

YOGA



KAIUT YOGA

ACTIVE AGING

Our body undergoes a natural biological aging process from birth to old age. This process is inherent to the evolution of life and is divided into four phases: childhood (from birth to 11 years old), adolescence (12 to 20 years old), adult age (21 to 65 years old), and old age (65 years old and beyond). Constant changes are always happening, especially between the first two phases.

Importantly, changes can vary from individual to individual due to issues related to genetic makeup and personal characteristics. We will not consider gender-related changes here, focusing on the broader picture of the human being and the aging process.

Estimates indicate that between the ages of 30 and 40, the annual loss of musculoskeletal mass is about 1%, which results in a reduction in muscle strength that can negatively impact functionality and quality of life. The aging process, or senescence, is also typically marked by the presence of gray hair, wrinkles, and some degree of sensory decline involving sight, hearing, taste, and smell, as well as a decrease in the body's overall functional reserve.

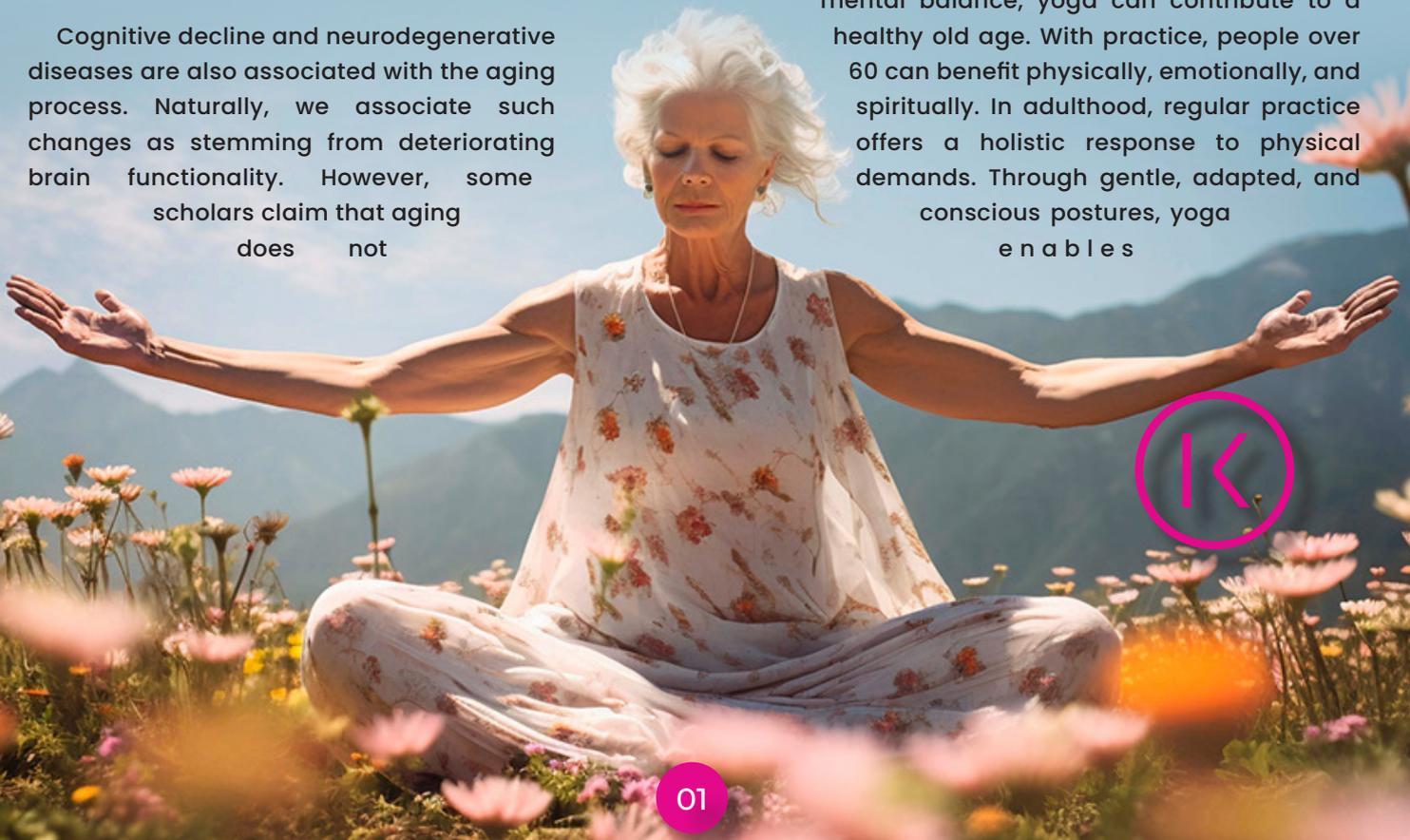
Cognitive decline and neurodegenerative diseases are also associated with the aging process. Naturally, we associate such changes as stemming from deteriorating brain functionality. However, some scholars claim that aging does not

necessarily imply the loss of brain functions but rather a reduction in the speed of information transmission between areas of the nervous system. Strategies developed throughout life can compensate for this decline, highlighting the importance of continuous learning.

We know that the global population over 60 years of age has increased in recent decades, raising questions about how we are aging, whether the above declines are unavoidable, or whether and how we can evolve with quality and maintain greater functionality. According to the World Health Organization, by 2050, there will be one billion people over the age of 60. Thus, it is increasingly crucial to understand how each individual can age in a healthy way.

What is important to know is that genetic factors are not entirely responsible for the age-related declines we typically experience. Lifestyle is also a factor that can negatively influence the aging process. Habits, diet, environment, and physical activity can significantly influence health in old age. In the modern world, increased stress and the demands of contemporary life contribute to health problems, including neurodegenerative diseases.

