



## THE PHYSIOLOGICAL EFFECTS OF YOGA ON DIFFERENT AGE GROUP

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### **Abstract**

The findings of a selection of previous studies that have discussed the physiological impacts of Yoga and Diet counselling will be analysed as part of this research project. Yoga is an ancient Indian science that encompasses all aspects of a person's existence, ranging from physical wellness to the discovery of one's true self. To achieve the highest possible level of awareness, yoga is a kind of life management that entails making modifications to one's diet, mental attitude, and the practise of specific procedures such as yoga asanas (postures), breathing practises (pranayamas), and meditation. There has been a recent spike in the amount of research conducted on yoga; nevertheless, we have only found a small number of publications that examine the role of yogic practises and nutritional guidance in health and illness. In light of this, an analysis of the physiological consequences of yoga practises and nutritional recommendations was carried out by conducting a review of the pertinent literature. According to the findings of the review, there were significant health benefits, some of which include improved patterns of sleep, cognition, body mass index, reproductive health, respiratory function, blood pressure, joint diseases, diabetes, and treatment for recovering addicts and addicts seeking recovery.

**Keywords:** *physiological, yoga*

### **Introduction**

The area of medicine known as complementary and alternative medicine (often abbreviated as CAM) is one that is now undergoing rapid expansion and development. Alternative and complementary medicine (CAM) is an umbrella term encompassing many types of therapy that are either used in place of conventional forms of treatment or in addition to them. According to the National Center for Complementary and Alternative Medicine, the definition of complementary and alternative medicine (CAM) is "a spectrum of various medical and health care systems, practises, and products that are not presently accepted as part of mainstream medicine" (NCCAM). [1] Alternative and complementary medicine is often known as "integrative medicine." The National Center for Complementary and Alternative Medicine (NCCAM) has classified a wide variety of complementary and alternative medicine (CAM) treatments into the following categories: biologically based therapies (such as herbs, aromatherapy, dietary supplement use, oxygen therapy), mind-body interventions (such as yoga, hypnotherapy, art therapy), energy therapies (such as Reiki, Tai Chi), manipulative and body based methods (such as chiropractic, reflexology), and mind-body interventions (such as acupuncture, massage therapy) (e.g. homeopathy, Chinese herbal medicine, naturopathy). The complementary and alternative medicine (CAM) therapies include significant therapeutic lifestyle changes

(TLCs), which are accessible, effective, and cost-effective regardless of whether they are taken on their own or in conjunction with other treatments. [2, 3]. TLCs have the potential to enhance not just a person's physical health but also their feeling of self-worth, as well as their quality of life. [4] Due to the fact that certain TLCs, including exercising exercise, watching what you eat, practising yoga, and meditating, may be enjoyable, there is a greater possibility that they will develop into long-term, self-sustaining healthy habits. [5] It is also possible that it has neuroprotective properties, which would mean that it would reduce the chance of future cognitive impairment associated with ageing as well as the shrinkage of the relevant brain tissue. [6-8] Cancer survivors who engage in healthy lifestyle behaviours, such as exercising regularly, maintaining a healthy weight, and eating healthily, have the potential to significantly reduce the risk of morbidity and mortality associated with cancer treatment, and they can also improve their quality of life. These behaviours include maintaining a healthy weight, eating healthily, and exercising regularly. [9] There is some evidence to suggest that regular yoga practise can promote health by reducing activity in the hypothalamic-pituitary-adrenal axis and the sympathetic nervous system. [Citation needed] [Citation needed] PCOS has been linked to issues with both the metabolism and the reproductive system; treatment of both illnesses may benefit from physical activity and nutritional counselling (Polycystic Ovary Syndrome). [10] It is likely to be advantageous to have a nutritionist follow general dietary recommendations (such as a reduced intake of sodium chloride, saturated fat, and energy), which has the potential to have a big effect in lifestyle illnesses that are not complicated and are mild to moderate in severity. Because of the significant influence that one's upbringing and the people who serve as role models have on one's dietary and possibly other lifestyle behaviours, it is likely that dietary treatments should always target the entire family, such as in the primary prevention of coronary heart disease (CHD) (Coronary Heart Disease). [11] As a result of this, there is a desire for nonpharmacologic therapy choices including yoga and food counselling in the event of less severe lifestyle issues. In spite of the fact that there is a substantial body of documented scientific evidence indicating that yoga may have curative, preventative, and promotional effects, additional research is required to determine the extent to which the findings of previously conducted research are applicable to individuals who already suffer from lifestyle-related illnesses. Yoga has been shown to have a number of health benefits, including reduced stress, improved circulation, and reduced blood pressure.

