

Sport

1. What are the benefits of creatine supplementation in athletes?

Creatine is a safe and widely used supplement to improve performance in sports that require explosiveness, such as weightlifting and sprinting. Several studies show that creatine supplementation does not cause kidney damage in healthy subjects and can increase strength and muscle mass.

Fonte: [BioMed Central](#)

2. Is hydration crucial during exercise?

Recommendations on fluid intake for endurance athletes have evolved. The theory held was that "once you are thirsty you are already dehydrated." However, such a view poses a health risk to athletes who in an attempt to prevent dehydration drink excessively exposing themselves to hyponatremia. For this reason, today it is recommended to follow the instinctive mechanism of thirst and monitor body parameters such as body weight, color of urine.

Fonte: [MDPI](#)

3. What are the effects of caffeine on sports performance?

Caffeine can improve performance by increasing concentration and reducing the perception of fatigue. It promotes physical performance. On dosing and timing, a moderate dose of caffeine of 3-6 mg/kg 30-90 min before exercise is recommended to maximize the effects.

Fonte: <https://www.mdpi.com/2072-6643/11/6/1289>

4. How does exercise help mental health?

Physical activity releases endorphins, which improve mood and reduce anxiety and depression. Moderate exercise such as walking also has positive effects.

Fonte: [Harvard Health - Exercise and Mental Health](#)

5. What is the role of muscle strength in healthy aging?

Resistance exercises help maintain muscle mass and bone density, reducing the risk of falls and osteoporosis in the elderly.

Fonte: [Harvard Health - Strength Training](#)

6. Does exercise reduce stress?

Sports contribute to improved physical health in several ways. It contributes to better stress management and mental health. Exercise helps reduce levels of stress hormones such as cortisol and adrenaline.

Fonte: <https://www.health.harvard.edu/staying-healthy/exercising-to-relax>

7. Can adopting a healthy lifestyle even in old age have positive effects or is it too late?

The 3 habits that have the greatest impact on longevity are: diet, exercise and not smoking. Having healthy habits even in old age could offer life-prolonging benefits.

Fonte: <https://www.health.harvard.edu/staying-healthy/a-healthy-lifestyle-late-in-life-still-offers-benefits>

Nutrition

1. How important is fiber intake in the diet?

Fiber is essential for good digestion and for preventing chronic diseases such as type 2 diabetes. They are found mainly in whole foods, fruits and vegetables.

Fonte: [Harvard Nutrition Source - Fiber](#)

2. How many and what carbohydrates should you eat?

Assuming the absence of diabetes there is no real need to monitor how many carbohydrates we take in each day. Instead of focusing on quantity we should focus on size-when eating carbohydrate-rich foods aim for a portion that is the size of your fist. Also remember that a key index of the quality of carbohydrates you take in is the presence of fiber.

Fonte: <https://www.health.harvard.edu/heart-health/carbs-cutting-through-the-confusion>

3. What role does intermittent fasting play in weight loss?

The main advantage of intermittent fasting, says Dr. Frank Hu, lies not so much in the effectiveness of this approach, which would seem to have similar results to traditional dieting, but in its simplicity.

Fonte: <https://www.health.harvard.edu/staying-healthy/can-intermittent-fasting-help-with-weight-loss>

4. What is the link between processed foods and longevity?

Processed food intake correlates with a 10% greater likelihood of dying.

Fonte: <https://www.health.harvard.edu/staying-healthy/eating-ultra-processed-food-may-shorten-life-span-among-older-adults>

5. What do we know about xylitol? What are its benefits and possible side effects?

It is a natural sweetener widely used as a substitute for regular sucrose in products such as: chewing gum, candy, foods suitable for diabetics...Xylitol has fewer calories and carbohydrates than sugar, does not cause glycemic spikes, and can help prevent cavities by reducing levels of bad bacteria in the oral cavity. However, in some individuals excessive intake of this sweetener can cause digestive problems such as gas, bloating and diarrhea.

Fonte: <https://www.health.harvard.edu/nutrition/xylitol-what-to-know-about-this-popular-sugar-substitute>

6. What are the risks and benefits associated with alcohol consumption?

Moderate alcohol consumption appears to have beneficial effects on the cardiovascular system and probably protects against type 2 diabetes and gallstones. However, excessive alcohol

consumption is associated with serious health risks. These include alcoholism, liver damage (such as cirrhosis), hypertension, cardiovascular disease, and a significantly increased risk of developing certain types of cancer, including liver, mouth, and colon cancers.

