

## Guillermou

In this study, the dose-effect relationship between KAATSU strength training and muscle function performance and the underlying physiological mechanism are analyzed. KAATSU resistance training can strengthen muscle strength, improve muscle endurance, and promote neuromuscular adaptation. High occlusion pressure compression intervention within the effective compression range may better improve muscle strength performance, while medium occlusion pressure compression intervention is more conducive to improving muscle endurance performance, and compression Continuous compression is better than intermittent compression in promoting neuromuscular adaptation.

KAATSU resistance training promotes muscle strength by inducing increased metabolic stress, promoting the secretion of hormones related to muscle growth, promoting neuromuscular adaptation, and regulating the expression of microRNAs and molecules related to skeletal muscle formation. Muscular endurance can be promoted through a number of physiological mechanisms, such as upregulation of endothelial nitric oxide synthase expression, hypoxia-inducible factor 1, vascular endothelial growth factor at the gene or protein level, promoting skeletal muscle capillary angiogenesis, activation of the phosphorylation of p38MAPK, AMPK signaling pathway, and its downstream peroxisome proliferator-activated receptor coactivator 1, and promotes mitochondrial production and metabolic enzyme activity aerobics. Increased recruitment of type II muscle fibers eliciting a higher threshold may promote neuromuscular adaptation.

[www.cjter.com/.../abstract18645.shtml](http://www.cjter.com/.../abstract18645.shtml) (2022)

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In this systematic review and meta-analysis, BFR KAATSU training compared to exercise under normal blood flow conditions could positively influence both aerobic capacity and sports performance.

Differences in younger and older subjects were discussed. KAATSU proved to be a promising and beneficial workout for improvements in aerobic capacity (measured in  $VO_2$ ) and performance.

[link.springer.com/.../s11332-022-00944-x](https://link.springer.com/.../s11332-022-00944-x) (2022) This study aimed to compare the long-term effect of passive recovery (PR) and active recovery (AR) during low-intensity resistance training with BFR on hormone levels and performance in young men.

The findings indicated that by increasing muscle activation and a higher metabolic load, RA during BFR resistance training could cause more marked improvements in serum GH, muscle strength, and endurance. [bmcsportsscimedrehabil.biomedcentral.com/articles/10.1186/s13102-022-0..](https://bmcsportsscimedrehabil.biomedcentral.com/articles/10.1186/s13102-022-0..) (2022)

Peripheral arterial disease (PAD) is a condition with increasing incidence worldwide, affecting more than 20% of Europeans and North Americans in the age group > 55 years, and in the group > 70 years it affects up to to 60% of the population.

Among many forms of treatment, endovascular treatment remains the most common treatment method, however, the most non-invasive, but still effective, is rehabilitation through physical training. Recently, innovative solutions have been introduced regarding this form of treatment by combining anaerobic interval exercises with KAATSU venous blood flow restriction and cooling. KAATSU successfully stimulates the acute angiogenic response and influences certain endothelial functions.

[academic.oup.com/eurheartj/article/43/Supplement\\_1/ehab849.120/6521169..](https://academic.oup.com/eurheartj/article/43/Supplement_1/ehab849.120/6521169..) (2022)

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This study examined respiratory and circulatory responses during low-intensity resistance exercise using a KAATSU device, which results in moderate blood flow restriction, in both healthy male adults and male patients with cardiovascular disease. The results suggest that low-intensity resistance exercise with a KAATSU device may be a safe and useful training method for cardiac rehabilitation.

[www.jstage.jst.go.jp/article/dkmj/advpub/0/advpub\\_2022-032/\\_article/-c..](http://www.jstage.jst.go.jp/article/dkmj/advpub/0/advpub_2022-032/_article/-c..) (2022) KAATSU Low Intensity Blood Flow Restriction Therapy is a novel physical therapy (PT) approach to rehabilitate muscle injuries in post-operative knee patients. Low-intensity exercise is used in strengthening blood flow restriction to achieve strength improvements similar to those seen in high-intensity training. BFR.

[medical.advancedresearchpublications.com/index.php/CHCMJ/article/view/..](http://medical.advancedresearchpublications.com/index.php/CHCMJ/article/view/) (2022) Inclusion of KAATSU simultaneously with resistance exercise increases bone and muscle mass primarily through various hormonal pathways while improving cardiovascular function without any adverse events.

Improvements in mobility and gait are indicators of a higher health-related quality of life, minimizing disability in older adults. Protocols with blood flow restriction using occlusion pressures equal to 70% and 130% of systolic blood pressure were more effective in inducing peak acute parathyroid hormone (PTH) responses and promoting a metabolic condition favorable to bone anabolism. .

[link.springer.com/.../s13670-020-00323-9](http://link.springer.com/.../s13670-020-00323-9) (2020) [www.sciencedirect.com/.../S1728869X22000168](http://www.sciencedirect.com/.../S1728869X22000168) (2022)

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Most older adults cannot perform higher intensity exercise. An alternative exercise training program combining low-intensity resistance exercise with KAATSU blood flow restriction may have similar acute and chronic benefits for skeletal muscles in older adults.