### **Physiological Basis of Yoga**

- a) Neuroplasticity, changes in the hypo-pituitary–pancreatic axis, and changes in the sympathetic nervous system may result from deeper relaxation during yoga.
- b) Pranayama, which stretches the lung tissue, produces inhibitory signals from the cardio-respiratory region involving vagi, as a result of the action of slowly adapting receptors and hyperpolarizing currents. These inhibiting signals may cause alterations in the autonomic nervous system, as well as decreased metabolic rate and predominance of the parasympathetic nervous system. The practise of pranayama has the potential to alter a variety of inflatory and deflatory lung responses as well as interact with central neuronal components to alter homeostasis.
- c) The regeneration of pancreas cells that occurs during yoga practise may boost glucose consumption as well as glucose metabolism in peripheral tissues, liver, and adipose tissues. Both the sensitivity of the b-cells in the pancreas to the signal that glucose is present and the sensitivity of the cells to insulin can be improved by the practise of yoga. Direct stimulation of the pancreas by the postures can revitalise its capacity to produce insulin;

- d) Muscular relaxation, development, and improved blood supply to muscles might enhance insulin receptor expression on muscles, causing increased glucose uptake by muscles and thus reducing blood sugar levels; and
- e) Practicing yoga can result in better lipid levels, which may be the result of enhanced hepatic lipase and lipoprotein lipase at the cellular level, as well as an increase in the absorption of triglycerides by adipose tissues.
- f) It appears that the activity of the ascending reticular activating system and the autonomic centres in the brainstem are modified by meditation, which has an effect on the cardiovascular, respiratory, and metabolic parameters.
- g) A research found that experienced meditators had increased grey matter density in lower brain stem areas compared with non-meditators of the same age, and that experienced meditators exhibited structural changes in brainstem regions with cardio-respiratory regulation.
- h) Regular meditation practise increased the speed at which attention could be distributed and moved, leading to an increase in the level of information processing as well as a reduction in reaction latency.
- i) I at the beginning of meditation, the skin resistance significantly rose, and although it dropped after meditation, it remained much greater than it was before meditation.
- j) An increase in melatonin levels may be one of the ways in which meditation is thought to facilitate the health benefits that have been attributed to it.

### **Benefits of Yoga for Different Age Groups**

Many people in the modern era believe that yoga is the key to excellent health. It is a pattern that people all across the world are discussing in the same way. People have gained first-hand knowledge of its advantages, and as a result, they are experimenting with a variety of yoga practises. The world's opinion on yoga has undergone a sea change over the course of the past decade. The reason for this transition is due to the fact that yoga has a variety of advantages that may be enjoyed by everybody. Yoga is now being taught to people of all ages, from very young children to older citizens, with the intention of assisting them in overcoming a variety of challenges.

The practise of yoga contributes to overall growth and health. Everything, including a person's physical, mental, emotional, and spiritual well-being, is taken into consideration. Everyone's attention has been redirected to their health and their immune systems after the recent outbreak. People all across the world are turning to yoga as a means of dealing with the abrupt shift in their circumstances and adjusting to the new norm. Meditation and deep breathing are also essential aspects of yoga, since they enable practitioners to think more clearly and approach situations with a more objective perspective. Our lives become more balanced as a result, and we are better able to find delight in the everyday activities that we once took for granted.

The following is a list of ways that yoga may assist people of varying ages deal with their various physical and mental issues:

**Kids:** Children have been severely impacted as a result of the epidemic. They no longer have the natural instinct to be carefree and impetuous because of what it has done to them. They are now continually confronted with worry and terror even if they are careful about the acts they take. Parents and even schools

are turning to yoga in order to assist their children in releasing pent-up energy, connecting with one another, and expressing their feelings. Because yoga is not a competitive activity, there is no added pressure on the child to do well. Instead, the child learns to tune in to what their body is telling them and how practise is the key to becoming better while also learning to accept their body's limitations. Your children will benefit much from beginning their yoga practise at a young age, so be sure to instil this belief in them. Partner poses are a wonderful way for parents and children to connect with one another. Learning together, supporting one another, and having fun while performing some fun postures helps to build the bond of love and trust that exists between them.