Fonte: <https://nutritionsource.hsph.harvard.edu/healthy-drinks/drinks-to-consume-in-moderation/alcohol-full-story/>

Sleep

1. Why is sleep important?

Proper sleep has many health benefits and is essential for optimal well-being. Lack of sufficient sleep can trigger mild to potentially life-threatening consequences, from weight gain to heart attacks.

Mental and physical effects of insufficient sleep start to become apparent after two or more nights of short sleep. The first signs are often irritability and sleepiness. Work performance begins to suffer—particularly on complicated tasks—and people are more likely to complain of headaches, stomach problems, sore joints, memory lapses, and sluggish reaction time.

Fonte: <https://www.health.harvard.edu/topics/sleep>

2. How much sleep do I need?

The answer varies based on the individual. Guidelines recommend that adults aged 18 to 60 get at least seven hours of sleep a night.

Those aged 61 to 64 need seven to nine hours, and those aged 65 and older need seven to eight hours. But again, these are estimates.

In contrast, children need more sleep. Guidelines suggest that toddlers (ages one to two years) require 11 to 14 hours of sleep per day (including naps). Preschoolers (ages three to five) should get 10 to 13 hours (including naps), and school-age children (ages 6 to 12) need nine to 12 hours. Teenagers need eight to 10 hours of sleep.

Fonte: <https://www.health.harvard.edu/topics/sleep>

3. How can I get more sleep?

Limit your time on your phone and computer right before bed. Light from your screens disrupts the melatonin (the hormone that helps you fall asleep) production in your body by 22%.

Other Tips:

- Limit caffeine 4-6 hours before bed
- Wear an eye mask to create a dark room
- Make sure the temperature is between 68 and 72 degrees
- Use ear plugs or a fan for white noise to drown out disruptive noise
- Create a To-Do list before bed to prevent your mind from racing

Fonte: <https://wellness.huhs.harvard.edu/sleep>

4. What is insomnia?

This condition is defined as the inability to sleep or stay asleep. An individual may have a hard time falling asleep or may sleep but then awaken in the early morning and be unable to return to sleep. Short-term insomnia can be caused by stress or traumatic events (divorce, job loss, death of a loved one). Chronic or long-term insomnia may be caused by ongoing anxiety, working different work shifts that disrupt the body's circadian rhythms, poor sleep habits, medical conditions that can interrupt sleep (chronic pain, gastroesophageal reflux disease), or medications that have a stimulating effect. Insomnia often can be treated with behavioral therapies, although sometimes sleep medications are prescribed.

Fonte: <https://nutritionsource.hsph.harvard.edu/sleep/>

5. What treatments for insomnia can help me sleep better?

Sleep-promoting changes in your surroundings and daily habits are usually the best way to treat and manage insomnia. These include everything from exercise to food choices to sleep hygiene. Examples include:

- Follow a regular sleep schedule. Have a routine bedtime and wake up roughly the same time each morning.
- Sleep in loose, comfortable clothing on a comfortable mattress.
- Eliminate sources of noise or bright lights that prevent or disrupt sleep. If noise from outside your bedroom can't be eliminated, you can drown it out with pink noise like a fan or a recording of ocean waves or rain.
- Maintain a comfortable bedroom temperature.
- Cut down on daily beverages containing caffeine.
- Avoid heavy eating before bedtime.
- Eliminate alcohol. Many people experience wakefulness when alcohol effects wear off. Alcohol also suppresses REM sleep, the stages of sleep when dreaming occurs.
- Exercise daily, preferably at least four hours before bedtime.

Fonte: <https://www.health.harvard.edu/topics/sleep>

6. What are the effects of long-term sleep deprivation?

Short sleep duration in adults is defined as less than 7 hours of sleep in 24 hours. About 40% of adults report unintentionally falling asleep during the day at least once a month.

Sleep helps to process your thoughts from the day as well as store memories, so a lack of good-quality sleep can lead to difficulty focusing and thinking clearly. You may feel tired, irritable, or anxious during the day. Performance at work or school may suffer. Your reaction time may be slowed, increasing the risk of driving accidents.