In this context, the practice of yoga can be a valuable tool. By promoting physical and mental balance, yoga can contribute to a healthy old age. With practice, people over 60 can benefit physically, emotionally, and spiritually. In adulthood, regular practice offers a holistic response to physical demands. Through gentle, adapted, and conscious postures, yoga enables





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the strengthening of the body, increased mobility, and improved balance, contributing to maintaining functional independence.

Yoga is also a powerful tool for promoting mental and emotional health. Aging is often associated with issues such as loneliness, anxiety, and even depression. Yoga offers breathing, meditation, and relaxation techniques that reduce stress and promote mental clarity and emotional tranquillity. And it can also provide a platform for connection, as individuals can journey through the later years of one's life with a community. Beyond that, yoga is an invitation to a journey of self-discovery, acceptance, and personal growth.

This e-book will discuss the benefits of yoga for people over 60. We will look at scientific studies that highlight yoga's positive impacts on physical and mental health and overall quality of life for aging populations.

Happy reading!

Francisco Kaiut





Life and Movement: *A Recipe for Better Health and Longevity*

The way each of us leads our lives is a critical factor in our health after the age of 60 (and throughout the entire journey). It is well known that lifestyle can give rise to diseases, including neurodegenerative ones, such as Parkinson's and Alzheimer's disease. Our body will go through natural transformations as part of the evolutionary process. However, our habits can enhance either the positive or negative aspects of this process. That is, our habits can either support and promote health or make room for disease.

It is essential to rethink our habits and how we take care of ourselves as we live in a unique moment of population aging. In the case of the United States, for example, data from a 2022 census showed that the number of Americans aged 65 and older is projected to increase by 47%, from 58 million in 2022 to 85 million by 2050. This represents between 17 and 23% of the total population. This same trend is projected for the Brazilian population and many other countries worldwide.

To address this change in the population profile, the United Nations General Assembly launched the Decade of Healthy Aging in December 2020. Between 2021 and 2030 the UN looks to encourage people to replace bad habits with good ones to improve their quality of life as they age and improve longevity.

In an article for the magazine Espaço Aberto, published by the University of São Paulo (USP), Elisa Kawamoto, a researcher at the National Institute on Aging in the United States and the Institute of Biomedical Sciences (ICB), shares her research that looks to discover why some people age without any degeneration—knowing this can inform how we can live better and longer.

Today, there is a large number of elderly patients with neurodegenerative diseases. Often, it is thought that their brains are genetically different, to begin with, leading to these diseases later in life. Kawamoto details how genetic factors can indeed influence our state of health during old age, giving rise to the disease around the age of 60. Some common signs are forgetfulness, loss of memory, and cognition. Environmental

factors can, however, help compensate for this neurological decline. Specifically, physical exercise and a balanced diet can stimulate the formation of proteins that protect cells from free radicals.

According to a physician and professor at the Faculty of Medicine of Ribeirão Preto, Eduardo Ferrioli, genetics is not the main factor in aging; in fact, it plays a relatively smaller role in health during old age. For individuals in their 80s, genetics contributes about 30%, while the other 70% is due to habits, diet, environment, physical activity, educational level, social aspects, and other modifiable factors.

From the neurological point of view, Cristoforo Scavone, professor at the Institute of Biomedical Sciences (ICB) and researcher at the Laboratory of Molecular Neuropharmacology, shared that some studies show that in the aging process, there is no loss of brain functions, but rather a decrease in the speed of information transmission between some areas of the nervous system.

According to him, the discussion in the academic world is not centered on the decline of the nervous system but on how our learning during life influences the development and functions of older people in society. Any change in this balance would result from a pathology, not a "symptom" of natural aging.

Another point raised in the article is the negative impact of poor diet and stress on our health, as the lifestyle of modern society leads us to neglect self-care. Precisely for this reason, physical activity is crucial in old age, as well as in other phases of life, because it induces the body to balance, promotes caloric expenditure, and reduces blood pressure, among other benefits.

For people over 60, it can be extra challenging to know their body well and how to stay active in a beneficial way. However, we currently have some powerful tools that help us get through this phase of life with full health and an available and functional body. There are certainly numerous tools to engage with in the early years to prevent age-related severe declines in functioning. Having access to this knowledge helps us to better prepare for this phase.

According to the Brazilian Ministry of Health's Guide to Care for the Elderly, the quality of health and well-being of older people reflects the experiences and lifestyle each one has had throughout their lives. This involves the influence of the social circle, relationships, diet, physical activity, and working conditions, among other factors. Of course, it is impossible to have control over each factor, but we can take up the practice of self-care, which can only deliver positive outcomes when it comes to aging and longevity.



Self-care refers to an individual being more attentive to the needs of their body and mind. Doing this helps prevent diseases, controls diseases already diagnosed, and combats complications resulting from them. The habit of self-care can also be incredibly empowering. Taking up the habit of self-care can free us from always looking to and needing help from external sources regarding our health and well-being. The key elements of self-care include physical activity, healthy eating, and awareness of mental health.

To take care of physical and mental health, physical activity is pointed out as an alternative, as it improves nutrition and oxygenation of organs, protects joints and muscles, and prevents and controls diseases such as diabetes, high blood pressure, dementia, and arthritis in addition to helping to improve mood. With such varied types of physical activity available, there is something for everyone.

The article "Exercise and Aging: Can You Walk Away from Father Time," published in Harvard Health Publishing, explores the intricate relationship between exercise, disease, and longevity. According to the text, a well-designed activity program not only slows the effects of the passing of the years but also protects against various chronic diseases that often afflict older people.