**Pre-Teens and Teens:** The challenges that this age group must overcome are more complex than those faced by younger children. Negativity and dread in their environments as their personalities are being shaped causes them to have varying perspectives on the various experiences that life has to offer. There is a lot of unpredictability in the world nowadays, which may easily lead to feelings of self-doubt. They find that yoga helps them connect with their bodies as well as their breaths. They get an understanding of self-love and self-acceptance. They are able to keep their mental and emotional equilibrium in spite of the unexpected, out of their control changes that are occurring in their surroundings.

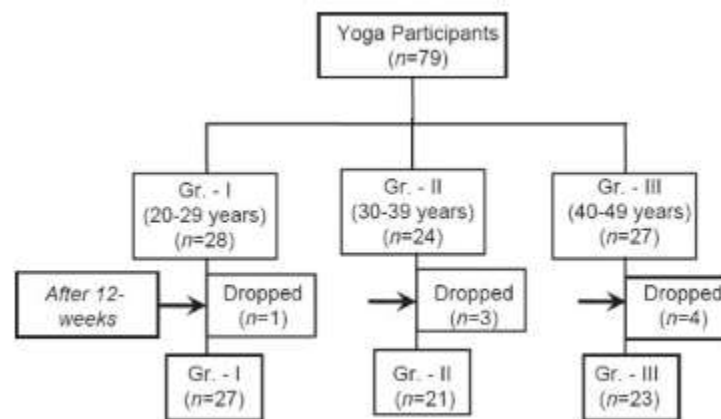
**Adults:** For people who fall into this group, life has become absolutely unmanageable. Nobody who is an adult in this world ever dreamed that their life would be what it is right now. Life has thrown everyone's plans for the shuffle, whether it be dealing with the death of loved ones, the loss of a job, being unable to visit their place of employment, staying connected with the world from their homes, taking care of the day-to-day responsibilities of the household, and being responsible for the education and entertainment of their children. People learn to accept things that are outside of their control via the practise of yoga. The breathing techniques that are part of yoga make a significant contribution toward assisting people in facing reality in a composed and in charge manner. In today's world, when stress, worry, and depression are all too common, having a tool like yoga to assist you combats these conditions is invaluable.

**Senior Citizens:** This is the age group that is most severely impacted. People older than 60 years old made up the vast majority of those who perished. The practise of yoga has been shown, throughout the course of time, to be beneficial for both immunity and longevity. Through the various asanas (yoga positions) and pranayama (breath practise), yoga offers a solution to the majority of the physical and mental challenges that occur with advancing age. The positive effects of yoga have been demonstrated by a plethora of studies. The regular practise of yoga raises one's level of awareness, which, in turn, has a beneficial effect on all facets of a person's life. Rejuvenating, restoring health, strengthening, and empowering are just a few of the benefits that it provides. Yoga is not a competitive activity, and it can be done in a moderate or difficult manner. Yoga may be practised by everyone, regardless of their age or body type. Because modern yoga can be readily adapted to maximise an individual's benefits and be practised at a level that is comfortable for them, all you need to do is find your own unique practise and determine what works best for you. Include your family in your yoga practises so that you may strengthen your relationship with them while also reaping the benefits of yoga together. Spending meaningful time with loved ones is an excellent way to enhance connections, as well as to bring more good energy into one's life and home.[12]

