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Assessment of the effect of Pranayama on pulmonary function: Comparison among vegetarian and non- vegetarian healthy young adults

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Abstract

Introduction: Yoga, an ancient physical exercise, promotes holistic well-being through practices like Pranayama. Diet may also affect respiratory health. This study assessed pulmonary function test (PFT) parameters among vegetarians and non-vegetarians before and after Pranayama.

Method: This quasi-experimental study was conducted at Birat Medical College, Nepal, from 15 Oct to 31 Dec after ethical approval. Healthy medical students were enrolled in vegetarian (Group A) and non-vegetarian (Group B) groups for one month of pranayama practice. Current smokers, those with recent respiratory infections, chronic respiratory pathologies, or those on medications affecting lung function were excluded. Baseline and end-line demographic, physiological variables, and PFT parameters (forced vital capacity [FVC], forced expiratory volume in the first second [FEV1], FEV1/FVC, peak expiratory flow rate [PEFR]) were analysed using SPSS v.24 for inter-group comparisons (unpaired t-tests); intra-group (pre-post) comparisons (paired t-tests) with $p \leq 0.05$ considered significant.

Result: Among 73 participants (Group A=36, Group B=37), at baseline, Group A had a higher FEV1/FVC ratio (0.77±0.02 vs. 0.76±0.03; unpaired t-test, p=0.01). Post-Pranayama, Group A showed significant improvements in pulse rate, FVC, FEV1, and FEV1/FVC (paired t-test, all $p \leq 0.05$). For all participants combined, significant post-intervention improvements were seen in weight, body mass index (BMI), systolic blood pressure (SBP), pulse rate (PR), respiratory rate (RR), and all PFT parameters (paired t-test, all $p \leq 0.05$) except for diastolic blood pressure (DBP).

Conclusion: This study demonstrates that Pranayama practice significantly improves lung function and physiological parameters in both dietary groups. A minor baseline difference suggests that dietary patterns may influence respiratory health.

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Introduction

Yoga, evolved from Sanskrit, "yuj" which means "to join" or "unite" is believed to develop 10,000 years back substantiates to improve physical, vital, mental, emotional, psychic, and spiritual health.[1] Yogic practices are broadly categorized into asana, pranayama, mudra, bandha, shatkarma and meditation. The term pranayama; prana (breath) and ayama (control), refers to breathe regulation, intended to cleanse the body and mind while enhancing spiritual and physical wellbeing.[2]

Yogic practices enhance muscular strength, improves body flexibility, reduces anxiety and stress, improves respiratory and cardiovascular function and enhance overall well-being.[3] Yoga is a holistic discipline to integrate body movement.[4,5] Forceful practices like Bhastrika and Kapalabhati enhance respiratory muscle strength and endurance, and pranayama improves anxiety levels.[6–8]

High fibre diet and low saturated fat improves lung function and reduces airway inflammation respectively.[9,10] Vegetarians have a lower risk of chronic diseases like diabetes, in contrast non-vegetarians obtain higher amounts of vitamin B_{12} and iron.[11–13] For many yoga practitioners, dietary choices are viewed as part of a broader lifestyle aimed at optimizing health having better posture, flexibility and efficient respiratory function.[14,15] Regardless of dietary pattern (vegetarian vs. non-vegetarian) yoga significantly improves lung function.[16]

There is paucity of data exploring pulmonary function test (PFT) and pranayama practices along with dietary influence. Thus, the present study aims to assess baseline PFT parameters; forced vital capacity (FVC), forced expiratory volume in one second (FEV1), FEV_1/FVC ratio, peak expiratory flow rate (PEFR) among vegetarians and non-vegetarians and comparison with end line following the practice of pranayama (breathing exercises) yoga.

Method

This study employed a quasi-experimental study designed to evaluate the impact of vegetarian and non-vegetarian diets on pulmonary function before and after intervention of pranayama (breathing exercises). A purposive sampling technique was applied, and the study population included medical and paramedical students aged 18–25 years from Birat Medical College and Teaching Hospital (BMCTH). Ethical approval, with reference no. IRC-38-2082/83, for this study was obtained from the Institutional Research Committee of BMCTH, ensuring that all procedures were conducted in accordance with the Declaration of Helsinki.