Looking at the example of heart disease, the leading cause of death in the United States, research back in 1978 Harvard Alumni Study found that the incidence of heart disease was reduced by 39% among men who exercise regularly. The risk of stroke, the third leading cause of death in the country, was also found to decrease with regular exercise. Light exercise reduces risk by 24 percent, while moderate to intense exercise shows an even more significant reduction, reaching 46 percent. These kind of results are still found in studies today.

The positive effect of physical activity can also be seen for those with cancer. Highly active people had a 47% reduction in the risk of developing colon cancer, as evidenced by the Harvard Health Care Professionals Follow-up Study.

Physical activity has also been found to have significant benefits for cognitive functioning in aging populations, as evident in the study titled "Higher Physical Activity Is Associated with Increased Attentional Network Connectivity in the Healthy Elderly," published in Frontiers Aging Neuroscience, reinforcing the benefits of physical activity for healthy aging.

Researchers at Samsung Medical Center in Seoul, Korea, started from the lack of success of pharmaceutical treatments in preventing or treating dementia that spurred studies to understand strategies that emphasize the benefits

of lifestyle adjustments. Based on neuroimaging evidence, they observed a positive correlation between the amount of physical activity and gray matter volumes in the prefrontal and cingulate cortices in the brain.

The research involved 76 healthy participants aged 60 and over, subdivided into groups according to levels of physical activity in daily life. The results highlighted significant benefits associated with those who were more active. Older adults who engaged in more physical activity showed a noticeable improvement in cognitive processing speed. This positive effect, according to the study, can be explained by the fact that maintaining a higher level of physical activity reduces cardiovascular risk factors, such as hypertension and diabetes, factors that can improve function through underlying neurological mechanisms, such as the increase in neurotrophic factors or the reduction of oxidative stress.

This finding is consistent with previous studies indicating that a non-sedentary lifestyle contributes to a more robust cognitive reserve in older people. The group had even larger intracerebral volumes, suggesting increased brain reserve. This finding is supported by previous studies linking regular physical activity to better endothelial health by promoting angiogenesis and neurogenesis. The analysis of the brain network also revealed that the group with greater physical activity exhibited greater regional nodal strength in areas associated with attention. This suggests yoga can lead to improvement of overall cognitive function and optimization of specific brain areas related to attention.

While the study has limitations, such as its cross-sectional design, the results provide crucial evidence of the preventive benefits of physical activity on age-related cognitive decline. This finding can guide interventions and public health policies aimed at healthy aging, highlighting the importance of encouraging regular physical activity in the elderly population.

Despite the undeniable benefits of exercise, researchers recommend taking precautions to ensure

safe fitness. For people over 40 years old or who have a medical problem, it is recommended that you have a medical check-up before starting an exercise program. However, the most important thing is to disregard the myth that physical activities are only for young people.

This maxim has already been debunked by studies that demonstrate the benefits even when started later in life. One study demonstrated that individuals respond as well at physical training at age 50 as at 20. In addition, those who start exercising after the age of 45 can enjoy a 24% reduction in the mortality rate compared to those who are sedentary.

With this, it is easy to understand that regular exercise is a valuable investment for a long and healthy life. As science backs up the benefits of exercise in diverse age groups, it's evident that staying active is a wise choice at every stage of life. In addition to the habit of getting your body moving, it is recommended not to smoke, maintain a balanced diet, avoid excessive consumption of alcoholic beverages, and maintain a good social life.



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Yoga: The Secret to Active Aging

Have you ever questioned whether the passing of the years must correspond to physical losses? We know that in life's journey, various physical capacities naturally decrease, such as strength, speed, and endurance. These changes are not only related to the muscles but also involve changes in the coordination of body movements. The point is that the transformations that the human body undergoes should not be translated into decline, loss or disability. We can live each phase fully and better every day.

According to the chief of cognitive and behavioral neurology at the Veterans Affairs Boston Healthcare System, professor of neurology at Harvard Medical School, and chair of the Science of Learning Innovation Group at Harvard Medical School Academy, Andrew E. Budson, one of the most important causes of reduced strength and coordination with aging is reduced levels of physical activity.

In the article "How to stay strong and coordinated as you age," published in Harvard Health Publishing, he explains that there is a myth in our society that it is good to reduce exercise more and more as we age. However, the truth is exactly the opposite.

As we age, it becomes more important to exercise regularly, increasing the time we spend exercising to compensate for bodily changes in hormones and other factors we can't control. The good news is that exercising to improve strength and coordination can benefit people of any age.

The main precaution is to engage in activities that will not lead to injury in the short or long term. To improve strength and coordination from ages 18 to 88, Budson recommends aerobic exercise and exercises that promote strength, balance, and flexibility for at least two hours a week, such as yoga, tai chi, Pilates, and isometric weightlifting.

In another article, also published in Harvard Health Publishing, getting moving is also a powerful resource for treating depression. This condition affects countless people at all stages of life, particularly in adulthood. Antidepressants are often prescribed to treat this disease, but exercise may be as or even more effective.

The positive impact of exercise goes beyond simply improving mood. When we engage in some activity, a biological cascade of events begins that results in wide-ranging health benefits, such as protection against heart disease and diabetes, improved sleep, and reduced blood pressure.

An interesting observation made by the researchers is the effect of endorphins, chemicals released during high-intensity exercise, providing a sense of well-being known as the "runner's euphoria." However, the real value lies in low-intensity workouts sustained overtime. This type of activity stimulates the release of proteins called neurotrophic growth factors (inclusive of nerve growth factor (NGF)), which promote the growth and connection of nerve cells.