## **MATERIALS AND METHODS**

This study included the participation of seventy-nine ( $n = 79$ ) male Indian air force ground personnel members who were between the ages of 20 and 49. They did not have any prior experience with the practise of yoga and did not suffer from any clinical illnesses or use any medications. They were separated into three

groups according to their ages as follows: Group I (Gr. - I) (n1 = 28, aged 20-29 years), Group II (Gr. - II) (n2 = 24, aged 30-39 years), and Group III (Gr. - III) (n3 = 27, aged 40-49 years) [Figure 1]. According to the declaration of Helsinki, individual written informed consent was acquired from each participant, and the entirety of the study was carried out only after getting authorization from the Institutional Ethical Committee. Everyone was given an explanation of the aim of the research as well as their participation within it. There was one volunteer from Grade I, three volunteers from Grade II, and four volunteers from Grade III who did not participate in the study owing to a variety of reasons and were not included in the final analysis. Therefore, 27 participants from Grade I, 21 volunteers from Grade II, and 23 volunteers from Grade III (n = 71 for the overall group) finished the full research. Before the beginning of the studies, the participants were asked to refrain from engaging in any activities that required them to eat, drink, or exert themselves physically for at least two hours. The subjects shared a similar eating habit in terms of their overall calorie consumption, and they all got their food from the same mess.



**Figure 1** Flow diagram of the study recruitment and follow-up

### Yogic training

For a total of twelve weeks, every one of the volunteers participated in a specialised Hatha yoga training (HYT) that consisted of one hour of yoga practised six days a week in the early morning (05:30-06:30 h) and led by a certified yoga instructor (3 months). Prayer, yogic sukshma and sthulavayama, suryanamaskar, shuddhi kriyas (yogic internal cleaning techniques), yogasanas, pranayamas, and meditation were all part of the yogic session. The order of the yoga poses and their duration are detailed in Table 1, which may be seen here. This training regimen will be referred to in the following as "HYT," an abbreviation. Because attendance at yoga sessions and performance during yoga sessions are known to have an effect on the result of training, the yoga instructor was responsible for ensuring that the volunteers adhered to and performed well during yoga sessions. They maintained consistent attendance as well as comprehensive and routine practise in the record, and as a result, they were able to prevent these factors from having an effect on the outcome.

**Table 1 Contents of yogic package practiced by the volunteers for 12-weeks training program**

Practices	Duration (min)
Prayer	1
Yogic Sukshma Vyama	5
Yogic Sthula Vayama	5
Surya Namaskar (2 rounds)	5
Shuddhi Kriya	
Kapalbhati	2
Yogasana	20
<i>Meditative Asanas</i>	
Padmasana	
Vajrasana	
<i>Cultural Asanas</i>	
<i>Standing Posture Asanas</i>	
Tadasana	
<i>Sitting Posture Asanas</i>	
Yogamudra	
Gomukhasana	
Paschimottanasana	
<i>Prone Lying Posture Asanas</i>	
Bhujangasana	
Dhanurasana	
Supta Vajrasana	
Sarvangasana	
<i>Supine Lying Posture Asanas</i>	
Supta Pawanmuktasana	
Matsyasana	
Halasana	
Karnapidasana	
Uttanapadasana	
<i>Relaxative Asanas</i>	
Savasana	
Pranayama	10
Anulom-viloma	
Bhastrika	
Bhramari	
Omkar meditation	10

### Experimental procedures

All the volunteers participated in a pre-post design study. Every experiment was carried out before and after the yoga training period, to appraise the effect of the said training. Their daily routine such as morning drill, PT and other duties remained unaltered.

### Anthropometric assessment

Every anthropometric parameter was collected from the volunteers when they were just wearing the barest minimum of garments and going barefoot. With the use of a stadiometer, the standing body height was measured to an accuracy of within 0.1 cm, beginning from the soles of the feet and proceeding all the way up



to the vertex in an upright body position. The subject's body mass (in kilogrammes) was determined by utilising a conventional electronic scale when the subject's bladder and stomach were empty (ID150H, Delmar, India). The Du Bois formula was utilised in order to determine the body surface area (BSA). The body mass index (BMI) was determined by taking the square root of the ratio of weight to height. The ponderal index (PI) was determined by taking the ratio of weight to height multiplied by three. The conicity index (CI) was determined with the use of a tried and true formula.