The sample size was determined using formula, $n=(Z\alpha/2+Z\beta)^2\times\sigma^2/d^2$ to detect a significant difference in pulmonary function parameters between the two dietary groups (vegetarians vs. non-vegetarians), with a power analysis (power=0.80) and an alpha level of 0.05, pooled SD (standard deviation) of PFT parameter (σ), expected mean difference after yoga (d) having 30 participants in each group. Total 76 participants; vegetarian (Group A, 38) and non-vegetarian (Group B, 38) were enrolled in the study ensuring potential dropouts. Participants were provided with detailed information about the study's purpose, procedures and benefits. Written informed consent was obtained from all the participants before data collection was commenced. Confidentiality and all the safety measures were maintained for yoga sessions as well as for pulmonary function test. Participants were allowed to withdraw from the study at any time without any repercussions if not willing to continue. All the subjects who participated in yoga were ensured that they were adhered to either a vegetarian (individuals who have abstained from consuming meat, poultry, and fish for at least 12 months prior to the study) or non-vegetarian diet (individuals who consume meat, poultry, or fish at least once per week for a minimum of 12 months prior to the study).

The inclusion criteria were; individuals aged 18–25 years who had been following a vegetarian or non-vegetarian diet for above mentioned duration willing to provide written informed consent. Exclusion criteria included current smokers, individuals with chronic respiratory pathologies (e.g., asthma, COPD), those on medications affecting lung function, and participants with recent respiratory infections.

Data collection involved a two-step process. Initially, demographic and anthropometric information; name, age, gender, height (measured with stadiometer), weight (digital weighing balance) and BMI (kg/m²) along with dietary habits was gathered using questionnaire proforma. Health history and vitals; respiratory rate (counting chest movement), blood pressure (digital sphygmomanometer), pulse rate (radial pulse rate) was recorded in a sitting and relaxed posture.

Followed by this, PFTs were conducted using a calibrated spirometer (© RMS – Recorders and Medicare Systems Pvt. Ltd., India). Primary pulmonary function parameters measured included, FVC: the maximum volume of air that can be forcibly exhaled after full inspiration, FEV1: the volume of air exhaled during the first second of the FVC, FEV1/FVC ratio: proportion of the vital capacity exhaled in the first second that is expressed as a percentage, PEFR: the highest flow rate achieved during forced exhalation.

All pulmonary function tests were performed by trained technician in a controlled room temperature (20–24°C), adhering to the American Thoracic Society/European Respiratory Society (ATS/ERS) guidelines to ensure accuracy and reliability.[17] Participants were seated comfortably on a chair in a relaxed position. After applying a nose clip, the participant was instructed to take a deep inspiration, insert the mouthpiece, and then exhale as forcefully and rapidly as possible to measure FVC and FEV_1. For PEFR assessment using the Mini-Wright Peak Flow Meter, the participant was instructed to take a deep inspiration and blow forcefully into the flow meter in a similar manner. The PEFR value was recorded at the point where the indicator stopped. The procedures were repeated three times and average values were documented for accuracy and reliability, Figure 1a, b, c.

A one-month pranayama intervention was conducted. The yoga sessions were scheduled according to the students' class roll numbers to ensure uniformity, minimize variability, and facilitate the orderly conduct of the sessions. Yoga was conducted for a month (38 participants in each session), in a regular time starting at 6:30 am morning with warm up (10 minutes) and then pranayama (Nadi Shodhana or Alternate Nostril Breathing, Kapalabhati or Skull-Shining Breath, Ujjayi or Ocean Breath and Anulom Vilom or Simple Alternate Nostril Breathing) for 20 minutes. All the safety measures were taken into consideration during yoga session.

Three participants (two from Group A, one from Group B) discontinued and were excluded, resulting in a final sample of 73 (Group A=36, Group B=37). Post-intervention, PFT and vital signs were re-measured using the same instruments and protocol.

Data were analysed using IBM SPSS Version 24.0. Descriptive statistics were expressed as mean±SD. Inter-group comparisons (Group A vs. Group B) at baseline and post-intervention were performed using unpaired (independent samples) t-tests. Intra-group comparisons (pre- vs. post-intervention values) were performed using paired t-tests. A p-value of ≤0.05 was considered statistically significant.

Result

Out of 73 students, mean age and height of group A (vegetarian) and B (non-vegetarian) were comparable, Figure 2. The FEV1/FVC ratio was significantly higher in vegetarians (Group A: 0.77±0.02) compared to non-vegetarians (Group B: 0.76±0.03) before the commencement of pranayama (p=0.01). Although FVC, FEV1 and PEFR values were also higher in vegetarians, these differences were not statistically significant, Figure 2.