In children, insufficient sleep can lead to attention and behavior problems or hyperactivity. In the elderly, lack of sleep may decrease focus and attention, leading to a greater risk of falls, bone fractures, and car accidents. Epidemiological studies show that insufficient sleep is independently associated with a higher risk of obesity.

Fonte: <https://nutritionsource.hsph.harvard.edu/sleep/>

Social relationship

1) Why are social relationships important for health?

Social relationships influence health as much as other factors like sleep, diet, and exercise. Studies show that people with strong social ties are happier, have fewer health problems, and live longer. Conversely, the lack of strong relationships is associated with depression, cognitive decline, and an increased risk of mortality.

Fonte: <https://www.health.harvard.edu/staying-healthy/the-health-benefits-of-strong-relationships#:~:text=Dozens%20of%20studies%20have%20shown,well%20as%20with%20increased%20mortality>

2) What are the psychological benefits of social support?

Social support, which includes acts such as offering help or expressions of affection, benefits not only the receiver but also the giver. This reciprocity promotes greater life satisfaction and improved emotional well-being.

Fonte: <https://www.health.harvard.edu/staying-healthy/the-health-benefits-of-strong-relationships#:~:text=Dozens%20of%20studies%20have%20shown,well%20as%20with%20increased%20mortality>

3) Are there risks associated with poor-quality social relationships?

Yes, negative or unsatisfying relationships can lead to negative effects on both physical and mental health. For example, studies have found that couples who experience frequent conflicts show signs of a weakened immune system, including development and progression of cardiovascular disease, recurrent myocardial infarction, atherosclerosis, autonomic dysregulation, high blood pressure, cancer and delayed cancer recovery, and slower wound healing (Ertel, Glymour, and Berkman 2009; Everson-Rose and Lewis 2005; Robles and Kiecolt-Glaser 2003; Uchino 2006). Poor quality and low quantity of social ties have also been associated with inflammatory biomarkers and impaired immune function, factors associated with adverse health outcomes and mortality (Kiecolt-Glaser et al. 2002; Robles and Kiecolt-Glaser 2003).

Fonte: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3150158/#:~:text=Several%20recent%20review%20articles%20provide,dysregulation%2C%20high%20blood%20pressure%2C%20cancer>

4) How can social relationships be improved for a healthier life?

Strengthening relationships through activities that bring joy, dedicating time to those who matter, and reducing unnecessary commitments are effective ways to improve social bonds.

Maintaining meaningful connections can contribute to greater well-being and reduce the risk of conditions such as dementia.

Fonte: <https://www.health.harvard.edu/staying-healthy/the-health-benefits-of-strong-relationships#:~:text=Dozens%20of%20studies%20have%20shown,well%20as%20with%20increased%20mortality>

5) How can social support influence diet and nutritional well-being?

Social support plays a significant role in promoting healthy eating habits, especially among the elderly. People who live alone or have fewer social contacts tend to consume less fruit and vegetables, increasing the risk of malnutrition. Participating in group programs that encourage socialization and nutritional education can help improve the intake of healthy foods, such as fruits and vegetables, and promote a healthy lifestyle.

Fonte: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3969105/>

Stress

1) What happens to the brain during a stress response?

Stress is the body's response to external pressures, which can arise from various situations or life events. During a stress response, the brain activates the fight-or-flight mechanism, primarily through the amygdala, which detects threats and signals the hypothalamus to initiate hormonal changes. This leads to the release of adrenaline and cortisol, increasing heart rate, blood pressure, and alertness. While this response is beneficial in short bursts, chronic stress can result in neuroinflammation, cognitive decline, and mood disorders due to prolonged exposure to these hormones. Effective stress management is crucial to mitigate these negative effects on brain health

Fonte:

- <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2864527/>
- <https://www.health.harvard.edu/staying-healthy/understanding-the-stress-response>
- <https://nutritionsource.hsph.harvard.edu/stress-and-health/>
- <https://www.health.harvard.edu/healthbeat/how-stress-can-make-us-overeat>

2) How do you distinguish between "good" stress (eustress) and harmful stress (distress)?