[eurapa.biomedcentral.com/.../s11556-022-00294-0](https://eurapa.biomedcentral.com/.../s11556-022-00294-0) (2022) This review reports on the potential benefits of the use of blood flow restriction (BFR) when combined with walking, resistance training and electrical stimulation in people with COPD and possible safety concerns. This treatment appears to be safe and has been used by many different populations, including people with ischemic heart disease. For COPD patients who are contraindicated to exercise, a possible treatment may be to combine neuromuscular electrical stimulation with BFR.

BFR has potential as a novel, low-intensity, but effective exercise training modality for people with COPD. [trainology.org/.../v3-1%2001%20Thiebaud%20et%20al.pdf](https://trainology.org/.../v3-1%2001%20Thiebaud%20et%20al.pdf) (2014)

[www.ncbi.nlm.nih.gov/.../PMC8743940](https://www.ncbi.nlm.nih.gov/.../PMC8743940) (2021) L-carnitine administration may be an important contributor to the mechanisms that reduce KAATSU training-induced neuromuscular fatigue. and its neuroprotective effects mediated by increasing brain acetylcholine levels. Endogenously synthesised, L-carnitine can alleviate carnosine loss in muscle tissue by attenuating neuromuscular fatigue and increasing ATP. L-carnitine improves respiratory muscle strength, an important factor in respiratory functions, in patients with chronic obstructive pulmonary disease. L-carnitine is naturally found in heart and skeletal muscle tissues (containing approximately 95% of the total content .

[www.sciencedirect.com/.../S0753332220300895](https://www.sciencedirect.com/.../S0753332220300895) (2020)

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Combine blood flow restriction exercise with other exercise modalities, fasting, caloric restriction, ketogenic diet, quercetin, apigenin, malic acid, tryptophan, axtaxanthin, fermented foods, niacin, polyphenols such as resveratrol, epigallocatechin-3- gallate (EGCG), curcumin, milk, and pterostilbene and in general the Nrf2 Diet, increase NAD. Chronic inflammation, overeating, insulin resistance or excess blood glucose, disrupted circadian rhythm, alcohol are factors that decrease NAD.

[f1000researchdata.s3.amazonaws.com/manuscripts/13118/9bc67958-db1a-44f..](https://f1000researchdata.s3.amazonaws.com/manuscripts/13118/9bc67958-db1a-44f..) . (2018)

[www.selfhacked.com/blog/about-nrf2-and-natural-ways-to-increase-it/](https://www.selfhacked.com/blog/about-nrf2-and-natural-ways-to-increase-it/) (2022)

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**juststeve**

Gui, on a personal note what a timely article as life often dictates what our to do list will or won't be. After a long period of being locked out of routine beneficial practices, and in the last few weeks having an old injury revisited, it would have never occurred to me to just use KAATSU without resistance training. (Full Disclosure, while having toyed with it a bit without weights to get a feel for it, the mind has been stuck in the old Full Monty Routine of before.) This is stellar for the multiple offenses to the body brought on by life.

While not mentioned in the article, the gut is wondering if the increase in blood pressure people struggle with may be positively affected with this Program? Increasing blood flow to the legs along with improved elasticity of the vascular system one would anticipate improvement so as not to need BP med's or at the very least reduce them. All and all, weight resistance carefully done goes a long way to protecting against injury or recovering from injury. And it all seems obvious now, in the background, under the radar, our gold star athletes have been listening very carefully to Doc, and also using KAATSU.

It is very likely why we have had incredible examples of sports stars doing unheard of things and reaching into their Forties and still giving outstanding performances. It wasn't all that long ago when most were done in a professional career by their late 20's and once they hit 30 most considered themselves over the hill. By the late 80's early 90's more than few sources were exclaiming 50 is the new 30, for regular people. Perhaps we will see 70 as the new 30?

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## Guillermou

Thanks Just, you always find the best strategies to improve your health. In my comment it is also recommended in the COPD disease that you have very well controlled. The purpose of this study was to survey physicians regarding the use of BFRs in people with neurological conditions. One hundred and twelve physiotherapists and other healthcare professionals who reported using BFR in the past 5 years completed an anonymous online survey. Eighty-nine percent of those surveyed thought BFR was safe in people with neurological conditions.

Clinical use of BFR in people with neurological conditions may be commonplace. Although this study had a relatively small sample size and collected data retrospectively, the results support the potential clinical feasibility and safety of BFR use in patients with neurological conditions and suggest that further research is needed. [www.jstage.jst.go.jp/article/jpts/34/4/34\\_2021-188/\\_article/-char/ja/](http://www.jstage.jst.go.jp/article/jpts/34/4/34_2021-188/_article/-char/ja/) (2022).--- In this review, we summarize recent research that has studied the impact of exercise in patients with secondary sarcopenia, specifically those with a comorbid condition.