Decrement in PR (p=0.003) but increment in FVC (p<0.001), FEV1 (p<0.001), FEV1/FVC (p=0.02) among vegetarians while comparing two groups after completion of pranayama were statistically significant, Figure 3.

On combining both dietary groups, the mean values of all the parameters except diastolic blood pressure (DBP) indicated significant differences (p≤0.05) pre and post yoga, Table 1.

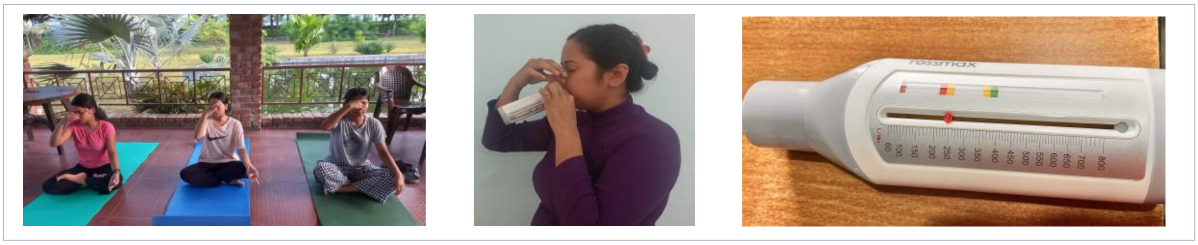
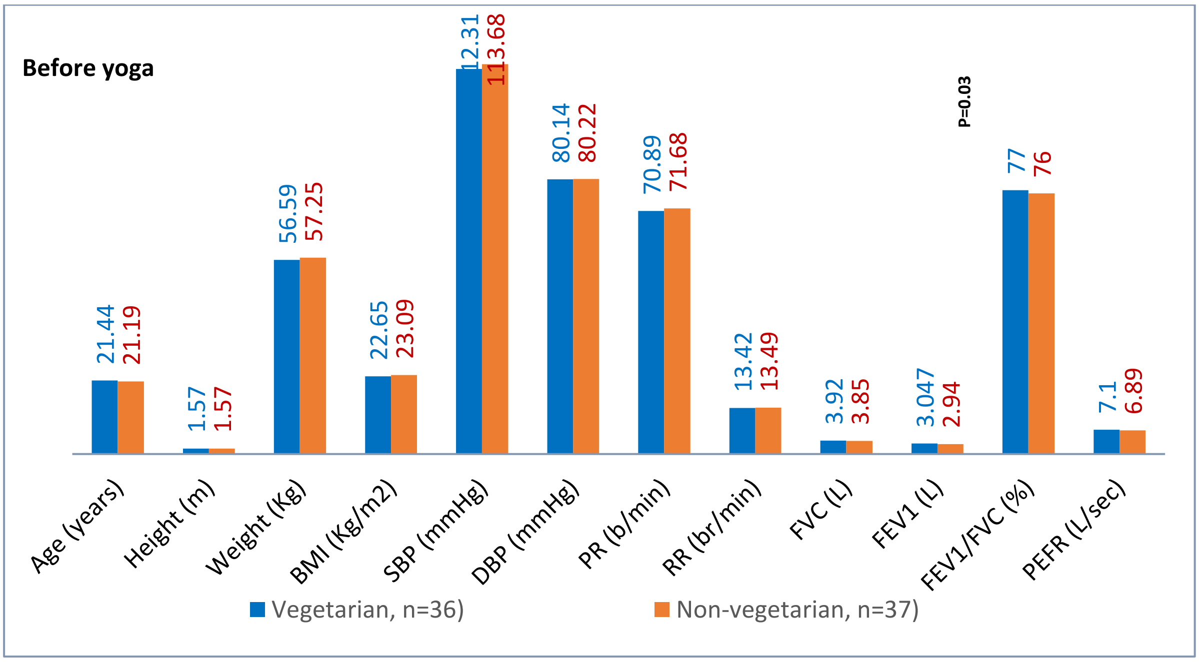


Figure 1a. Pranayama practice; 1b. Measuring peak expiratory flow; 1c. Peak expiratory flow meter



BMI=Body mass index, SBP=Systolic blood pressure, DBP=Diastolic blood pressure, PR=Pulse rate, RR=Respiratory rate, FVC=Forced vital capacity, FEV1=Forced expiratory volume in 1 second, PEFR=Peak expiratory flow rate, b/min=beats per minute, br/min=breathe per minute, L=litre, L/sec=litre per second

