Original Research Article

Effect of yoga on general health: food habits versus blood groups

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ABSTRACT

Background: In this paper, we attempted to critically analyze the relation between food habits intake versus different blood groups. In majority of the cases we found that there is a close link between the food habits versus the blood groups.

Methods: As a sample measure, we collected 50 sample blood groups and their respective food habits. Descriptive statistics is applied to know the average number of people having different food habits versus blood groups. The study covers 25 females and 25 males. The target groups cover students, public and staff of Patanjali Yogpeeth and also patients.

Results: The findings of the study show that the 4 major blood groups A, B, AB and O have almost the same food habits in terms of calorie intake. Secondly, the study shows that there is a probability of blood groups having a relation to different ailments which could be treated with appropriate dieting systems and energy. Thirdly, the sample study shows that people having AB blood group may be more prone to mental discomforts for which Aloevera juice along with general yoga practices has been suggested followed by other blood groups; A, B and O.

Conclusions: This study will be useful for all the medical and paramedical practitioners, dieticians, nutrition experts. It will have general health policy implications at primary and sub center level centers.

Keywords: Food, Calories, Blood groups, Disorders

INTRODUCTION

The medical fraternity and scientists across the globe have not subscribed concretely the blood group relation with food habits. Here in this article, we are critically analyzing its relationship with calories intake. This critical study throws many challenges to the experts in the field of nutrition, dieticians, naturopathy therapists, and other such health practitioners.

The prevalent concepts of diet and nutrition are based on age, calorie requirements, sex, and nature of work of a person. A diet plan for any individual primarily focuses on the said aspects and his/her health condition. The diet plan also differs according to the culture, region and religion of people. It can further be contemplated that if a baby’s blood group can be known when he/she is in the womb then the mother’s food habits can be changed accordingly so as to benefit the baby’s health. There is an immense need to carry out genetic research in the area of blood groups of people.¹

In this paper, we are analyzing the calories intake versus blood groups of different people and also suggesting
various Patanjali organic and herbal food products for people having health disorders.

METHODS

During a study period of 4 weeks, a general survey was carried out among the staff members and students at Patanjali Yogpeeth and at University of Patanjali, Haridwar. A primary data on blood groups are collected from the staff members from the dental unit of Yogpeeth and also from the University of Patanjali. Swami Ramdev’s food habits and yogic practices were also observed. The sample size was 50. A secondary data was collected from various research journals including psychological parametric tests data. Further we supplemented our findings from literature survey of various national and international journals. For example we have quoted from the American Journal of Epidemiology to validate our primary findings.

One of the co-authors Ms. Rachna Bhattarai has done extensive research on blood groups and food habits. She has worked with the food habits of about 100 patients in different hospitals in Chennai whose data had to be kept confidential due to the hospital privacy policies.

**Inclusion criteria**

Inclusion criteria were subject is a male or female between the age of 16 and 45; subject has been a yoga practitioner for at least 1 year; subject does not have a history of any major illness past 6 months and minor illness past 1 week; subject consumes Patanjali Food and Herbal Supplements.

**Exclusion criteria**

Exclusion criteria were subject suffering from any dietary disorders, subject who consumes junk food, tobacco, cigarette or alcohol; subject having irregular sleep cycle.

**RESULTS**

The Table 1 shows the data on daily intake of food converted into energy units and classified according to the blood groups of the individuals. The food items which were taken into consideration were food grains like wheat, corn, etc. seasonal vegetables, pulses, rice and seasonal fruits and milk. The calories derived from each food item in a day was calculated for each individual and summed up to get the standard calorie intake (per day) of normal healthy people who practice yoga which is shown in the under mentioned Table 1.

| Participant No. | Blood group | Calorie intake | Participant No. | Blood group | Calorie intake |
|-----------------|-------------|----------------|-----------------|-------------|----------------|
| 1               | B           | 2456           | 16              | B           | 2210           |
| 2               | B           | 2432           | 17              | B           | 2299           |
| 3               | B           | 2560           | 18              | B           | 2236           |
| 4               | B           | 2351           | 19              | A           | 2310           |
| 5               | B           | 2365           | 20              | A           | 2452           |
| 6               | B           | 2540           | 21              | A           | 2369           |
| 7               | B           | 2565           | 22              | AB          | 2398           |
| 8               | B           | 2201           | 23              | AB          | 2369           |
| 9               | B           | 2515           | 24              | AB          | 2398           |
| 10              | B           | 2316           | 25              | AB          | 2398           |
| 11              | B           | 2372           | 26              | O           | 2254           |
| 12              | B           | 2103           | 27              | O           | 2406           |
| 13              | B           | 2130           | 28              | O           | 2265           |
| 14              | B           | 2150           | 29              | O           | 2354           |
| 15              | B           | 2154           | 30              | O           | 2410           |
| 16              | B           | 2210           | 31              | O           | 2430           |
| 17              | B           | 2289           | 32              | O           | 2459           |
| 18              | B           | 2236           | 33              | O           | 2364           |
| 19              | A           | 2310           | 34              | O           | 2365           |
| 20              | A           | 2452           | 35              | O           | 2236           |
| 21              | A           | 2320           | 36              | O           | 2335           |
| Average         |             | 2330.28        |                 |             | 2310           |
| 22              | AB          | 2369           | 37              | O           | 2154           |
| 23              | AB          | 2398           | 38              | O           | 2220           |
| 24              | AB          | 2432           | 39              | O           | 2358           |
| 25              | AB          | 2123           | 40              | O           | 2354           |
| Average         |             | 2330.50        |                 |             | 2329.96        |

