

FITNESS & NUTRITION

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1 ISOMETRIC EXERCISE TRAINING FOR ARTERIAL HYPERTENSION

Hypertension is one of the leading causes of cardiovascular disease and premature death.

More research has emerged in recent years regarding isometric exercise training as an effective adjuvant method for decreasing arterial blood pressure.

High blood pressure is a health concern and a significant economic burden. In the United States, an average of \$131 billion was spent annually over 12 years to manage this prevalent health issue.

Isometric training is when you exercise your muscle/s by overcoming resistance without changing the length of the muscle. Examples include the famous wall-sit exercise or carrying bags from the grocery store to your car (an isometric exercise for the shoulders).

One review of randomized controlled trials and meta-analyses showed that isometric exercise training can decrease high blood pressure better than standard exercise guidelines or give the same results (1).

The isometric training protocol involves wall-sit and leg extension for the legs and a handgrip exercise for the arms.

2 EFFECT OF EXERCISE ON SLEEP QUALITY

The quality of sleep is closely related to our physiological and psychological health. High-quality sleep is essential for human growth, regeneration, and overall health.

Stressful, high-paced living requires tools to improve the quality of our sleep, and exercise might be the most important instrument we have so far in our arsenal to regulate and improve our sleeping quality.

A meta-analysis and systematic review of 6193 subjects found that the effect of improving sleep is tightly related to the type of exercise, exercise cycle, and age (2). They concluded that aerobic exercise may be the best form for having a good night's sleep.

3 GENETICS, NUTRITION, AND HEALTH

The use of Artificial Intelligence and Machine Learning can take human nutrition to a whole new level with precise, personal diets.

Nutritional genomics, which includes nutrigenomics and nutrigenetics, is a field that studies the interplay between an individual's genetic makeup, diet, and health outcomes.

Nutrigenomics explores how dietary components affect gene expression and regulation, while nutrigenetics investigates the impact of genetic variation on an individual's response to dietary nutrients.

The future potential of nutrigenomics is huge. Through personalized nutrition strategies based on an individual's genetic and metabolic traits, nutrigenomics can revolutionize health outcomes (3).

4 VEGETARIAN NUTRITION IN HEALTH IMPROVEMENT

Plant-based diets positively affect health mostly from the phytochemicals and fiber inside.

However, a vegetarian diet must be well-planned, especially nowadays, where we have quick access to highly processed plant-based products.

Consumer knowledge about the vegetarian diet needs to be enhanced to avoid misinformation and promote sustainability for individuals, society, and the environment (4).

5 AEROBIC EXERCISE AND WEIGHT LOSS

How effective is aerobic exercise for weight loss? A team of researchers searched through 116 trials with a total of 6880 participants and concluded that 30 minutes of aerobic exercise per week resulted in modest reductions in body weight, waist circumference, and body fat measures in overweight and obese adults.

However, the effect of the aerobic exercise was dose-dependent with exercise duration per week. So, to achieve a clinically significant reduction in weight loss, individuals should exercise aerobically at moderate intensity or greater for 150 minutes per week (5).



6 QUICK ANALYSIS OF YOGA ON STRESS IN STRESSED ADULTS

With the ever-growing prevalence of stress, people look for non-pharmacological options to reduce it and save money. One viable option that research is looking into heavily is the ancient practice of yoga.

Stress is a natural response from our bodies, but prolonged stress and higher quantities can harm human health overall. In addition, individuals under stress tend to be less productive, which can have social and economic consequences.

One meta-analysis found low-quality evidence for statistically significant short-term effects and medium-quality evidence for statistically significant long-term effects of yoga for reducing stress and increasing the quality of life in stressed adults (6). More research is needed to discover the quantities and exact mechanisms of yoga on stress reduction.



7 DIET STRATEGIES FOR HEALTHY AGING AND LONGEVITY

A couple of strategies can be incorporated to promote healthy aging and longevity. For example, maintaining a healthy bodyweight throughout life span utilizing moderate caloric restriction can be important. Being cautious with the source of dietary fat, protein, and carbohydrates rather than their quantity can also be vital.

In addition, minimizing the intake of red and processed meat has benefits. The method of food preparation is just as important as the type of food. Following dietary patterns like traditional diets (Mediterranean, Nordic, and Okinawan) is another strategy that works well for people living in those areas.

Using herbs and spices worldwide is a great way to give your body many antioxidants crucial for health. Lastly, eating a healthy diet and other lifestyle factors can increase disease-free life expectancies by 8-10 years (7).

8 THE IMPORTANCE OF EXTRA-VIRGIN OLIVE OIL IN HEALTH

Extra virgin olive oil, alone or as part of a Mediterranean diet, offers a multitude of health properties and acts as a key parameter of clinical nutrition (8).