Eustress and distress are two types of stress with distinct effects. Eustress is positive stress that motivates, energizes, and enhances performance, often experienced during events like starting a new job or preparing for a competition. In contrast, distress is negative stress that causes anxiety and overwhelm, typically arising from challenging situations like job loss or relationship issues. The key difference lies in how each type affects an individual's feelings and coping abilities; eustress feels manageable and rewarding, while distress can feel unmanageable and detrimental to well-being.

Fonte:

- <https://psychcentral.com/stress/eustress-vs-distress>
- <https://www.health.harvard.edu/topics/stress>

3) How does cortisol affect the body in chronic stressful situations?

In chronic stressful situations, elevated cortisol levels can have detrimental effects on the body. Prolonged cortisol release leads to increased appetite and fat accumulation, particularly around the abdomen, raising the risk of obesity and related diseases like type 2 diabetes and cardiovascular issues. Chronic stress can also cause neuroinflammation, contributing to mental health disorders such as anxiety and depression. Additionally, sustained high cortisol levels may impair immune function and disrupt sleep patterns, further exacerbating health problems over time.

Fonte:

- <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC10706127/>
- <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4263906/>
- <https://nutritionsource.hsph.harvard.edu/stress-and-health/>
- <https://www.health.harvard.edu/staying-healthy/understanding-the-stress-response>

4) Are there differences between types of stress (physical, emotional, psychological) on a biological level?

Yes, there are differences between types of stress on a biological level. Physical stress, such as injury or illness, activates the body's immediate fight-or-flight response, releasing hormones like adrenaline and cortisol to prepare for action. Emotional stress, often linked to interpersonal relationships or significant life changes, can lead to prolonged cortisol release, affecting mood and cognitive function. Psychological stress, stemming from anxiety or worry, can cause chronic activation of the hypothalamic-pituitary-adrenal (HPA) axis, leading to long-term health issues such as hypertension and depression. Each type of stress engages different physiological pathways, influencing overall health and well-being.

Fonte:

- <https://www.health.harvard.edu/staying-healthy/understanding-the-stress-response>
- <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4263906/>

5) Is it possible to completely eliminate stress from your life, or should it just be managed?

It is not possible to completely eliminate stress from life, as stress is a natural response to various challenges and situations. Instead, stress should be effectively managed through techniques such as mindfulness, regular exercise, and healthy eating. Chronic stress can lead to serious health issues, so adopting coping strategies is essential for maintaining well-being. Accepting that some stress is unavoidable allows individuals to focus on resilience and proactive management rather than seeking to eliminate it entirely.

Fonte:

- <https://nutritionsource.hsph.harvard.edu/stress-and-health/>
- <https://www.health.harvard.edu/staying-healthy/understanding-the-stress-response>

6) How can you reduce stress?

To reduce stress, consider these effective strategies:

1. Exercise Regularly: Physical activity helps lower stress hormone levels and improves mood.
2. Practice Mindfulness: Techniques like meditation and deep breathing promote relaxation and activate the body's natural calming response.

3. **Maintain a Healthy Diet:** Eating balanced meals supports overall health and can help regulate stress responses.
4. **Connect with Others:** Talking about your feelings with friends or family can provide support and reduce feelings of isolation.
5. **Engage in Hobbies:** Make time for activities you enjoy to help distract from stressors and boost your mood.

Implementing these practices can significantly enhance your ability to manage stress effectively.

Fonte:

- <https://nutritionsource.hsph.harvard.edu/stress-and-health/>
- <https://www.health.harvard.edu/staying-healthy/understanding-the-stress-response>

7) What is the role of the autonomic nervous system in stress management?

The autonomic nervous system (ANS) plays a vital role in stress management by regulating involuntary physiological responses. It consists of two branches: the sympathetic nervous system (SNS), which triggers the "fight-or-flight" response during stress, and the parasympathetic nervous system (PNS), which promotes relaxation and recovery. When stress occurs, the SNS activates, releasing hormones like adrenaline to prepare the body for action. Once the stressor is removed, the PNS helps return the body to a state of calm. Maintaining a balance between these systems is essential for effective stress management and overall health.

Fonte:

- <https://www.health.harvard.edu/staying-healthy/understanding-the-stress-response>
- <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4263906/>
- <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5050399/>

MINDSET

1) How can your way of thinking affect stress management at the neurological level?