In cases of depression, neuroscientists have observed a reduction in the hippocampus, the brain region

responsible for mood regulation. Exercise supports the growth of nerve cells in the hippocampus, improving their connections and consequently relieving depression.

While acknowledging the advantages of physical activity, we know that for many, getting started is a big challenge, especially for those who physically deal with the symptoms of depression, such as sleep disturbances, reduced energy, and body aches. Breaking this cycle is possible with small steps. Dr. Michael Craig Miller, assistant professor of psychiatry at Harvard Medical School, suggests starting with just five minutes a day of any preferred activity. This initial routine expands organically, going from five to 10 minutes and gradually to 15.

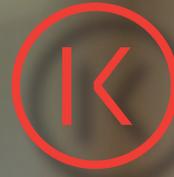
In fact, there is no precise formula for the duration and intensity of exercise needed to relieve the symptoms of depression; the consensus is that the improvement begins to be noticed a few weeks after the start of regular practice. Importantly, exercise is not a one-size-fits-all solution but rather a key part of a long-term treatment.

The key to incorporating exercise into one's routine is to choose something sustainable over time, something that the person enjoys and wants to keep doing—given consistency is also a key to effectiveness. This choice will contribute to mental health and promote a more active and balanced lifestyle. In a society that suffers from symptoms of depression, recognizing the role of physical activity as a natural ally in the pursuit of well-being is essential.

In this context, yoga stands out as a practice to generate better health and promote healthy aging. Despite being an activity available to humanity for thousands of years, recent studies have enriched our understanding of how and why it is beneficial for diverse ailments throughout life, especially for the elderly population.

Research on yoga has shown the positive influence this practice can have on the aging process—from cellular health to mobility and balance. In one study, researchers from the All India Institute of Medical Sciences explored the impact of a lifestyle based on yoga and meditation on cellular aging in healthy individuals. Ninety-six individuals took part in a 12-week intervention incorporating classic yoga postures, breathing exercises, and meditation.

Their initial view was that our sedentary lifestyle,



exposure to environmental pollutants, and ingestion of processed and unhealthy foods have harmed human health damaging DNA and creating genomic instability. They theorized that yoga could activate the damage response to repair genomic damage and improve genomic stability.

Their findings supported their initial theory. Following the intervention, there was an increase in telomere length, suggesting a possible contribution to genomic stability and reduced telomere wear – the latter plays a crucial role in cell longevity by acting as a biological clock.

The practice also appeared to positively impact the inflammatory response, suggesting that the practice may help control factors associated with accelerated cellular aging. This can be attributed to changes in cortisol levels, among other factors.

For the researchers, integrating the practice as a lifestyle can slow down aging. A practice not only for mental and physical health but also for cellular longevity, providing a holistic approach to healthy living at all stages.

An article published in *Advances in Geriatric Medicine and Research* reviewed the evidence from several studies that point to yoga as a positive mechanism in physical and mental health. One of the studies evaluated looked at the functional connectivity of the brain in older women who had been practicing yoga for at least eight years. The results revealed a significant improvement in connectivity between the prefrontal and posterior cortex, areas related to working memory, spatial attention, and decision-making. This finding suggests that yoga not only benefits the body but also has a positive impact on mental and cognitive health.

In addition, long-term studies have shown reductions in factors associated with premature aging. Intensive yoga and meditation practice were associated with improvements in brain-derived neurotrophic factor levels, hypothalamic-pituitary axis activity, as well as an overall decrease in inflammatory activity.

When it comes to the acceptance of the practice by older people, it was possible to verify the





existence of a wide range of programs that adapt to different levels of ability and difficulty. One of them is the Kaiut Yoga Method, aimed at taking care of the whole body in a broad way from the stimuli in the joints. The Method adapts to the most diverse bodies, needs, and ages, promoting from more subtle classes to more strenuous ones. The combination of the postures generates benefits such as greater malleability, mobility, and reduction of chronic pain. The impact of yoga goes beyond the physical, encompassing cognitive benefits such as protection against cognitive decline and improvements in sleep quality. Diversity provides opportunities for everyone, whether it's focusing on mental benefits or fitness.

"ACCORDING TO ONE ARTICLE, EXERCISE CAN BE AS EFFECTIVE AS ANTIDEPRESSANTS FOR SOME PEOPLE. THE POSITIVE IMPACT OF EXERCISE GOES BEYOND THE SIMPLE IMPROVEMENT OF MOOD. WHEN WE PRACTICE SOME ACTIVITY, WE START A BIOLOGICAL CASCADE OF EVENTS THAT RESULTS IN COMPREHENSIVE HEALTH BENEFITS [...]"

COMPLEMENTARY *Therapy for Health*

Over the past half century, the number of people practicing yoga has grown exponentially. The academic world has responded, seeking to unveil and articulate yoga's potential in people's lives.