The nutritional value of extra virgin olive oil can be seen in inflammation, oxidative stress, coagulation, endothelial function, and gut microbiota.

This 'health gold' protects against various metabolic disorders, including hypertension, diabetes mellitus, obesity, and lipid abnormalities, while strengthening cardiovascular health.

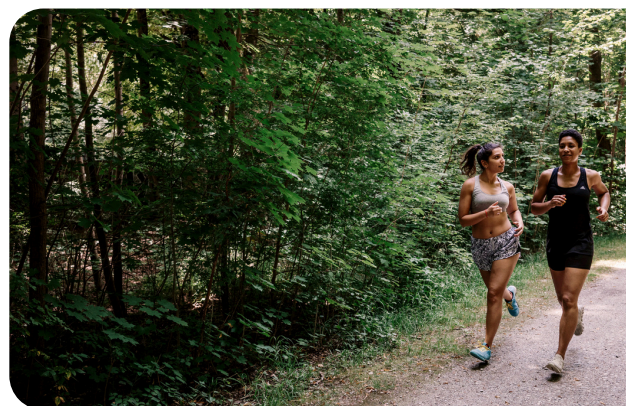


9 CARDIORESPIRATORY FITNESS IS AN IMPORTANT PREDICTOR OF HEALTH

In the adult general population, cardiorespiratory fitness (CRF) is a strong and persistent predictor of risk across many mortality outcomes (9). People with low CRF are more prone to hypertension, stroke, atrial fibrillation, dementia, and depression.

CRF can be a vital risk factor that provides additional information beyond the standard risk factors like smoking, blood pressure, and total cholesterol. Moderate physical activities like brisk walking can significantly improve cardiovascular fitness in people with low CRF.

The most prominent benefits are noted when people shift from unfit to fit. Consistent evidence regarding cardiorespiratory fitness shows its importance and the need to include this parameter in the public health service as a routine clinical practice.



10 CHOLESTEROL-LOWERING DIETARY SUPPLEMENTS

High total cholesterol can be detrimental to your health and increases your risk of developing cardiovascular diseases.

For this purpose, researchers are working on finding which supplements are most effective in lowering cholesterol. Of course, a healthy diet is the primary option, but in addition to the diet, we want to know if there are supplements that we can turn to if needed for practicality and urgency.

Certain dietary supplements like phytosterols, berberine, viscous soluble nutritional fibers, garlic supplements, soy protein, specific probiotic strains, and certain polyphenol extracts could significantly reduce plasma total and low-density lipoprotein (LDL) cholesterol levels by 3-25% in individuals with higher cholesterol levels (10).

11 EFFECTS OF EXERCISE ON GUT MICROBIOTA

Exercise might be a promising method to improve gut microbiota in adults. A meta-analysis with 25 studies and 1044 participants investigated this topic and found encouraging results (11).

Change in the Shannon index was significantly increased after exercise. The Shannon index is a well-known diversity index used in microecological studies. The higher the value, the higher the community diversity. However, distinct responses based on gender and age implicated that more research is needed,

12 EXERCISE AND EXERKINES IN AGING AND DISEASE PREVENTION

Physical exercise is an important health factor, and its positive effects on several tissues, organs, and systems have been confirmed.

Exerkines are a complex network of signaling molecules that mediate the multiple benefits of exercise. Their secretion during physical activity regulates inflammation, metabolism, and regeneration. Key exerkines can enhance homeostasis and combat aging, promoting good health and longevity.

Adding exercise-induced exerkines to therapeutic strategies represents a promising approach to alleviating age-related pathologies at the molecular level (12).

13 10-20-30 METHOD IMPROVES FITNESS AND HEALTH

A method that gave positive results in improving health and fitness in untrained and trained individuals while being time-efficient is 30 seconds of low intensity, followed by 20 seconds of moderate pace, finished with a high intensity burst of 10 seconds (13).

This 10-20-30 concept can be used with running or cycling, as in the study, or with any ergometer where the machine can be adjusted for intensity. One performance lasts five minutes, and the number of bouts ranges from two to four.

The study subjects lowered blood pressure and body fat. In addition, long-term blood sugar levels were improved, and asthma-related quality of life was improved.

14

ANTIOXIDANT PHYTOCHEMICALS IN DISEASE PREVENTION

Strong evidence supports the positive impact of specific polyphenols on the prevention and treatment of cardiovascular diseases, neurodegenerative disorders, cancer, and complications related to obesity (14).

However, our understanding of their full power is limited at the moment because we don't yet fully understand the interactive mechanisms, optimal dosage, requirements, and potential side effects.

The antioxidant activity of certain polyphenols, such as tannins, flavones, triterpenoids, steroids, saponins, and alkaloids, on reactive oxygen and nitrogen species could explain polyphenols' safeguarding effect against the onset of chronic diseases.