Your way of thinking significantly influences stress management at the neurological level. Positive thought patterns can activate the relaxation response, reducing stress hormones and promoting a sense of calm. Techniques such as mindfulness and positive self-talk can enhance emotional regulation, which is crucial for mitigating the physiological effects of stress, such as inflammation in the brain. Additionally, dietary choices that support brain health—like omega-3 fatty acids and antioxidants—can further bolster resilience against stress by improving neurotransmitter function and reducing anxiety-related behaviors. Thus, both cognitive strategies and nutrition play vital roles in effective stress management.

Fonte:

- <https://www.health.harvard.edu/blog/nutritional-strategies-to-ease-anxiety-201604139441>
- <https://www.health.harvard.edu/staying-healthy/top-ways-to-reduce-daily-stress>
- <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7781050/>
- <https://www.health.harvard.edu/mind-and-mood/stress-management-enhance-your-well-being-by-reducing-stress-and-building-resilience>
- <https://www.hsph.harvard.edu/news/hsph-in-the-news/mindful-eating-stress/>

2) Is there scientific evidence showing the link between a positive mindset and better physical health?

Scientific evidence increasingly supports the link between a positive mindset and improved physical health. Research indicates that happiness is associated with lower levels of cortisol, a stress hormone, which reduces inflammation and enhances immune function. Positive emotions correlate with better cardiovascular health, including lower blood pressure and reduced risk of heart attacks. Furthermore, individuals with optimistic outlooks tend to engage in healthier lifestyle choices, further contributing to their overall well-being and longevity. This interplay underscores the significant role that mental well-being plays in physical health outcomes.

Fonte:

- <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6124958/>
- <https://www.health.harvard.edu/staying-healthy/top-ways-to-reduce-daily-stress>

3) What is the impact of positive thinking on emotional resilience according to psychological research?

Psychological research demonstrates a strong link between positive thinking and emotional resilience. Studies indicate that individuals who practice positive thinking are better equipped to "bounce back" from stressors, utilizing positive emotions to enhance their coping

mechanisms. For instance, the broaden-and-build theory suggests that positive emotions expand cognitive resources, enabling more effective emotion regulation and faster recovery from negative experiences. Additionally, interventions focused on cultivating a positive mindset have shown significant improvements in resilience and life satisfaction among participants, particularly older adults. Overall, fostering a positive outlook not only enhances emotional resilience but also contributes to better mental health outcomes.

- <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3132556/>
- <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6405300/>

4) What evidence shows that practices such as meditation and mindfulness can improve mindset?

Research indicates that practices like meditation and mindfulness significantly improve mindset. Mindfulness-based interventions, such as Mindfulness-Based Stress Reduction (MBSR), have been shown to reduce stress, anxiety, and depression while enhancing overall well-being and cognitive flexibility. A meta-analysis found that these practices can lead to positive changes in brain structure and function, particularly in areas related to attention and emotion regulation. Furthermore, mindfulness promotes greater self-awareness, enabling individuals to recognize and reframe negative thought patterns, which contributes to improved mental health outcomes.

Fonte:

- <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC10442577/>
- <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9811678/>

5) What is the link between mindset and the production of neurotransmitters such as dopamine and serotonin?

The link between mindset and the production of neurotransmitters such as dopamine and serotonin is well-supported by research. Positive thinking and emotions can enhance serotonin levels, promoting feelings of well-being and reducing symptoms of anxiety and depression. Similarly, engaging in rewarding activities that foster joy can boost dopamine production, which is associated with motivation and pleasure. Studies show that a positive mindset not only influences these neurotransmitter levels but also enhances the overall functioning of the brain's reward systems, thereby improving mood regulation and emotional resilience.

Fonte:

- https://brain.harvard.edu/hbi_news/exploring-how-serotonin-and-dopamine-interact/
- <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2612120/>

6) How do personal beliefs influence recovery and healing, according to studies in health psychology?

Studies in health psychology reveal that personal beliefs significantly influence recovery and healing. Individuals with positive beliefs often experience enhanced resilience, optimism, and coping abilities, which are crucial during recovery processes. Research indicates that higher levels of spirituality and faith correlate with better mental health outcomes, including reduced anxiety and improved stress management. Additionally, belief systems can provide a sense of purpose and community support, further facilitating healing. Thus, fostering positive personal beliefs can be a vital component in enhancing recovery trajectories across various health challenges.

Fonte:

- <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9915160/>
- <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6759672/>