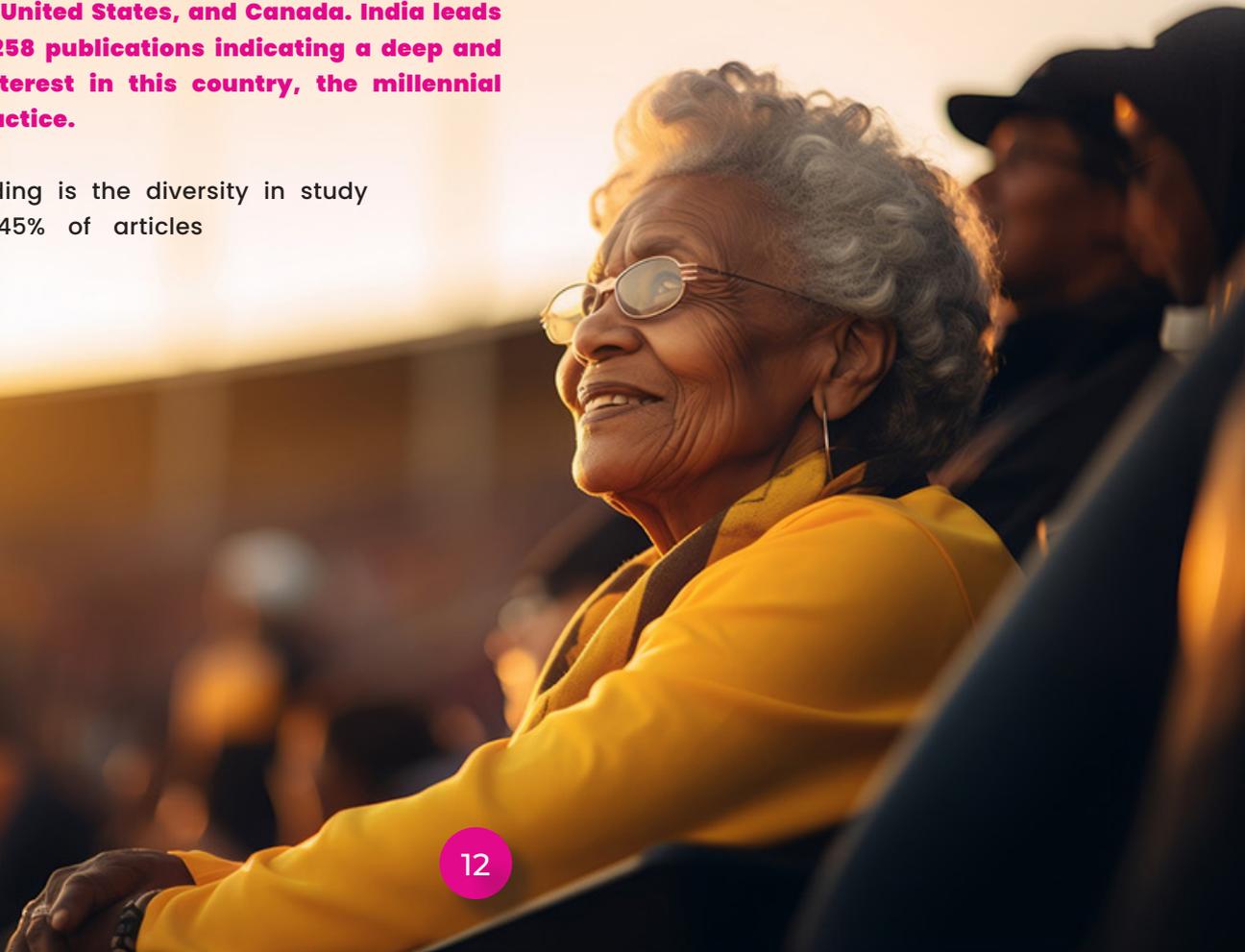
Research published in the Journal of Alternative and Complementary Medicine, conducted by a group of U.S. and Indian researchers, combed through several electronic databases, including PubMed, PsychInfo, MEDLINE, and Google Scholar, from 1967 to 2013, to understand how yoga has been used as a complementary therapy to take care of health.

The results, derived from 486 articles published in 217 peer-reviewed journals, show a significant three-fold increase in the number of publications in the last ten years. This data denotes the growing interest of the academic world in the subject. The detailed analysis revealed that yoga as a therapy is being explored in various parts of the world, with significant contributions from India, the United States, and Canada. India leads the way, with 258 publications indicating a deep and deep-rooted interest in this country, the millennial cradle of the practice.

A crucial finding is the diversity in study designs, with 45% of articles identified as

randomised controlled trials, 18% as controlled trials, and 37% as uncontrolled trials. This diversity underscores the breadth of yoga's applications in different clinical settings. The results also showed that interventions using the practice focus mainly on three areas: mental health, cardiovascular diseases, and respiratory diseases. These disorders pose significant challenges in people's daily health care, and the practice has emerged as a promising complementary approach.

The literature review did not distinguish the methods of yoga because it considered all the practices originating from a single system and differing only in delivery, not in their components (i.e., breathing, posture, meditation). In this way, the researchers assessed that patients with restricted range of motion (e.g., stroke) may benefit from



yoga that focuses on alignment and slow movements using accessories (e.g., chair). Thus, the practitioner can do a few postures at a time, holding each one for an extended period.

An important aspect considered in the study is that in recent decades there has been a large increase in the number of practitioners outside of the clinical context. That is, the practice offers benefits that go beyond traditional medical approaches. We've seen this in our Kaiut Yoga classrooms, with students that practice consistently over time.

The physical and mental transformations that take place become more noticeable to the yogi the longer they engage in consistent practice. A study published in *BioPsychoSocial Medicine*, a journal of the Japan Society of Psychosomatic Medicine, sought to identify the experiences of adult practitioners of Yoga. To do this, the researchers conducted qualitative interviews over the course of two years with 18 adults who did yoga twice a week.

The researchers concluded that the sooner a person starts practicing yoga and maintains consistency will help alleviate possible future physical difficulties—consistency ensures better physical capacity and, consequently, quality of life. The study also showed that when asked about the meaning of the word yoga, participants said exercise, healthy living, worship, calm, harmony, awareness and balance.

For the researchers, yoga is connected with lifestyle and the wellbeing necessary to continue our existence. In addition, it was possible to verify that the practice alleviates problems such as pain and anxiety that individuals have on a daily basis and also improves the vital energy of practitioners. The study participants reported that they experienced a feeling of well-being from practice, one of comfort, calmness, and security with their body image.