Although there is a strong argument in favor of using exercise to improve muscle mass, quality, or physical function in subjects with cancer, type 2 diabetes, kidney disease, lung disease, and many more, very few studies have reported evaluations of sarcopenia from reference. Based on the trials summarized in this review, we can propose, but not conclude, that resistance, aerobic, balance, or even walking training may be helpful in subjects with secondary sarcopenia. [www.mdpi.com/.../51](http://www.mdpi.com/.../51) (2022)

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**DOING KAATSU WITH CANCER** Former Japanese golf professional Teruo Sugihara was one of the first professional golfers to transform his career later in life by incorporating the KAATSU Cycle and KAATSU Constant modes into his training and recovery from prostate cancer in 1997. In 2006, at age 68, he became the oldest player to make the cut in a top-tier Japanese tour event. His final Japan Golf Tour appearance came at the 2010 Mizuno Open in Nishonomiya, Japan, the same year that he co-authored a book called KAATSU Golf with KAATSU inventor Dr. Yoshiaki Sato. There are many valuable lessons in his innovative use of KAATSU during his cancer recovery that he has shared with golfers of any age, but especially with older people.

Sugihara-san used KAATSU to improve his overall health and his golf game specifically. His book written in Japanese, called KAATSU Golf, describes how he used KAATSU to: 1) strengthen his upper body 2) improve his swing 3) enhance his mobility during his swing 4) increase his grip strength 5) improve his leg strength with squats and practice swings 6) enhance his overall strength and club head speed [www.kaatsublog.com/.../doing-kaatsu-with-cancer.html](http://www.kaatsublog.com/.../doing-kaatsu-with-cancer.html) (2019)

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## Guillermou

The Kaatsu Training was applied to patients with metabolic syndrome to evaluate the effect of Kaatsu in patients with hypertension, diabetes mellitus, dyslipidemia and obesity with metabolic syndrome. A series of 3 Kaatsu exercises was performed for 6-12 min, once or twice a week with a Borg scale at level 13. Kaatsu utility was assessed 3-4 months later. Kaatsu training improves physical conditions including hypertension, diabetes mellitus, dyslipidemia, and obesity with metabolic syndrome. Kaatsu may qualify as a valuable exercise alternative for people with type 2 diabetes

[www.jstage.jst.go.jp/article/ijktr/7/1/7\\_1\\_7/\\_article/-char/ja/](http://www.jstage.jst.go.jp/article/ijktr/7/1/7_1_7/_article/-char/ja/) (2016).-----

[www.sciencedirect.com/.../S1043276020302344](http://www.sciencedirect.com/.../S1043276020302344) (2021).----- In this systematic review,, KAATSU can be used as a safe and effective exercise prescription for personalized fat/weight loss.

BFRT significantly reduces BMI by reducing body weight, body fat percentage, and waist circumference and has the effect of improving body composition. It also significantly reduced total cholesterol and low-density lipoprotein cholesterol level and tends to lower TG and increase HDL-C in overweight/obese adults, which could reduce the incidence of cardiovascular disease.

[www.frontiersin.org/articles/10.3389/fphys.2022.1039591/full?utm\\_sourc..](http://www.frontiersin.org/articles/10.3389/fphys.2022.1039591/full?utm_sourc..) (2022)

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## Almond

Guillermo and all... As you point out, there is no exercise, medication or therapy that is one-size-fits-all and appropriate for everyone. I am wondering about the vaccinated individuals who might be prone to cardiovascular problems. Not just older folks in poor health. Could this be harmful for them?

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## whiteowl1

Huge help in enlarging blood vessels for IV oxidative therapies...Also, Steve Munatones, called me back so kindly on a weekend from his home to walk me through using my Kaatsu. I've been really helped by BFR.

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## Guillermou

Aging is a risk factor for cardiovascular diseases and more than 90% of cardiovascular diseases occur in adults older than 55 years. According to the cardiovascular disease report, the number of deaths from cardiovascular diseases accounts for 40% of the disease deaths of residents, ranking first in China. Physical training has a positive effect on cardiovascular health in older adults. The combination of low-load training with blood flow restriction (LL-BFR) has recently been shown to trigger a series of hemodynamic responses and promote vascular function in various populations .

This systematic review and meta-analysis reveals that LL-BFR training will elicit an acute hemodynamic response in older adults, which can return to normal levels 30 min after training, and a significant decrease in systolic blood pressure. In addition, long-term LL-BFR training resulted in significant improvements in flow-mediated vasodilation, ankle cardiovascular index, and ankle-brachial index (ABI). More high-quality studies are needed to confirm issues such as BFR pressure. [www.mdpi.com/.../6750](http://www.mdpi.com/.../6750) (2022)

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## Pete.Smith

Thanks to KAATSU's cycling mode Dr. Mercola became so strong, that he can now easily lift 600 pounds, or could lift with ease 3 persons together at the same time, like Dr. Fauci, Joe Biden and Zelensk, push them high above his head, and throw them with ease 5 feet away from him, like against a wall, or just drop them on the hard floor. \* \* \* Now I have seen several studies that fish (oil) improve protein in muscles giving much more strength, but only in combination with exercises.

