\$10) handgrip device – the "Go Fit" (Figure 2). These authors used 28 subjects and applied the same protocol to those two different devices: (a) squeeze the device with the right hand and hold it for two minutes, (b) rest for one minute, (c) squeeze the device with the left hand and hold it for two minutes, (d) rest for one minute, and (e) repeat the first three steps once more. Over a 6-week period, the authors concluded that both handgrip devices were effective in lowering the systolic and diastolic blood pressures of the subjects [7].



Figure 2: Go fit.

Conclusion

Based on this study, it seems that isometric hand grip devices are effective in lowering blood pressures, and the cost is not a constraint factor in achieving this health benefit. For this reason, it

is suggested that health-fitness clubs should include such handgrip devices in their training programs for their members.

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