The volunteers were instructed to stand with their shoulders relaxed, face the investigator, and maintain an upright posture while having their circumferences measured using a tape measure. The cricoid cartilage was used as the reference point for the anterior measurement of the neck circumference (NC), and the midpoint between the external occipital protuberance and the tip of the spinal process of the 7th cervical spine was used for the posterior measurement (vertebral prominence at the root of the neck). The upper chest, at the level of the junction between the deltopectoral groove and the tip of the anterior axillary fold, was the location where chest circumferences were measured both during full inspiration and during severe expiration. The measurement for the waist circumference was taken at the point that was exactly in the middle of the iliac crest and the lowermost edge of the ribs. The volunteers stood with their feet together while having their hip circumference measured. The measurement was taken at the point where the buttocks had the greatest circumference.

The GPM Skinfold Caliper was used to measure the skinfold thickness of the biceps, triceps, subscapular, and suprailiac areas in millimetres (DKSH, Switzerland). For the purpose of determining the biceps skinfold thickness, the biceps fat pad was measured at the level of the vertical fold at the posterior midline of the upper arm while the right arm was held in a suspended position. In order to determine the triceps skinfold thickness, the triceps fat pad was measured while the arm was in a relaxed position. This measurement was taken approximately halfway between the lateral projection of the acromion process of the scapula and the inferior margin of the olecranon process of the ulna. The fat pads below the inferior angle of the scapula and superiorly on the iliac crest immediately in the midaxillary line were measured to determine the subscapular and suprailiac skinfold thicknesses, respectively. The thickness of each skinfold was measured to the closest one millimetre. At each location, the average of three separate readings was tallied. We also assessed the subscapular to triceps ratio (S:T), the central skinfold thickness (the total of the subscapular and suprailiac skinfolds), and the peripheral skinfold thickness (the sum of the biceps and triceps skinfolds). According to Siri, we were able to determine our body density. The usual equation was used to compute the subject's percentage of body fat. In addition to this, both total body fat and lean body mass (LBM) were determined.

## RESULTS

Anthropometric characteristics, muscular strength and flexibility of group all volunteers is presented in [Table 2](#). Body weight of air force volunteers improved significantly ( $P < 0.05$ ) after HYT. BSA, BMI and CI did not show any significant change after yogic practices, though we observed a gross trend of improvement in these parameters after yogic practice. PI of these participants was improved significantly ( $P < 0.05$ ). Triceps, suprailiac and subscapular skinfold thickness decreased significantly ( $P < 0.01$ ,  $P < 0.01$  and  $P < 0.05$  respectively) after yoga practice. Biceps skinfold thickness also decreased, but the value was statistically not significant. Central, peripheral, sum of all skinfold thickness and LBM of the volunteers decreased significantly (All  $P < 0.05$ ) after 12-weeks yoga practice. Body density increased significantly ( $P < 0.001$ );

while S: T, central to peripheral skinfold ratio (C:P), fat% and total fat were lowered after HYT – but the data was statistically not significant. LBM% registered statistically non-significant increment. Chest circumference (during both inspiration and expiration) of the volunteers was increased significantly (both  $P < 0.001$ ) after yoga training. Neck, waist and hip circumference and waist-hip ratio did not show any significant change after yoga practice, but a trend of improvement was observed. Handgrip strength (left and right) of the participants improved significantly ( $P < 0.01$  and  $P < 0.001$  respectively) after HYT. Back leg strength (BLS) of air force volunteers was also improved significantly ( $P < 0.001$ ). T and N and H and T flexibility improved significantly (both  $P < 0.001$ ) after 12 weeks yoga training.