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## Guillermou

Yes, PETE. Also. Carnosine is a dipeptide composed of beta-alanine and L-histidine and is present in skeletal muscle. Normally the limiting amino acid is beta-alanine. Oral beta-alanine (BA) supplementation can induce carnosine overload and this places it as a limiting factor in carnosine synthesis. However, the effect of L-histidine (HIS) supplementation on carnosine levels has not been established. In a study whose objective was to assess: 1) whether supplementation with HIS can cause an increase in carnosine; and 2) whether the combination of BA + HIS supplementation is more efficient than BA supplementation alone. Men and women participated and were divided into three groups based on the supplementation received: BA (6g/day), HIS (3.5g/day) and BA+HIS.

Before (D0), after 12 days (D12) and 23 days (D23) of supplementation, the carnosine content in soleus and gastrocnemius was assessed by H-MRS and blood samples. Muscle samples were obtained by biopsy on D0 and D23 of the vastus lateralis. The results showed that both BA and BA+HIS increased carnosine concentrations in the studied muscles, with no differences between conditions. In contrast, carnosine levels in the HIS group were not altered. The authors confirmed that it is beta-alanine, and not histidine, that is the limiting factor in carnosine synthesis in skeletal muscle.

Anserine (-alanyl- N -methyl-histidine) and ophidine/balenin (-alanyl- N -methyl-histidine) are two methylated analogues of carnosine, collectively referred to as histidine-containing dipeptides (HCDs). HCDs are present primarily in mammalian skeletal muscle and neuronal tissue and, to a lesser extent, in the heart, liver, and kidney. Oral -alanine supplementation is a popular ergogenic strategy in sports because it can increase intracellular carnosine concentration and subsequently improve high-intensity exercise performance.

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The concentration of carnosine and anserine in skeletal and cardiac muscle is dependent on the circulating availability of -alanine, which in turn is controlled by -alanine degradation in the liver and kidneys. The present study highlights the importance of -alanine transamination in tissue HCD homeostasis and thus contributes to a better understanding of mammalian -alanine and carnosine metabolism. [www.ncbi.nlm.nih.gov/.../PMC5009790](http://www.ncbi.nlm.nih.gov/.../PMC5009790) (2016) Studies have shown that -alanine has an important ergogenic role in sports performance. Weeks of beta-alanine supplementation significantly increase muscle carnosine concentrations.

[ijn.zotarellifilhoscientificworks.com/index.php/ijn/article/view/227](http://ijn.zotarellifilhoscientificworks.com/index.php/ijn/article/view/227) (2022) A good dose of essential amino acids combined with beta-alanine to promote the production of carnosine, which neutralizes acid and helps restore proper pH levels in the muscle, thus increasing endurance and delaying the onset of muscle fatigue. In the human body, carnosine concentrations are highest in muscle tissue. However, brain tissue also has fairly high concentrations. The brain may particularly need the antiglycosylation and antioxidant effects that carnosine provides.

Glycosylation, oxidative stress, inflammation secondary to oxidative stress, and protein crosslinking methylglyoxal, a product of uncontrolled glucose oxidation, contribute to the progression of Alzheimer's disease [www.sciencedirect.com/.../S030100821830145X](http://www.sciencedirect.com/.../S030100821830145X) (2019) In high intensity efforts, and in continuous intermittent exercise, the beneficial evidence of Beta Alanine supplementation is strong. The sports modalities that have strong evidence of the ergogenic effects of -alanine supplementation are: 4 km cycling race, 2,000 m rowing race, 100 and 200 m swimming race, combat modalities and water polo. [cdn.journals.lww.com/nsca-jscr/Abstract/2019/01000/Ergogenic\\_Effects\\_o..](http://cdn.journals.lww.com/nsca-jscr/Abstract/2019/01000/Ergogenic_Effects_o..) (2019)

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## Guillermou

In vigorous exercise above VO<sub>2</sub> max, carnitine supplementation stimulates the constant oxidation of free fatty acids. Another factor to take into account is that the concentration of carnitine in the muscle can vary depending on the intensity of the physical exercise. Thus, in low-intensity aerobic exercise, the concentration of carnitine does not change significantly, but during intense physical exercise, there is a decrease in muscle carnitine and its concentration does not normalize until after 1 hour of exercise. finish the exercise. The carnitine content is suggested to improve blood flow and oxygen delivery to muscle tissue through improved endothelial function.

Studies in older adults further showed that carnitine intake can lead to an increase in muscle mass and a reduction in physical and mental fatigue. Based on current studies, a role for carnitine in preventing age-associated muscle protein degradation and regulating mitochondrial homeostasis is suggested. [www.ncbi.nlm.nih.gov/.../PMC5872767](http://www.ncbi.nlm.nih.gov/.../PMC5872767) (2018) "As an energy consumer, the brain is the most expensive organ we take with us," says Dr. Marcus Raichle, a distinguished professor of medicine at Washington University School of Medicine in St.