Figure 2. Demographics and pulmonary function test (PFT) between vegetarian and non-vegetarian medical students before yoga, n=73

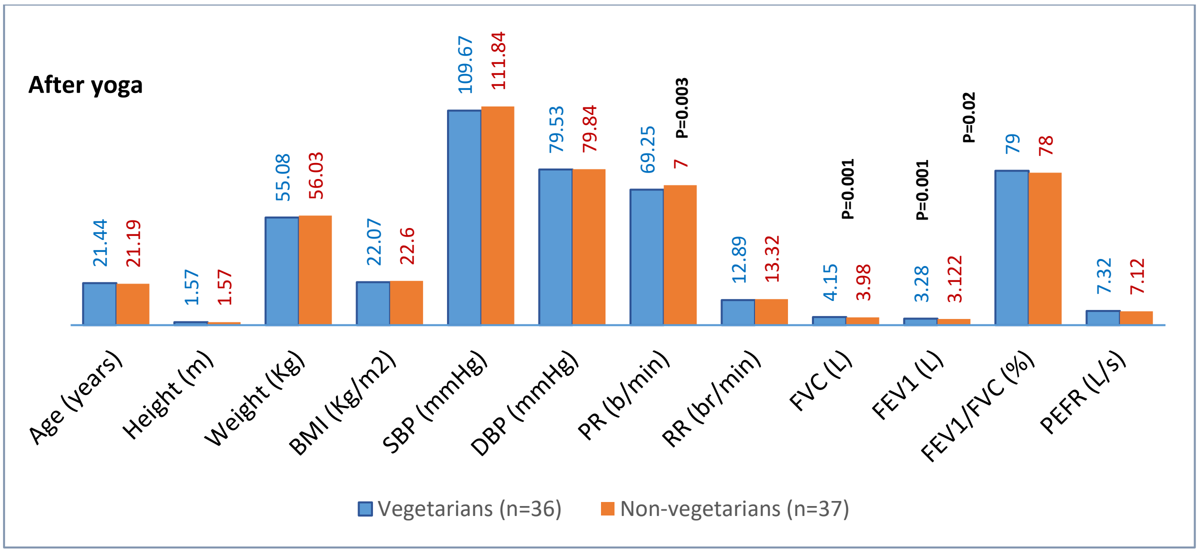


Figure 3. Demographic and PFT variables between vegetarian and non-vegetarian medical students after yoga, n=73

Table 1: Comparison of pre and post yoga demographic, vitals and PFT Variables, n=146

Demographic and PFT	Pre-yoga (n=73)	Post yoga (n=73)	p value
Weight (Kg)	56.92±3.37	55.56±3.14	0.001
BMI (kg/m^2)	22.87±1.08	22.33±1.21	0.001
SBP (mmHg)	113±9.15	110.77±8.15	0.002
DBP (mmHg)	80.18±5.81	79.68±5.39	0.080
PR (b/min)	71.29±3.81	70.45±3.42	0.048
RR (br/min)	13.45±0.15	13.11±1.10	0.032
FVC (L)	3.89±0.26	4.06±0.19	0.001
FEV1 (L)	2.99±0.24	3.20±0.17	0.001
FEV1/FVC	0.76±0.02	0.78±0.01	0.001
PEFR (L/min)	420.14±36.95	433.49±35.90	0.001

≤0.05 statistically significant, t-test

Discussion

The present study demonstrated that medical students in group A (vegetarian) and B (non-vegetarian) were comparable with respect to age and height. Demographics and physiological parameters (weight, BMI, SBP, DBP, PR, RR) of vegetarians were lower but baseline PFT parameters were significantly higher (p=0.01) for FEV1/FVC ratio for Group A: 0.77±0.02 than in Group B: 0.76±0.03 before the commencement of pranayama. The PFT parameters FVC, FEV1 and PEFR were also higher but not significant.