In individual and focus group interviews, benefits for both mind and body were reported. The positive experiences described by the participants involve reduced pain, increased alertness, and even significant improvements in sleep quality.

Throughout our lives, flexibility is an ally in constant transformation. From puberty, it peaks around the age of 30 and has reduced its potential as adulthood advances. In an effort to understand the benefits of yoga for improving spinal elasticity, a groundbreaking study was conducted within the framework of the University for Health project, a health education and physical recreation program for older people implemented by the European Union.

The study was carried out by Polish researchers who recruited 56 women between the ages of 50 and 79 who participated in a 90-minute



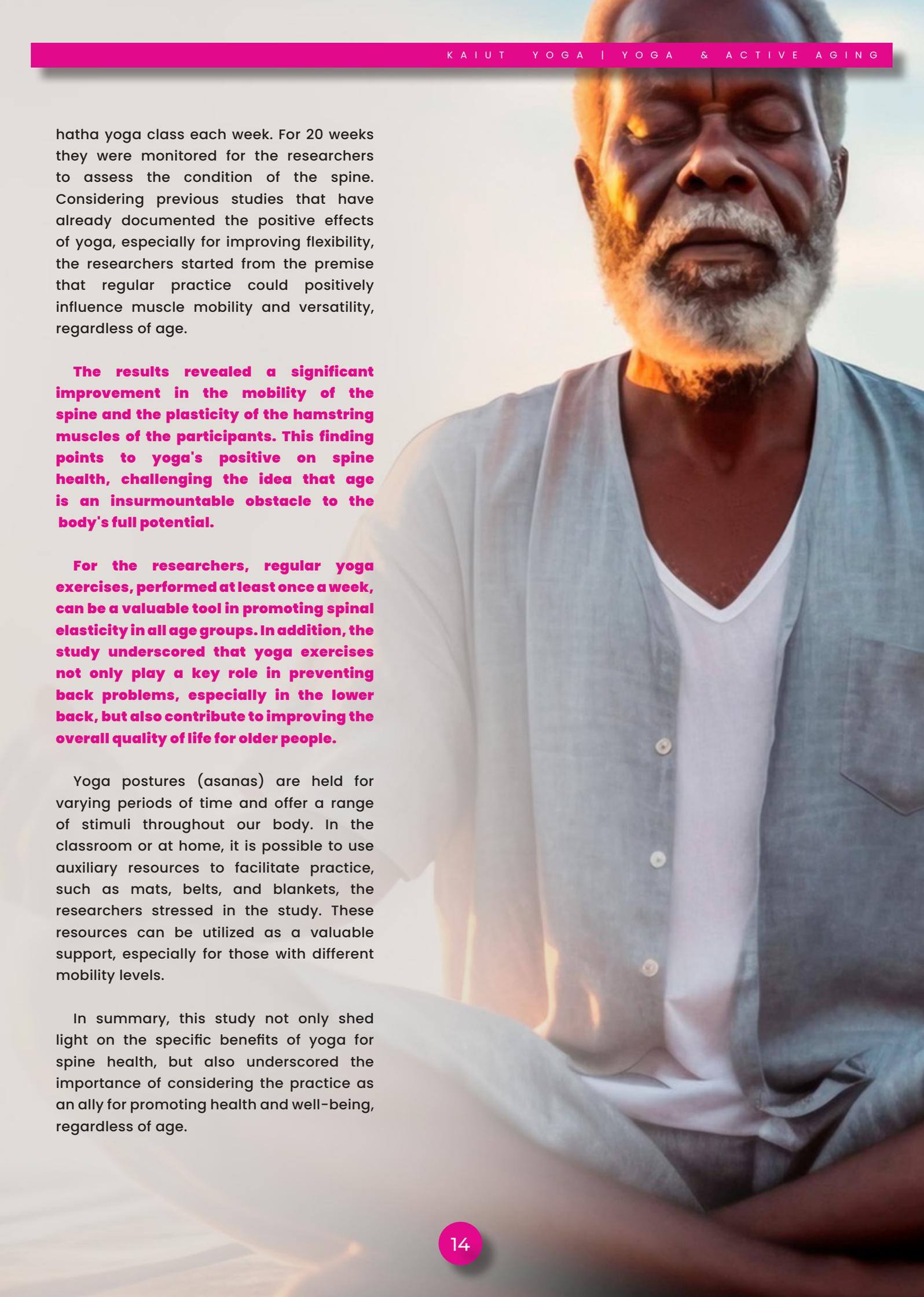
hatha yoga class each week. For 20 weeks they were monitored for the researchers to assess the condition of the spine. Considering previous studies that have already documented the positive effects of yoga, especially for improving flexibility, the researchers started from the premise that regular practice could positively influence muscle mobility and versatility, regardless of age.

The results revealed a significant improvement in the mobility of the spine and the plasticity of the hamstring muscles of the participants. This finding points to yoga's positive on spine health, challenging the idea that age is an insurmountable obstacle to the body's full potential.

For the researchers, regular yoga exercises, performed at least once a week, can be a valuable tool in promoting spinal elasticity in all age groups. In addition, the study underscored that yoga exercises not only play a key role in preventing back problems, especially in the lower back, but also contribute to improving the overall quality of life for older people.

Yoga postures (asanas) are held for varying periods of time and offer a range of stimuli throughout our body. In the classroom or at home, it is possible to use auxiliary resources to facilitate practice, such as mats, belts, and blankets, the researchers stressed in the study. These resources can be utilized as a valuable support, especially for those with different mobility levels.