**Table 2 Anthropometric characteristics, muscular strength and flexibility of group all**

Parameters	Before	After
Body weight (kg)	72.5±10.5	68.8±8.6*
BSA (m <sup>2</sup> )	1.84±0.14	1.80±0.12
BMI (kg/m <sup>2</sup> )	24.1±4.1	23.2±3.0
PI (kg/m <sup>3</sup> )	14.6±2.0	13.9±1.7*
CI	1.30±0.12	1.29±0.11
Body fat		
Biceps (mm)	6.0±2.7	5.6±2.8
Triceps (mm)	12.2±5.1	10.1±3.8**
Suprailiac (mm)	13.2±6.7	10.3±5.3**
Subscapular (mm)	19.2±8.2	16.5±7.1*
S:T	1.11±0.42	1.03±0.35
Central SFT (C)	32.5±14.1	26.8±11.8*
Peripheral SFT (P)	18.2±7.3	15.7±6.0*
C:P	1.80±0.44	1.71±0.43
SKFT	50.1±21.2	43.1±16.6*
Density (kg/m <sup>3</sup> )	1.05±0.02	1.06±0.01***
Fat %	20.3±7.4	18.7±6.5
LBM %	79.7±7.4	81.3±6.5
Total fat (kg)	15.3±6.9	13.3±5.6
LBM (kg)	57.2±5.7	55.4±5.1*
Circumference		
Neck (cm)	34.7±3.0	34.3±2.6
Chest (inspiration, cm)	92.1±7.9	96.8±7.3***
Chest (expiration, cm)	85.9±7.8	90.8±7.7***
Waist (cm)	91.9±10.4	89.0±9.0
Hip (cm)	93.9±6.1	92.4±5.3
W/H ratio	0.99±0.11	0.96±0.10
Muscular strength (kg)		
LGS	37.5±4.8	40.4±5.9**
RGS	39.2±5.5	43.5±5.7***
BLS	112.8±18.2	125.0±18.0***
Flexibility (cm)		
Trunk and neck	37.6±7.6	58.9±8.7***
Hip and trunk	28.6±7.2	35.8±6.9***

Table 3 shows Gr. - I volunteers' anthropometrics, muscular strength, and flexibility. Body weight, BSA, BMI, PI and CI of this age group did not change significantly after 12 weeks of yoga, although a trend was noticed. HYT lowered ( $P < 0.05$ ) subjects' suprailiac skinfold thickness. Biceps, triceps, subscapular skinfold thickness, S:T, sum of central and peripheral skinfold thickness, C:P, all skinfold thickness, fat percent, total fat, and LBM reduced non-significantly. After HYT, individuals' neck and chest circumferences rose ( $P < 0.05$ ). Waist, hip, and waist-hip ratio reduced, although not much. Both left and right handgrip strength increased after yoga ( $P < 0.05$  and  $P < 0.01$ ). BLS also improved ( $P < 0.05$ ). T and N and H and T flexibility increased considerably (both  $P < 0.001$ ).



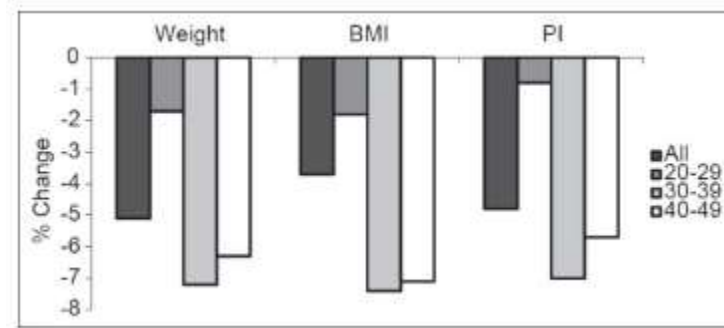
**Table 3 Anthropometric characteristics, muscular strength and flexibility of Group I**

Parameters	Before	After
Body weight (kg)	63.8±6.2	62.7±7.3
BSA (m <sup>2</sup> )	1.74±0.11	1.73±0.12
BMI (kg/m <sup>2</sup> )	21.9±1.8	21.5±1.9
PI (kg/m <sup>2</sup> )	12.9±1.2	12.6±1.2
CI	1.25±0.12	1.24±0.1
Body fat		
Biceps (mm)	3.93±1.12	3.71±1.05
Triceps (mm)	7.87±2.32	7.25±2.46
Suprailiac (mm)	7.27±2.54	5.86±1.95*
Subscapular (mm)	10.81±2.76	10.21±3.08
S:T	0.96±0.31	0.86±0.27
Central SFT	18.07±4.57	16.07±4.77
Peripheral SFT	11.8±3.3	11.0±3.1
C:P	1.58±0.38	1.51±0.38
SKFT	28.5±6.9	28.4±7.4
Density (kg/m <sup>3</sup> )	1.072±0.007	1.072±0.007
Fat %	11.78±2.90	11.74±3.02
LBM %	88.22±2.90	88.26±3.02
Total fat (kg)	7.63±2.39	7.51±2.67
LBM (kg)	56.21±4.59	55.17±5.14
Circumference		
Neck (cm)	33.4±2.2	34.8±2.7*
Chest (inspiration, cm)	90.9±8.8	95.9±7.7*
Chest (expiration, cm)	83.9±8.7	88.8±7.8*
Waist (cm)	83.6±9.8	82.0±7.9
Hip (cm)	91.7±3.3	90.4±5.6
W/H ratio	0.93±0.12	0.90±0.10
Muscular strength (kg)		
LGS	35.6±4.2	38.1±4.5*
RGS	38.4±5.1	42.2±4.7**
BLS	110.9±18.7	122.1±19.0*
Flexibility (cm)		
Trunk and neck	40.6±8.7	64.2±7.9***
Hip and trunk	32.0±7.1	38.9±6.7***