Table 1: Standard calorie intake (per day) of normal healthy people who practice yoga.
Table 2: Average calorie intake per person.

| Blood group | No. of participants | Percentage of participants | Average calorie intake per person |
|-------------|---------------------|-----------------------------|-----------------------------------|
| A           | 3                   | 6%                          | 2330.67                           |
| B           | 18                  | 36%                         | 2330.28                           |
| AB          | 4                   | 8%                          | 2330.50                           |
| O           | 25                  | 50%                         | 2329.96                           |

Table 1 thus provides an input for determining the presence of any relation between blood group and food habits of the sample population.

The average calorie intake per person is calculated separately for each blood group and the results are summarized in Table 2. The number of participants of each blood group (out of total 50 participants) and the average calorie intake per person of the respective blood group is thus summarized.

![Figure 1: Percentage of participants of different blood groups.](image1)

![Figure 2: Blood groups and calorie intake per person.](image2)

It can be observed from Figure 2 that average calorie intake is almost same for every blood group, having a range of 2329-2331 calories per person per day.

DISCUSSION

Thirty five blood group systems are recognized by the International Society of Blood Transfusion - two dominant systems are ABO and Rhesus (Rh). According to these two systems, the four major blood groups are A, B, AB and O. The presence or absence of Rh factor determines the +ve or –ve sign before a blood group. Blood volume is mainly composed of 55% plasma and 45% blood cells. Blood groups naming is done on the basis of presence or absence of antigens on the surface of red blood cells (RBC’s).

The presence and lack of blood antigens in some blood groups induce blood membrane changes, morphologically and functionally. The structure-dependent functions of blood types can link the blood groups to health and diseases. A recent study found people with type AB blood were 82 percent more likely to experience difficulties with memory recall, language, and attention than people with other types. One reason, researchers suspect, is due to the key clotting protein, known as coagulation factor VIII, which may actually reduce the quality of blood flow to the brain, rather than sealing up injury sites.

Multiple studies have found a correlation between a woman’s blood type and the reproductive system. One study by researchers at Yale University and New York's Albert Einstein College of Medicine found that women with blood type O are twice as likely to have a lower egg count and poorer egg quality as others. The researchers measured the level of reproductive hormone FSH in the women and adjusted for other fertility factors, such as age and BMI. Women with blood type O were more likely to
have higher levels of FSH, indicating a low ovarian reserve.

A 2012 study from Harvard University found people with non-O blood also happen to have an increased risk for cardiovascular disease. But those with type AB blood were the most at-risk overall, demonstrating a 23 percent greater chance of suffering from heart disease than type O subjects. Further, certain blood types are more likely to co-occur with varying levels of hormones in the body, physicians commonly tailor their exercise recommendations to the patient’s type. People with type A blood, for example, are more likely to have higher levels of cortisol, the stress hormone, in their body. When the adrenal gland dumps more and more cortisol into the blood, people’s stress response grows more acute.

Researchers believe this could be due to the correlation between blood type AB and blood clots, as well as, higher rates of inflammation that have also been linked to type AB and B blood types. A survey also states that most of the mentally disturbed people by birth or later half of their life are mostly found A+ and AB+. As most of the organizations find it not to disclose the blood group of their patients Therefore it is very hard to get the data whereas, in person we also have noted that it is being said AB+ and A+ are highly weak in sense organs. Even the disabled child weather they are deaf, dumb or blind. Mostly its being found they carry A+ and AB- blood group.

The clinical significance of the ABO blood group system extends beyond transfusion medicine and several reports have suggested an important involvement in the development of cardiovascular, oncological and other diseases. A recent systematic review and meta-analysis documented that having a non-O blood group carries an approximately two-fold increased risk of venous thrombosis. The higher prevalence of blood group A in patients with gastric cancer formerly observed by several studies has also been recently confirmed in a large prospective population-based study involving more than one million of Scandinavian blood donors followed for up to 35 years. The association between ABO blood types and colon cancer showed an increased risk of colon carcinoma in AB blood type.

Rachna Bhattacharai, International Chef and dietician, in an interview in Guardian News Bureau, stated that people having B+ blood group should refrain from eating grain based food as it can affect their bones. Similarly, Dr. Peter J. D’Adamo in his book on “Eat Right for Your Type” suggests that the diet of an individual should be based on the order of evolution of blood groups. This approach needs to be followed for all other blood groups and the concept of diet based on blood groups needs to be explored which is the basis of our research.

Also the food habits as well as the quality of food products have changed with time. Increased use of chemicals in the processing of food has degraded the food quality and decreased the natural beneficial properties of the food products. The solution to this problem lies in the use of organic and natural food products made available by Patanjali.