Louis. While the brain makes up just 2% of a person's total body weight, it accounts for 20% of the body's energy use, according to Raichle's research. Muscle consumes many more calories than fat tissue just by being alive, even if it's not moving. The heart, brain, kidneys, and liver are also heavy consumers of energy even at rest. The intestinal tract also spends a high amount of calories but only when it deals with digestion. [www.ncbi.nlm.nih.gov/.../PMC124895](http://www.ncbi.nlm.nih.gov/.../PMC124895)

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## epi-cure

Pete, something must have gotten lost in the translation. Those were 600 pound leg presses so the overhead part of the competition is best left to someone else. I visualize doc doing a sort of handstand next to the target, then launching them with a mule kick either lined up together or one at a time.

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## **Pete.Smith**

Thanks Gui and Epi-cure. All weightlifters use their legs, even to lift weight above their heads, but a mule kick is also very effective weapon of self-defense. Who else deserves a dr Mercola mule-kick? Surely, Bill Gates, Klaus Schwab, dr. Harari ....

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## **juststeve**

Pete, epi-cure, a mule kick sounds just about right as for many all those listed have strong qualifications to Identify as Jack Asses. Just say'n

Posted On 03/20/2023

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## Almond

I just returned from a trip to a big city and am still suffering PTSD. I have not decided whether the majority of the people are so ignorant, delusional or just so preoccupied with convenience, immediate creature comforts and entertaining distractions that they have lost touch with reality. People tell me I am old-fashioned and absolutely no one lives like we do anymore—or would want to. They tell me that banks are stable and there is plenty of food in the supermarkets—that they are unconcerned. They tell me I am silly to worry. They tell me their water is good because govt tests it (but not for industrial chemical contaminants) and adds fluoride and chlorine to make sure it is safe as if that is a good thing.

(Strange that govt issued a warning not to eat contaminated fish from those waters?) They do not believe in eating food the way God produced it. Their conversations focus on their medical problems, hospital bills, aches&pains. Yet, they consume more sugar/corn syrup and crappy oils than any kind of nutritious food item. (listed as a primary ingredient) I have never even eaten or seen such terrible food in my entire life! The 3 major food groups in this part of the country are jello, cool whip and velveeta cheese. I ate so almost nothing and still gained weight.

They never walk anywhere or go outside because the sun might cause cancer. Fluorescent lighting everywhere. So much noise that a person cannot hear themselves think. They will not spend money on fresh food, but, instead, spend their money on new electronic toys or fashions “because it shows”. I am surprised at how much they struggle getting labor-saving devices to work and how often they break down (planned obsolescence). They do not own their possessions, but their possessions own them. They have so many items that never get used, but are just for show, so people will know they “could” use them. -  
Continued-

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## Almond

-Continued- They delight in telling me how wealthy they are—but in a condescending manner. It is some kind of status thing that I cannot relate to—part of their pecking order. Why should I care if anyone owns more than I do if my needs are met and I am content? They take delight in draping themselves in bling and hoping others will notice them. (I believe it is wiser to keep a low profile and let everyone think I am poor—esp. during times like these. Be the “gray man”.) All their entertainments are indoors and cost money (admission).

They have absolutely nothing worthwhile to do all day except to watch biased television programming and gossip about other people. Their liberal channels show surprisingly little international or financial news, either. No wonder they are clueless about what is going on in the world. Sitting under artificial light in front of a television has seriously impaired their eyesight. They take pride in not having to do any work and become very petty, entitled and demanding. -Continued-

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## Almond

-Continued- I figure I have it pretty good. They think I am poor, so pretty much leave me alone, as I would not help advance their social climbing aspirations. I wake up in the morning excited (most days, anyway) about my work or some new project. I prefer my comfortable work clothes. How horrible if I had to wear heels every day! I enjoy getting outdoors and look forward to working the gardens for spring planting. They do not want our food. Because it has natural fiber, it “gives them gas”. They do not even own clothing that would last thru one work day.

If TSHTF, they will not be able to walk far to get out of the city in their cute little plastic shoes before they get blisters, sit down on a curb and whine that govt needs to take care of them. I am surrounded by beauty, tranquility and abundance. Because I am willing to work, I know how to harvest the bounty of nature. It keeps me healthy and happy. Many times, I tell my husband I am grateful that I was not born the Queen of England. Then, I could not eat chicken drumsticks with my fingers or spit watermelon seed onto the lawn.

Posted On 03/19/2023

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## **epi-cure**

Almond what a masochistic trip that was. Relatives and/or friends? It's hard to even engage conversationally with such ignorant people.

Posted On 03/19/2023

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## **brianallen1**

Almond, you are wealthier than any of them will ever be in every way! Now you know why the events of the last 3 years were allowed to occur.