A study conducted in India, physiological parameters (SBP, DBP, PP, HR) under resting conditions among vegetarians were less than non-vegetarians, 127.7±6.4, 77.8±4.4, 94.5±4.3, 77.1±2.1 vs. 133.7±7.7, 86.0±5, 101.9±5.1, 82.3±2.7, respectively, which is similar to the findings of the present study.[18] In a study, participants in the highest quartile intake of fibre intake (>17.5 g/d) had mean FEV_1 and FVC measurements that were 82 ml and 129 ml higher than the lowest quartile of intake (<10.5 g/d) (p=0.05 and 0.01, respectively). Mean percent predicted FEV_1 and FVC values were 2.4 and 2.8 percentage points higher respectively in participants with the highest quartile intake when compared with participants in the lowest fibre intake quartile (p=0.07 and 0.01, respectively).[9] A study conducted in Korean population, the mean FVC was observed 3.22 L in the highest quartile (>75th percentile) and 3.06 L in the lowest quartile (<25th percentile) of vegetable intake ($p<0.001$). There were significant increase in FEV_1 (from 2.15 to 2.28 L; $p<0.000$), FEV_1/FVC (from 74.46 to 76.69; $p=0.009$), FVC (from 2.91 to 3.07 L; $p<0.000$), and PEF (from 5.91 to 6.26 L; $p=0.002$) as well while increasing the fibre diet.[19] Weight and BMI (58.52±10.95, 20.80±3.16 respectively) were lower in vegetarians compared to non-vegetarians (weight=59.91±12.03, BMI=22.62±4.17) in a study by Gan and colleagues consistent with the present study having weight and BMI less in vegetarians.[20] Intake of both fruit and vegetable (vitamin C, vitamin E, and beta-carotene) above the median level was positively associated with FEV1 in three European countries.[21] The absence of significant differences in various parameters in this study could be due to the relatively small sample size, overall health and fitness levels of the participants or may be due to regular yoga practice. These findings indicate that dietary patterns may influence airway function.

After completion of pranayama (breathing exercise), a significant improvement in FVC ($p<0.001$), FEV1 ($p<0.001$), FEV1/FVC ($p=0.02$) and decrement in PR ($p=0.003$) was observed within vegetarian groups. The comparative analysis of the two groups suggests a potential beneficial effect of yoga on lung function. Moreover, comparing both groups together before and after pranayama practice, significant improvements were reported for weight (<0.001), BMI (<0.001), SBP (<0.002), PR (<0.048), RR (<0.032), FVC (<0.001), FEV1 (<0.001), FEV1/FVC (<0.001), PEFR (<0.001). The findings suggest a significant impact of yoga on both dietary groups though the vegetarian diet may have beneficial effects based on present findings. A study conducted in 100 elderly participants >60 years, FVC (control group, pre=2.8±0.3, post=2.7±0.3), FVC (pranayama group, pre=2.8±0.4, post=3.2±0.3), FEV1 (control group, pre=2.1±0.2, post=2.0±0.2), FEV1 (pranayama group, pre=2.1±0.3, post=2.5±0.2) and PEFR (control group, pre=4.5±0.5, post=4.4±0.4), PEFR (pranayama group, pre=4.6±0.6, post=5.2±0.5) reported significant changes after intervention of breathing exercises.[4] Similar reports were observed among Brazilian population where FVC (pre-yoga 3.26±0.8, post-yoga 3.36±0.8, $p=0.005$), FEV1 (pre-yoga 2.36±0.6, post-yoga 2.46±0.6, $p=0.005$), PEFR (pre-yoga 6.06±2.2, post-yoga 6.36±2.0, $p=0.3$) observed changes after Bhastrika suggestive of improvement in respiratory function and sympatho-vagal balance.[22] Seventy-five healthy medical students after 12 weeks of pranayama practice were observed for the ventilatory function. They had improved ventilatory functions with lowered respiratory rate (RR), increased forced vital capacity (FVC), forced expiratory volume at the end of first second (FEV1, %), maximum voluntary ventilation (MVV), peak expiratory flow rate (PEFR L/sec), and prolongation of breath holding time.[23] Various lung volumes recorded in a study where FVC, FEV1, MVV, PEFR, FEV3, RR and breath holding time (BHT) were significantly increased after performing yoga.[24] Thirty-seven percent of pranayama and other yoga practitioners reported improvement in sinusitis, allergy, and asthma.[25] These findings are consistent with the present research findings which suggest that regular pranayama practice with appropriate diet may be associated with respiratory health benefits. Moreover, the study reinforces the role of yoga as a non-pharmacological intervention to enhance respiratory health, which could be particularly beneficial in managing conditions like asthma and COPD.

Various studies, as discussed above, have demonstrated that yoga practice improves lung function irrespective of other lifestyle factors.