In detail, the protective potential of polyphenols against oxidative stress springs about their capacity to generate hydroxyl peroxide.

Current research shows that sustained consumption of polyphenols over time can offer protection against a spectrum of non-communicable diseases.

WATER-SAUTEED SHRIMP AND VEGETABLES WITH RICE - MEXICAN STYLE

If you have frozen shrimp, let them defrost the night before to be ready for cooking to avoid the extra water from the ice while cooking.

Take a pan and put it on a stove on medium heat. Add 3-4 tablespoons of water and wait for it to boil. After that, add the garlic, peppers, onions, and chili (if you use it).

Sautee the mixture for a few minutes, then season it lightly with salt and pepper (just with your fingertips). After mixing it, add the shrimp and the beans and cook for 3 to 7 minutes, depending on the size of the shrimp. The flesh should be pink and the tails red. Add water for the cooking if needed.

Right before the shrimp is done, add the cooked rice and season your dish with oregano and cumin. Mix it one more time, and that's it. You can sprinkle some freshly chopped cilantro if you wish. Enjoy.



Ingredients (for one person):

- One cup of rice (cooked)
- 250g of shrimp
- One cup of black beans (cooked)
- One cup of peppers (any type)
- 1/2 onion
- Two cloves of garlic
- One fresh chili (optional)
- One teaspoon of oregano
- One teaspoon of cumin
- Freshly chopped cilantro

QUICK VEGETABLE STIR-FRY WITH LOW-CALORIE VEGETABLES

It would be excellent if you had a wok pan; if not, no worries; just use your regular pan. Before starting with the pan, prepare water to boil for the pasta or noodles. Try to chop every vegetable lengthwise and similar in size so that they can cook evenly.



Ingredients (for one person):

- 150g of whole-grain pasta or noodles
- One small zucchini
- Medium-sized pepper
- One cup of cabbage
- Medium-sized carrot
- Two cloves of garlic
- One spring onion
- One fresh chili (optional)
- One tablespoon of olive oil, sesame oil
- Two tablespoon of soy sauce
- One tbs. of Worcestershire sauce; pepper, and sesame seeds

Place a pan on a medium-high heat and add one tablespoon of olive oil. After 15-20 seconds, add the chopped vegetables and mix continuously for a couple of minutes until they loosen up, but not too much. You want them to be slightly crunchy.

When the pan starts to stick, add one tablespoon of sesame oil, the soy sauce Worcestershire, and a touch of pepper, and continue to mix. This is when you add your pasta or noodles. Finish with some sesame seeds on top. Enjoy.

TURKEY WITH HOMEMADE PESTO AND CAULIFLOWER

Take a pot and add water to boil for the cauliflower. Add a pinch of salt to the water. Chop the cauliflower and prepare it for when the water is ready.

In the meantime, take a pan on a medium heat. Add a tablespoon of olive oil and add the turkey. Don't flip the turkey too much. Cook it on one side for 5-7 minutes, turn it around for another 5-7 minutes, and add salt and pepper right before it's ready.

For the pesto, use a blender, food processor, or even a knife. Add the basil, pine nuts, parmesan cheese, and extra virgin olive oil to it and blend it a few times to make it more chunky. If you like it smooth, just continue blending it until you reach your desired consistency. Add just a little bit of salt, but not too much.

Serve the cauliflower first and place the turkey on top of it. Take a tablespoon and drizzle the delicious pesto all over it. Enjoy.



Ingredients (for two):

- 400g of turkey breast
- Medium-sized cauliflower
- Two cups of basil
- Two tablespoons pinenuts
- 1/2 cup of grated parmesan
- 1/2 cup of extra virgin olive oil
- One garlic clove
- Salt and pepper



TUNA SANDWICH WITH LOW-CALORIE LEMON DRESSING AND ARUGULA

For this recipe, you need to find fresh ciabatta bread from your local bakery or supermarket. Make sure it's nice and fresh and not dry.

This recipe is easy and quick. It tastes delicious, and it's excellent for your brain.

Ingredients (for one person):

- Medium-sized ciabatta bread
- 150-200g of canned tuna
- One cup of arugula
- One cup of corn
- 1/2 onion
- One garlic clove
- Juice of small lemon
- 2 tbs. of extra virgin olive oil
- One teaspoon of dry basil
- Salt and pepper

Start with the dressing first. Squeeze one small to medium lemon. Add two tablespoons of high-quality extra virgin olive oil and one teaspoon of dried basil, press one clove of garlic into the mixture, and season with salt and pepper.

After the mixture is done, add the tuna, arugula, corn, and finely chopped onion (1/2 or whole if it's small) to the dressing and mix it well. Slice the ciabatta bread in half and spread the mixture evenly over the whole half. Enjoy.

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