Posted On 03/19/2023

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## **DebbyW**

My sister has Raynaud's syndrome. Does anyone have an idea if these bands would help her with circulation in her hands and feet?

Posted On 03/19/2023

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## **Guillermou**

Hi Debby. KAATSU WITH INDIVIDUALS WITH RAYNAUD'S DISEASE

[www.kaatsublog.com/2022/09/kaatsu-with-individuals-with-raynauds.html](http://www.kaatsublog.com/2022/09/kaatsu-with-individuals-with-raynauds.html) [kaatsu.com](http://kaatsu.com)

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## **imaginal110**

I purchased BStrong bands because they were cheaper than KAATSU though still pricey, but see that they are not really different than the cheap mechanical bands you can pick up for 20 or \$30. Buyer's remorse! Now it becomes a question of whether I can afford to NOT buy the KAATSU (which is something like 2k here in Canada).

Posted On 03/19/2023

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## **seastars**

[kaatsu.com](https://www.kaatsu.com) with the 10% discount. can pay \$46.14 for 24 mo. in finance plan. or \$999 with tax.

Posted On 03/20/2023

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## **j.hi.808**

70, gonna try it

Posted On 03/20/2023

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## **Susort5842**

Thanks, another great video

Posted On 03/20/2023

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## **spelican2**

I urge you to check out "iron chested qigong" which I think is much like KAATSU... I learned it from Hpmer NOTtingham on youtube. He has clients who have become measureably healthy thru this... Let me know what you think!!

Posted On 03/19/2023

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## **dog7852**

After reading everyone's comments. I agree it would be a great item to have. However.. Not everyone can pass along this type of cash at any given moment .

Posted On 03/19/2023

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## **achiro32**

I am wondering if the discount code no longer exists? I just saw it in an article just released today on KAATSU. Sounds interesting.

Posted On 03/19/2023

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## **seastars**

Mercola's link at the end of the article, plus I just posted its link. With 10% discount its 999. pay off in 24 mo. at \$46.14 a month.

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## Segstar

Don't forget after you make your satisfying purchase, you still have to USE it to git the desired results..Just had my first meal Calf liver and okra there's greeeeat, just ask Tony the tiger lol ..my oh my...

Posted On 03/19/2023

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## GlenOwen

Really looking forward to your loop band exercise equipment Dr macola

Posted On 03/19/2023

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## jer8557

Caution: If worn too tightly, the bands can cause permanent indentations on the soft tissue (muscles/fat). I worn the bands at the top of my legs and now I have indentations where the bands were worn.

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## don1773

Sure KAATSU might be effective but I'll never know. Have you seen how outrageous priced the system sells for? Really? Maybe you can afford it but most seniors can't. It appears to be slightly more complicated than a blood pressure cuff but priced hundreds and hundreds more.

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## Ioripori

What about ppl who have aFib? Or high blood pressure (treated with medication)? Can they do this and expect to see improvement?

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## Guillermou

In this systematic review, components that can potentially improve with blood flow restriction exercise (BFRE) include left ventricular dysfunction, inflammatory markers, inactivity, catabolic state, skeletal and possibly respiratory muscle myopathy, dyspnea and fatigue, ANS activity, and peripheral blood flow. Although the currently available BFRE literature has demonstrated improvements in each of these components in patients with heart disease and heart failure, feasibility, acceptability, compliance, adverse effects, and symptoms during and after BFRE need to be investigated. , since very few studies have examined these important aspects comprehensively in patients with these pathologies. [www.frontiersin.org/articles/10.3389/fphys.2022.924557/full?utm\\_source..](http://www.frontiersin.org/articles/10.3389/fphys.2022.924557/full?utm_source..) (2022)

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## Guillermou

"This review aimed to evaluate the effects of mild-intensity blood flow restriction exercise in patients with cardiac diseases. Unfortunately, very few studies are available in this area, and most are of moderate quality. From these studies, current evidence suggests that BFR combined with lowload exercises can improve muscle strength, cardiovascular endurance, and functionality in patients with heart disease without requiring high-intensity training. Future studies are needed to determine appropriate indications for prescriptions in cardiovascular patients by extending the follow-up periods, enrolling larger sample sizes, and using specific BFR exercise protocols for these patients." [www.jfsf.eu/.../JFSF-22M-07-023-R1.pdf](http://www.jfsf.eu/.../JFSF-22M-07-023-R1.pdf) (2023)

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## **RainGirl2**

I was wondering the same. Or, what if one has BP on the low end?

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## **wat6452**

Where can the katsu bands be purchased?

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## **Aesculepius**

As a final point in regard to Guillermou's question. A key marker for ascertaining blood viscosity and correlative ANR imbalances is the WBC differential. By observing granulocyte-lymphocyte ratios we clinicians can track the relative strength & performance of mitochondrial and glycolytic pathways in metabolic energy production. This provides a simple portal on to the underlying imbalances which, if addressed correctly, can bring remediation to many chronic conditions. That was my main caveat for people in the context of using occlusion methods for myoxin enhancement, fast twitch muscle growth etc.