## DISCUSSION

The current study was conducted to assess the effect of a 12-week HYT programme on anthropometric parameters, flexibility, and muscular strength of healthy persons across age groups. Hatha Yoga, an ancient Indian culture and way of life, improves physical and mental performance. Body weight, BMI, PI, skinfold thicknesses, fat percent, body circumferences, muscular strength, and flexibility increased in healthy people of diverse ages and occupations. Body weight is used to determine dietary needs, pharmacological dosage, pulmonary tidal volume, and hemodynamics. As excess or deficient body weight is linked to numerous lifestyle-related disorders, maintaining a healthy weight is crucial regardless of age or gender. In the current study body, weight dropped in all age categories, with the greatest loss in the 30-39 year age group (7.2%) [Figure 2]. All subjects' reduced body fat undoubtedly contributed to this decline. Yoga reduces middle-aged

men's body weight, according to Ray et al. Sukshma, sthulavyama, suryanamaskar, and asanas assist participants lose weight.



**Figure 2** Percentage change of weight, BMI and PI among all and volunteers of different age groups. BMI = Body mass index; PI = Ponderal index

According to the classification used by the World Health Organization, the body mass index (BMI) of all of the volunteers and participants in the age group 20-29 years was found to be within the "normal range," while the BMI of volunteers in the age groups 30-39 years and 40-49 years was considered to be "overweight" (2004). Following HYT, the BMI of all participants and volunteers in the age range of 20-29 years remained within the "normal range." However, the Body Mass Index (BMI) of participants in the age group of 30-39 years and 40-49 years was adjusted to "normal range" with a drop in BMI of 7.4 percent and 7.1 percent, respectively. It has been proven that an individual's chance of developing ischaemic heart disease rises by at least 26 percent for every 4 kg/m<sup>2</sup> increase in their body mass index. In this particular study, the BMI was brought down to a level of 2 kg/m<sup>2</sup> for the age group of 30-39 years, and 1.9 kg/m<sup>2</sup> for the age group of 40-49 years. After 12 weeks of HYT, the participants' body weight fell, which led to a fall in the PI, which indicates how a person's weight varies in relation to their height. The percentage of PI that decreased was 4.8 percent in all of the participants, 7% in the age group that ranged from 30-39 years, and 5.7 percent in the age range that spanned from 40-49 years [Figure 2].

## CONCLUSION

Changes in lifestyle that are therapeutic and include things like yoga, good diet, and other such practises have the potential to reduce morbidity and mortality while also improving quality of life. Studies are required to be carried out in order to examine the additive impact that yoga and diet counselling have on physiological parameters. [13]This is due to the possibility that the effects of yoga and diet/nutritional counselling add to one another. To summarise, Yoga and Diet Counseling is a Novel Emerging Clinical Discipline of Mind-Body Medicine that is Increasingly Used Worldwide as a Non-Pharmacological Form of Promotive, Preventive, and Curative Treatment for Lifestyle Diseases. This is due to the fact that Yoga and Diet Counseling promotes and prevents lifestyle diseases. [14]The results of this study imply that the HYT programme had an explanatory impact on the physiological welfares of participants in three distinct age groups, ranging from 20 to 29 years old, 30 to 39 years old, and 40 to 49 years old, as will be detailed below. These results include the following: It is also possible to comment, in light of the findings of this work, that the practise of Hatha yoga is helpful in preventing and attenuating the age-related deterioration of one's

physical health, muscular strength, and flexibility. This is something that could be said in light of the findings of this work.

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