Based on the above discussion, the blood groups related disorders with suggested solutions are provided in Table 3 below.

### Table 3: Blood groups versus disorders and suggested food products.

| Blood group | General disorder | Suggested food products |
|-------------|------------------|------------------------|
| AB          | Memory problems, cardiac diseases | Amrit rasayan, unpolished pulses |
| A           | Stress and anxiety problems, gastric problems | Special chyavanprash, Amrit rasayan, Badam pak |
| B           | Higher risk of inflammation | Aloe vera juice, Cow urine ark, Mustard oil |
| O           | Lower estrogen level in females | Special chyavanprash, Amrit rasayan, Badam pak |

Thus, Patanjali organic food products promote health and wellness. They are a rich source of proteins, vitamins, minerals, antioxidants and essential oils which are important for the strengthening of our immune system. These products help in proper digestion of food which is the basic requirement for a healthy body. Also, the founder of Patanjali Institutions, His Holiness Swami Ramdev Ji has been known to consume a diet consisting of only fruits and vegetables for many years and at present he is the Yoga Guru propagating various yoga practices like asanas, pranayama, meditation, etc. His energy levels are amazing. So a diet consisting only of fruits and vegetables can’t be considered as incomplete. The use of these products coupled with yogic practices thus helps in providing as healthy mind, body and soul.

### CONCLUSION

Food habits and their respective blood types may influence the risk of different diseases by different known and unknown mechanisms. Awareness creation is essential in this regard at primary health centers. This popularization will also have policy implications at national level. To overcome the tongue taste food habits, if one takes the path of yoga, taste could be replaced with a proper diet system. Typical yogic practices could be like bhastrika (forceful exhalation with passive inhalation), madisuddhi (nerves purification), savasana (lying posture), surya namaskar (combination of body and mind exercises) etc. It can be beneficial to increase knowledge in this aspect because individuals with high risk blood types could be screened and trained for modifying their lifestyles, health behavior and
environment, and other attempts that may increase public health.

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REFERENCES

1. Bhattrai R. Food Communicate. 1st ed. Chennai, India: 6th Sense; 2014.
2. D’adamo PJ, D’Adamo P. Eat right for your type. New York, NY: Putnam Adult; 1997.
3. Lögberg L, Reid ME, Lamont RE, Zelinski T. Human blood group genes 2004: chromosomal locations and cloning strategies. Transfusion medicine reviews. 2005;19(1):45-57.
4. Sandler SG, Mallory D. Biological functions of blood groups in health and disease. Haematologica. 1994;27(1):1-3.
5. Alexander KS, Zakai NA, Gillett S, McClure LA, Wadley V, Unverzagt F, Cushman M. ABO blood type, factor VIII, and incident cognitive impairment in the REGARDS cohort. Neurol. 2014;83(14):1271-6.
6. Locke T. A study on Blood Type O Linked to Fertility Problems, 2010. Available at: http://www.webmd.com/infertility-and-reproduction/news/20101025/blood-type-o-linked-fertility-problems. Accessed on 19 January 2017.
7. He M, Wolpin B, Rexrode K, Manson JE, Rimm E, Hu FB, et al. ABO blood group and risk of coronary heart disease in two prospective cohort studies. Arteriosclerosis, thrombosis, and vascular biology. 2012;32(9):2314-20.
8. Neumann JK, Arbogast BW, Chi DS, Arbogast LY. Effects of stress and blood type on cortisol and VLDL toxicity preventing activity. Psychosomatic Med. 1992;54(5):612-9.
9. Hebert C. A study on Seven Vital Correlations Between Different Blood Types and Health, 2016. Available at: https://www.gaia.com/article/7-relations-between-different-blood-types-health. Accessed on 21 January 2017.
10. Rachna B, newspaper interview in Guardian News Bureau published on May 31.
11. Liumbruno GM, Franchini M. Beyond immunohaematology: the role of the ABO blood group in human diseases. Blood Transfus. 2013;11(4):491-9.
12. Dentali F, Sironi AP, Ageno W, Turato S, Bonfanti C, Frattini F, Crestani S, Franchini M. Non-O blood type is the commonest genetic risk factor for VTE: results from a meta-analysis of the literature. In Seminars in thrombosis and hemostasis 2012;38(5):535-48.
13. Liumbruno GM, Franchini M. Hemostasis, cancer, and ABO blood group: the most recent evidence of association. Journal of thrombosis and thrombolysis. 2014;38(2):160-6.
14. Edgren G, Hjalgrim H, Rostgaard K, Norda R, Wikman A, Melbye M, Nyrén O. Risk of gastric cancer and peptic ulcers in relation to ABO blood type: a cohort study. Am J Epidemiol. 2010;172(11):1280-5.
15. Cao X, Wen ZS, Sun YJ, Li Y, Zhang L, Han YJ. Prognostic value of ABO blood group in patients with surgically resected colon cancer. British J Cancer. 2014;111(1):174-80.
16. D’adamo PJ, D’Adamo P. Eat right for your type. New York, NY: Putnam Adult; 1997.
17. Swadeshi utpad pustika. Haridwar, India: Divya Yog Mandir Trust; 2016.

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