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## Guillermou

Thank you. Also. From a macro-rheological point of view, it is known that, the viscosity of blood is directly proportional to the hematocrit (concentration of red blood cells), meaning that, an increase or decrease of the RBC concentration affects blood viscosity values. Increased red blood cell hematocrit increases relative viscosity. Keep in mind that the increase is not linear; the increase in hematocrit causes a disproportionate increase in relative viscosity. Therefore, the viscosity of the blood is highly dependent on the hematocrit. With a normal hematocrit of 40%, the relative viscosity of blood is approximately 4. Patients with abnormally elevated red blood cell hematocrit (polycythemia) have much higher blood viscosities.

In fact, increasing the hematocrit from 40 to 60% (a 50% increase) increases the relative viscosity from 4 to 8 (a 100% increase). Increased viscosity increases resistance to blood flow and increases the work of the heart and impairs organ perfusion. Some patients with anemia have low hematocrits and therefore reduced blood viscosities. NORMALIZATION OF BLOOD VISCOSITY ACCORDING TO THE HEMATOCRIT AND THE SHEAR RATE [www.ncbi.nlm.nih.gov/.../PMC8954080](http://www.ncbi.nlm.nih.gov/.../PMC8954080) (2022).----- BLOOD VISCOSITY ANALYSIS - DEPENDENCE ON TEMPERATURE AND HEMATOCRIT - [formulaction.com/wp-content/uploads/2022/08/AN-Blood-Viscosity-Analysi..](http://formulaction.com/wp-content/uploads/2022/08/AN-Blood-Viscosity-Analysi..) (2022).----- VISCOSITY OF BLOOD [www.cvphysiology.com/.../H011](http://www.cvphysiology.com/.../H011)

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## grulla

Hi "gui", " From a macro-rheological point of view, it is known that, the viscosity of blood is directly proportional to the hematocrit (concentration of red blood cells), meaning that, an increase or decrease of the RBC concentration affects blood viscosity values." Thanks for bringing hematocrit (as well as hemoglobin), and blood viscosity to my attention, something as an informed lay-person, that I am still trying to fully understand. According to Vitalant, (formerly United Blood Services/UBS), it is very closely related to the quick finger prik hemoglobin test that UBS and Red Cross administer at each and every blood donation event, as explained in the included post Vitalant link.

And my Vitalant hemoglobin check last Thursday was 15.5, which I am still trying to understand, is on a different scale than the hematocrit scale. [www.vitalant.org/.../hematocrit](http://www.vitalant.org/.../hematocrit) For the past 7 years now, since age 70, I have donated blood over 50 times in order to help keep any stagnant blood freshly (re)produced by my bone marrow process, as well as keeping my blood viscosity at a normal low. And I have just recently added boron to my daily vitamin supplementation for bone health (as well as hoping it will eventually reduce my PSA prostate reading). [nutritionandhealing.com/.../blood-viscosity](http://nutritionandhealing.com/.../blood-viscosity)

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## Guillermou

Thanks Grulla, A correct intake of boron is related to a 64% lower risk of prostate cancer. Boron influences this cancer because boron inhibits the activity of protease enzymes, including PSA. Enzyme related to prostate cancer via degradation of the extracellular matrix in the prostate gland, breaking cell barriers and facilitating the spread of prostate cancer. The PSA is reduced between 86-89% with the correct intake of Boron. [www.ncbi.nlm.nih.gov/.../15010890](http://www.ncbi.nlm.nih.gov/.../15010890) (2004) Increased groundwater boron concentrations, across the state of Texas, correlate with reduced risk of prostate cancer incidence and mortality. Also, boric acid improves the anti-proliferative effectiveness of chemo-preventative agents, selenomethionine and genistein, while enhancing ionizing radiation cell kill.

[link.springer.com/.../s10552-006-0077-8](http://link.springer.com/.../s10552-006-0077-8) (2007).----- Boron is an important trace mineral because (1) it is essential for the growth and maintenance of bones; (2) greatly improves wound healing; (3) beneficially impacts the body's use of estrogens, testosterone, and vitamin D; (4) increases magnesium absorption; (5) reduces the levels of inflammatory biomarkers, such as highly sensitive C-reactive protein (hs-CRP) and tumor necrosis factor (TNF-); (6) elevates the levels of antioxidant enzymes, such as superoxide dismutase (SOD), catalase, and glutathione peroxidase; (7) protects against pesticide-induced oxidative stress and heavy metal toxicity; (8) improves brain electrical activity, cognitive performance and short-term memory for the elderly; (9) influences the formation and activity of key biomolecules, such as S-adenosyl methionine (SAM-e) and nicotinamide adenine dinucleotide (NAD +); (10) has shown preventive and therapeutic effects in various types of cancer, such as prostate, cervical and lung cancer, and multiple and non-Hodgkin's lymphoma.