Some of the limitations of this study include sample size, while adequate for preliminary analysis, may not be large enough to detect subtle differences between the two dietary groups. The self-reported dietary adherence could introduce bias. The study duration was one month; longer intervention periods, with yoga practiced regularly, may have more pronounced effects. Despite these limitations, the study provides preliminary evidence supporting pranayama as a beneficial practice for respiratory health.

Conclusion

This study demonstrates that pranayama practice significantly improved lung function and physiological parameters in both vegetarians and non-vegetarians. A baseline difference in FEV1/FVC ratio between the groups suggests that dietary pattern may influence respiratory health, though both groups benefited from pranayama. These findings support the role of regular pranayama practice in promoting respiratory health regardless of dietary habits.

Author contribution

Concept design: RY; Literature search: RY, SKY; Data collection: All; Data analysis: RY; Draft manuscript: RY, SKY; Final manuscript and accountability: All

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Conflict of Interest

None

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None

Supplementary material

The data and supplementary material that support the findings of this study are available from the corresponding author upon reasonable request.

References

1. Mooventhan A, Nivethitha L. History, philosophy/concept, techniques of yoga and its effects on various systems of the body. Yoga Mimamsa. 2020;52(2):76-83. DOI: 10.4103/ym.ym_13_20 PubMed Google Scholar Full Text
2. Saraswati S. Asana Pranayama Mudra Bandha. 4th ed. Munger, India: Yoga Publications Trust; 2008. Google Scholar: scholar.google.com/scholar?q=Asana+Pranayama+Mudra+Bandha+Saraswati Full Text
3. Woodyard C. Exploring the therapeutic effects of yoga and its ability to increase quality of life. Int J Yoga. 2011;4(2):49-54. DOI: 10.4103/0973-6131.85485 PubMed Google Scholar Full Text
4. Chauhan N, Sharma M. Effect of yogic and deep breathing exercises on pulmonary function tests in the elderly: a physiological perspective. Eur J Clin Med. 2025;15(3):497-9. DOI: 10.5083/ejcm/25-03-86 Google Scholar Full Text
5. Singh L, Keshav R, Pandey M, Babu N. Effect of yoga regimen on the lung capacity of defence personnel deployed at high altitude area. J Ayurveda Integr Med. 2025;16(6):101223. DOI: 10.1016/j.jaim.2025.101223 PubMed Google Scholar Full Text
6. McDermott KA, Rao MR, Nagarathna R, Murphy EJ, Burke A, Nagendra RH, et al. A yoga intervention for type 2 diabetes risk reduction: a pilot randomized controlled trial. BMC Complement Altern Med. 2014;14:212. DOI: 10.1186/1472-6882-14-212 PubMed Google Scholar Full Text
7. Bagade AH, Bhonde MS, Dhokane NB. Effect of Pranayama on respiratory endurance in young adults. Natl J Physiol Pharm Pharmacol. 2018;8(8):1175-8. DOI: 10.5455/njppp.2018.8.0301028042018 Google Scholar Full Text
8. Gupta N, Khera S, Vempati RP, Sharma R, Bijlani RL. Effect of yoga based lifestyle intervention on state and trait anxiety. Indian J Physiol Pharmacol. 2006;50(1):41-7. PubMed: pubmed.ncbi.nlm.nih.gov/16850902 Google Scholar Full Text
9. Hanson C, Lyden E, Rennard S, Mannino DM, Rutten EP, Hopkins R, et al. The relationship between dietary fiber intake and lung function in the national health and nutrition examination surveys. Ann Am Thorac Soc. 2016;13(5):643-50. DOI: 10.1513/AnnalsATS.201509-609OC PubMed Google Scholar Full Text
10. Madanmohan, Udupa K, Bhavanani AB, Vijayalakshmi P, Surendiran A. Effect of slow and fast pranayamas on reaction time and cardiorespiratory variables. Indian J Physiol Pharmacol. 2005;49(3):313-8. PubMed: pubmed.ncbi.nlm.nih.gov/16440849 Google Scholar Full Text