In summary, this study not only shed light on the specific benefits of yoga for spine health, but also underscored the importance of considering the practice as an ally for promoting health and well-being, regardless of age.





AGING WELL AND BETTER

One of the challenges for those who are over 50 years old to start in yoga classes is to have the confidence to start. The idea of falling or suffering an injury keeps many away from the classroom. There are also individuals who imagine that age can represent a limitation, even more so if they consider the practice suitable only for young, flexible, lean and healthy bodies.

Breaking these stereotypes is the role of teachers, they need to be careful in the first classes to build the necessary security for the beginning of the practice. It is up to them to show students that there are options to have a healthier life through a safe practice that includes variations in postures. Resources such as blocks, cushions, straps, and other props can serve as support and protection during classes, helping the student find the tailored fit of their own body in the posture. Even a chair for generating more confidence, added to a wall that helps with balance.

The practice of yoga transcends the stereotypes that often surround it, showing that it is accessible and beneficial for all ages and body types. Precisely for this reason, it is increasingly possible to find people over 60 years old in yoga classrooms practicing self-care.

Researchers from the University of Southern California (USC) and the University of California Los Angeles (UCLA) have joined the Yoga Empowers Seniors Study (YESS) project. In it, the biomechanics of the body were explored to quantify the physical demands associated with seven standing yoga postures commonly practiced by older adults.

The YESS results showed that musculoskeletal demand varies between postures, highlighting the importance of a personalized approach. The analysis of the moments of joint strength of the lower limbs revealed significant differences between the seven postures, pointing to the need for well-balanced yoga programs that target a variety of muscle groups.

For 32 weeks, a group of 20 seniors participated in two weekly Hatha Yoga classes of 60 minutes each. In the sections, the Chair, Wall Plank, Tree, Warrior II, Lateral Stretching, Crescent, and One-Legged Balance postures were performed. Participants' biomechanical data were collected by the USC Musculoskeletal Biomechanics Research Laboratory from markers placed on students' bodies before classes. What they found is that firstly, participants were able to engage with the postures successfully and that some postures generated greater structural tone in participants—a fact that overturns the idea that only young and flexible bodies can practice yoga effectively.

The work showed the findings on the sagittal planes (the one that divides the body, from the top of the head to the tip of the feet, from left to right) and frontal (it divides into the anterior and posterior portions, showing how different postures target and stimulate different areas of the body. Regarding joint strength, the study concluded that it is necessary to adapt the practice to different needs, especially in the elderly.

The study concluded that it is possible to target specific joints or muscle groups from a personalized yoga program, with postures selected considering the biomechanical profiles of the students. Thus, teachers can select postures and put together a well-balanced program, avoiding repetitive overloads on the same musculoskeletal tissues and achieving better results.

Deconstructing stereotypes about yoga is essential to promote an inclusive practice adapted to different bodies and ages. Knowledge of students' physical demands provides a solid foundation for creating effective yoga programs that seek to not only strengthen the body but also promote balance, mobility, and overall health, regardless of age.

As you can see above, yoga can be tailored to the needs of the students. The positive effects of the practice on health are numerous. Still, I would like to highlight its impact on mental well-being, especially in people over 60 years of age, generating more quality of life. When we talk about quality of life, this is a broad concept that involves different domains of health, such as physical, mental, emotional and social functioning. On the other hand, mental well-being impacts the general state of health of human beings. It's about much more than the absence of mental illness, but also the individual capacity to feel good, broadly, and have the whole body functioning well. In short, it is the subjective experience of happiness combined with life satisfaction and psychological positivity.

As an activity that involves body and mind, yoga has the power to improve the overall quality of life. A review of studies published in *Age and Ageing*, a journal from the University of Oxford, aimed to determine the impact of yoga on quality of life and mental well-being in people over 60. The researchers identified 12 studies that together totalled 752 participants, with an average age between 60 and 75 years. All of the studies had an experimental group that participated in yoga sessions, while the others did not. The analysis allowed the academics to conclude that the practice improved the quality of life and mental well-being of the students.

Like previous research, the review found that yoga is beneficial for older people, including for gains in mobility and balance, as well as improving symptoms of depression. In this review, we considered modified postures in standing, sitting, and bench press, or even some that resorted to the use of resources such as blocks, blankets, and straps to help students over 60 perform the postures. This highlighted that the practice can be suitable for people over 60 years of age with physical issues such as back pain, Parkinson's disease, osteoarthritis, and cancer. That is, there is no limitation to include yoga in the care routine.

With the review, it can be concluded that quality of life and mental well-being in old age are associated with healthy aging. Thus, adults over the age of 60 can improve these two aspects of life through yoga, which is considered a safe and viable physical activity option for all people, including the elderly.

As you can read, yoga contributes positively to the aging process, offering a number of benefits to individuals. With practice, good physical availability is cultivated, translated into strength, flexibility, balance and agility. The integration of postures, breathing techniques, and meditation promotes a harmony between body and mind, promoting healthy aging.

CONCLUSION

Active Aging and Quality of Life with Yoga

As we celebrate the increase in longevity in the world's population, we need to recognize that aging is a unique journey for each individual. Old age, far from being synonymous with illness, opens doors to new possibilities and experiences, marking a phase of life in constant evolution. The process is characterized by structural, biochemical and psychological transformations, it is natural and universal. However, the quality of this aging is intrinsically linked to a holistic approach that considers genetic factors, health conditions, and the surrounding environment.