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## Guillermou

Boron is directly related to calcium metabolism, without Boron, calcium is eliminated more quickly from our body without being absorbed. Boron from plasma concentrations of testosterone and 17 estradiol. Testosterone is a very important hormone for athletes and 17 estradiol is another hormone closely related to stress tolerance and lowered immune system. The boron dose must be adequate, since it is an antagonist of B12, and a supplementation with high amounts of Boron can decrease B12. A substantial number of articles showing benefits support the consideration of boron supplements of 3 mg / day for anyone who eats a diet low in fruits and vegetables or who is at risk or has osteopenia; osteoporosis; OA; or breast, prostate, or lung cancer.

[www.ncbi.nlm.nih.gov/.../PMC4712861](http://www.ncbi.nlm.nih.gov/.../PMC4712861) (2015) In boron-deprived humans, boron supplementation improved mental alertness, attention, short-term memory, and motor speed and dexterity. Ecological epidemiological studies have found that low boron intake is associated with an increased risk of prostate cancer in men and lung cancer in women. Supplementation with boron in the form of boric acid, borates, and the boron ester fructoborate in humans with conditions that elevate inflammatory stress markers (eg, C-reactive protein) improved those markers. Boron prevents oxidative DNA damage and improves antioxidant status. [www.ncbi.nlm.nih.gov/.../PMC7442337](http://www.ncbi.nlm.nih.gov/.../PMC7442337) (2020)

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## Guillermou

Boron favors the absorption of calcium, magnesium and phosphorus. It also balances hormone levels, as it promotes the proper functioning of estrogen and testosterone, among other health benefits. In his book Update on human health effects of boron (2014, Journal of Trace Elements in Medicine and Biology), researcher FH Nielsen of the United States Department of Agriculture states that boron "beneficially affects bone growth and central nervous system function, alleviates arthritic symptoms, facilitates hormonal action, and is associated with reduced risk for some cancers." Boron produces the digestive enzymes necessary to assimilate calcium, magnesium and phosphorus, in addition to stimulating the production and use of vitamin D, hence its protective role in the bone system, which is why it is especially indicated for the prevention and treatment of ailments such as osteoarthritis or osteoporosis.

Regarding its hormonal role, boron promotes the segregation of estrogens, related to menstrual symptoms, fertility in women and bone density. A hormone whose production is greatly affected at menopause, so maintaining good levels of boron intake may be important in this phase of the female life cycle. In addition, foods with a good intake of boron stimulate testosterone production, which is why it is highly recommended by physiotherapists to increase muscle mass and promote recovery after physical exertion.

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## Guillermou

Boron is also related to brain function, which slows down and may even cause learning problems or poor cognitive development when there is a deficiency of this mineral. Finally, this mineral contributes to the protection of cell membranes and stimulates the immune system. Studies in middle-aged men and women have shown that boron is capable of inducing an increase in serum 25(OH) vitamin D levels (similar to estrogen therapy in postmenopausal women). In addition, several authors have observed that boron introduced into the diet can cause an increase in plasma concentrations of 17-estradiol and/or testosterone.

the function of ribose-containing molecules, such as S-adenosylmethionine, diadenosine phosphate, NAD + and its metabolite ADP cyclic ribose, could be modified by boron; these biochemical entities are involved, in addition to cardiovascular health and neurological functions, also in the formation and maintenance of bone, to which boron seems to have beneficial effects

**PIVOTAL ROLE OF BORON SUPPLEMENTATION ON BONE HEALTH: A NARRATIVE REVIEW**

[www.sciencedirect.com/.../S0946672X20301425](http://www.sciencedirect.com/.../S0946672X20301425)

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## Guillermou

In addition to the great benefits of donating blood, these supplements can help: Key supplements that can chelate iron from the body include: Turmeric quercetin resveratrol Green Tea

[hemochromatosishelp.com/hemochromatosis-supplements](https://hemochromatosishelp.com/hemochromatosis-supplements) Milk thistle has a potentially important role to play in hemochromatosis. It is one of the best natural remedies to help the damage caused by excess iron in the blood. Research has shown that milk thistle can lower ferritin, as well as benefit liver function and other iron overload concerns. The powerful polyphenols found in milk thistle, including silymarin and silybin, have been shown to benefit liver function and improve health.

In particular, silybin has been investigated in clinical trials in people with hemochromatosis. One study showed a "significant decrease in ferritin" in a study that looked at people with chronic hepatitis. Milk thistle may help lower ferritin, as shown in this study in patients with chronic hepatitis. There was a significant decrease in serum ferritin from baseline to end of treatment...78% of subjects had a decrease in the serum ferritin level. [hemochromatosishelp.com/milk-thistle-benefit-for-hemochromatosis/](https://hemochromatosishelp.com/milk-thistle-benefit-for-hemochromatosis/)

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## ono4884

I'm 66 and I've been doing BFR for quite a while. It's good using lighter weights to protect the joints.

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