11. Guilleminault L, Williams EJ, Scott HA, Berthon BS, Jensen M, Wood LG. Diet and Asthma: Is It Time to Adapt Our Message? Nutrients. 2017;9(11):1227. DOI: 10.3390/nu9111227 PubMed Google Scholar Full Text
12. Fraser GE. Vegetarian diets: what do we know of their effects on common chronic diseases? Am J Clin Nutr. 2009;89(5):1607S-12S. DOI: 10.3945/ajcn.2009.26736K PubMed Google Scholar Full Text
13. Craig WJ. Health effects of vegan diets. Am J Clin Nutr. 2009;89(5):1627S-33S. DOI: 10.3945/ajcn.2009.26736N PubMed Google Scholar Full Text
14. Baines S, Powers J, Brown WJ. How does the health and well-being of young Australian vegetarian and semi-vegetarian women compare with non-vegetarians? Public Health Nutr. 2007;10(5):436-42. DOI: 10.1017/s1368980007217938 PubMed Google Scholar Full Text
15. Barnes PM, Bloom B, Nahin RL. Complementary and alternative medicine use among adults and children: United States, 2007. Natl Health Stat Report. 2008;(12):1-23. PubMed: pubmed.ncbi.nlm.nih.gov/19361005 Google Scholar Full Text
16. Mathur T, Kumar B, Chaitanya P. Comparative analysis of vegetarian and non-vegetarian diets on spirometry-measured lung function in yoga practitioners. J Adv Sci. 2024;3(2). DOI: 10.58935/xxxx Google Scholar Full Text
17. Graham BL, Steenbruggen I, Miller MR, Barjaktarevic IZ, Cooper BG, Hall GL, et al. Standardization of spirometry 2019 update: an official American Thoracic Society and European Respiratory Society technical statement. Am J Respir Crit Care Med. 2019;200(8):e70-88. DOI: 10.1164/rccm.201908-1590st PubMed Google Scholar Full Text
18. Varshney VP, Bedi M, Bhandari B. Effect of Non-Vegetarian Diet on Cardiovascular Reactivity to Mental Stress in Young Adults. Vascular Disease Prevention. 2005;2(4):293-8. DOI: 10.2174/156727005774329636 Google Scholar Full Text
19. Park S, Park H. Combined Dietary Intake and Its Association with Pulmonary Function and Chronic Obstructive Pulmonary Disease Risk in Korean Adults: 2016-2018 Korea National Health and Nutrition Examination Survey. Clin Nutr Res. 2025;14(3):182-90. DOI: 10.7762/cnr.2025.14.3.182 PubMed Google Scholar Full Text
20. Gan WY, Boo S, Seik MY, Khoo HE. Comparing the nutritional status of vegetarians and non-vegetarians from a Buddhist organization in Kuala Lumpur, Malaysia. Malays J Nutr. 2018;24(1):89-101. Google Scholar: scholar.google.com/scholar?q=Comparing+the+nutritional+status+of+vegetarians+and+non-vegetarians+from+a+Buddhist+organization+in+Kuala+Lumpur+Malaysia Full Text
21. Tabak C, Smit HA, Räsänen L, Fidanza F, Menotti A, Nissinen A, et al. Dietary factors and pulmonary function: a cross-sectional study in middle-aged men from three European countries. Thorax. 1999;54:1021-6. DOI: 10.1136/thx.54.11.1021 PubMed Google Scholar Full Text
22. Santaella DF, Devesa CRS, Rojo MR. Yoga respiratory training improves respiratory function and cardiac sympathovagal balance in elderly subjects: a randomized controlled trial. BMJ Open. 2011;1:e000085. DOI: 10.1136/bmjopen-2011-000085 PubMed Google Scholar Full Text
23. Joshi LN, Joshi VD, Gokhale LV. Effect of short term 'Pranayam' practice on breathing rate and ventilatory functions of lung. Indian J Physiol Pharmacol. 1992;36(2):105-8. PubMed: pubmed.ncbi.nlm.nih.gov/1506070 Google Scholar Full Text
24. Priya KL, Devaki D, Vinu W. Impact of Hatha Yoga Sadhana and Natya Yoga Training on Forced Expiratory Volume Among Men and Women. Journal of Advanced Zoology. 2023;44. Google Scholar: scholar.google.com/scholar?q=Impact+of+Hatha+Yoga+Sadhana+and+Natya+Yoga+Training+on+Forced+Expiratory+Volume+Among+Men+and+Women Full Text
25. Pandey N. A Study on the Impact of Yoga on Daily Yoga Practitioners. Madhyabindu Journal. 2021;6(1):67-75. DOI: 10.3126/madhyabindu.v6i1.42768 Google Scholar Full Text