In this context, yoga emerges as an integral practice, offering both physical and mental benefits to those who seek to age with health and quality of life. More than a simple exercise, it transcends conventional interventions when it comes to benefitting physical and mental health. Studies that underscore yoga's positive impacts on cognition, mental and physical health highlight the effectiveness of the practice compared to individual interventions.

Doing yoga and meditating regularly slows down aging and is a key to being healthier as we age. Making yoga and meditation an intrinsic part of our lifestyle can be considered a vital strategy. Given the aging population across the world, and the subsequent public health challenges we as a global community face, the promotion of physical activity is crucial. Yoga, by offering a practice that transcends conventional physical exercise, can become an effective response to encourage independence at all stages of life, especially in old age.

As we wrap up this journey through active aging with yoga, it's undeniable that the choices we make today will shape tomorrow. It is important to adopt the practice as part of a lifestyle that values health, vitality, wisdom, and wholeness.

REFERENCES

U.S. Census Bureau, 2023 National Population Projections Tables: Main Series. <https://www.census.gov/data/tables/2023/demo/popproj/2023-summary-tables.html> Accessed on 02/15/2024.

U.S. Census Bureau, "America Is Getting Older," June 22, 2023; and U.S. Census Bureau, 1980 Census of Population, Volume 1, Characteristics of the Population (PC80-1). <https://www.census.gov/newsroom/press-releases/2023/population-estimates-characteristics.html> Accessed on 02/15/2024.

Decade of Healthy Aging in the Americas (2021-2030). Pan American Health Organization, 2020. Available at <https://www.paho.org/pt/decada-do-envelhecimento-saudavel-nas-americas-2021-2030#:~:text=A%20popula%C3%A7%C3%A3o%20mundial%20est%C3%A1%20aged,until%C3%A9%20o%20final%20do%20s%C3%A9culo>. Accessed on 01/10/2024.

Tieghi, Ana Luiza. Taking care of your body and mind is a way to age healthily. Open Space, University of São Paulo, 2014. Available at: <https://biton.uspnet.usp.br/espaber/?materia=cuidar-de-corpo-e-mente-e-saida-para-aging-with-health>. Accessed on 01/13/2024.

Care Guide for the Elderly. Brazilian Ministry of Health, 2023. Available at: <https://www.gov.br/saude/pt-br/assuntos/noticias/2023/dezembro/pesquisa-aponta-q-almost-37-of-Brazilians-over-50-years-old-has-chronic-pain>. Accessed on: 01/14/2021.

Exercise and aging: Can you walk away from Father Time. Harvard Health Publishing, 2014. <https://www.health.harvard.edu/staying-healthy/exercise-and-aging-can-you-walk-away-from-father-time>. Accessed: 13/01/2024.

Kim, Geon Ha et al. Higher Physical Activity Is Associated with Increased Attentional Network Connectivity in the Healthy Elderly. *Frontiers in Aging Neuroscience*, 2016. <https://www.frontiersin.org/articles/10.3389/fnagi.2016.00198/full>. Accessed:13/01/2024.

Budson, Andrew E. How to stay strong and coordinated as you age. Harvard Health Publishing, 2021. <https://www.health.harvard.edu/blog/how-to-stay-strong-and-coordinated-as-you-age-202112022651>. Accessed: 15/01/2024.

Exercise is an all-natural treatment to fight depression. Harvard Health Publishing, 2021. <https://www.health.harvard.edu/mind-and-mood/exercise-is-an-all-natural-treatment-to-fight-depression>. Accessed: 18/01/2024.

Tolahunase M, Sagar R, Dada R. Impact of Yoga and Meditation on Cellular Aging in Apparently Healthy Individuals: A Prospective, Open-Label Single-Arm Exploratory Study. *Oxidative Medicine and Cellular Longevity*, 2017. <https://ncbi.nlm.nih.gov/pmc/articles/PMC5278216/>. Accessed 22/01/2024.

Madhivanan P, Krupp K, Waechter R, Shidhaye R. Yoga for Healthy Aging: Science or Hype? *Advances in Geriatric Medicine and Research*. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8341166/>. Accessed: 18/01/2024.

Jeter PE, Slutsky J, Singh N, Khalsa SB. Yoga as a Therapeutic Intervention: A Bibliometric Analysis of Published Research Studies from 1967 to 2013. *Journal of Alternative and Complementary Medicine*, 2015. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4605382/>. Accessed: 28/01/2024.

Akdeniz, Ş., Kaştan, Ö. Perceived benefit of yoga among adults who have practiced yoga for a long time: a qualitative study. *BioPsychoSocial*. <https://bpsmedicine.biomedcentral.com/articles/10.1186/s13030-023-00276-3#citeas>. Accessed: 28/01/2024.

Grabara M, Szopa J. Effects of hatha yoga exercises on spine flexibility in women over 50 years old. *Journal of Physical Therapy Science*, 2015. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4339138/>. Accessed 28/01/2024.

Wang MY, Yu SS, Hashish R, Samarawickrame SD, Kazadi L, Greendale GA, Salem G. The biomechanical demands of standing yoga poses in seniors: The Yoga empowers seniors study (YESS). *BMC Complementary Medicine and Therapies*, 2013. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3557154/>. Accessed 28/01/2024.

Alice Tulloch, Hannah Bombell, Catherine Dean, Anne Tiedemann, Yoga-based exercise improves health-related quality of life and mental well-being in older people: a systematic review of randomised controlled trials, *Age and Ageing*, 2018. <https://doi.org/10.1093/ageing/afy044>. Accessed 30/01/2024.



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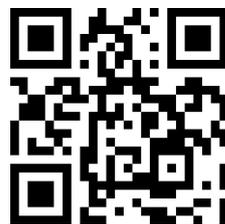
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