




## Aditi Mahavidyalaya

### Faculty Details



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Degree	Institution				Year	
BSc. (Hons) Food technology	<b>University of Delhi</b>				<b>2013</b>	
MSc. Foods & Nutrition	<b>University of Delhi</b>				<b>2015</b>	
PhD	<b>Uttaranchal University</b>				<b>Pursuing</b>	
<b>Career Profile</b>						
<p>Worked as Health Educator in HRIDAY-SHAN (NGO) for a project under PHFI.            Completed internship in food laboratories (FRAC, Intertek), food industries (DMS, BIKANO) and Export Inspection Council of India.            UGC-NET Qualified (2014).            Employed as Assistant professor in (2016) Lady Irwin College (University of Delhi) and presently in Aditi Mahavidyalaya since 2017.            Certified as Health &amp; Wellness coordinator training organised by AFSTI- Delhi Chapter with collaboration of Hindustan unilever limited, September 2018.</p>						
<b>Administrative Assignments</b>						
<ul style="list-style-type: none"> <li>Engaged as <b>Organising Committee member</b> in various academic workshops and national level conferences at workplace.</li> </ul>						
<b>Areas of Interest / Specialization</b>						
Food science and processing, New product development, Nutrition science						
<b>Subjects Taught</b>						
Fundamentals of Nutrition and Food Sciences Nutrition for the family Introduction to food safety Public Health Nutrition Public Nutrition Therapeutic Nutrition Nutrition and fitness						

Home based catering
Research Guidance
<u>NA</u>
Research Papers (Web link to the paper, if online available, or pdf of the paper)
<ul style="list-style-type: none"><li>• <b>Prabha S</b>, Goomer S. (2018) Vitamin- C retention in commercially available mung beans (<i>Vigna radiate</i>) sprouts. The Indian journal of Nutrition and Dietetics, Vol.55 (4) Oct- Dec, ISSN: 0022-3174; eISSN: 2348-621X</li><li>• <b>Prabha S</b>, Goomer S. (2019) Quality assessment of sprouted mung beans at various storage temperatures. The Indian journal of Nutrition and Dietetics, Vol.56 (1) Jan- March, ISSN: 0022-3174; eISSN: 2348-621X</li><li>• <b>Prabha S</b>, et al. (2021) Lifestyle, Immunity and COVID-19- An amalgamation of modern science and ayurvedic perspective. Journal of clinical and diagnostic research, Vol-15 (10):KE01-KE06 Oct. ISSN: 50843.15463</li></ul>

# Lifestyle, Immunity and COVID-19- An Amalgamation of Modern Science and *Āyurvedic* Perspective

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## ABSTRACT

Since 2019 the entire world is facing a crisis named as Corona Virus Disease 2019 (COVID-19). Within a short amount of time this disease which started from a small place in China has transformed into a pandemic and claimed millions of lives worldwide. India has witnessed the first and second wave of this infection with numerous variants of COVID-19, and an upsurge in infectivity rates and mortality rates. COVID-19 is a pernicious infection caused by a recent variant of Coronavirus. There are several research studies that have been carried out to understand its aetiology, pathophysiology, prevention and treatment strategies. As per the ancient Indian wisdom - "Prevention is better than Cure." Any kind of infection can be prevented by taking necessary precautions and preventive measures against exposure to suspected environment and pathogen. A strengthened immune system further is able to fight and curb the disease even if there is exposure to the virus or any other pathogen. Significant data is available to support the need and importance of lifestyle modifications, particularly as mentioned in *Āyurvedic* and *Yogic* scriptures for immunity boosting in all age groups. The present review aims to provide a comprehensive, holistic and easy understanding of practical lifestyle modifications that can boost an individual's immunity and help mitigate infectious diseases like COVID-19.

**Keywords:** *Āyurveda*, Defense mechanism, Health, Infection, *Yoga*

## INTRODUCTION

Wuhan, China reported the outbreak of a neoteric variant of Corona Virus in December 2019, which was later named as "Corona Virus Disease 2019" (COVID-19) by World Health Organisation (WHO). Seeing the severity and quick spread of the disease across countries and continents, WHO emergently declared it to be a Pandemic which has by far infected more than 176 million people and caused around 3.8 million deaths worldwide as on 12 June 2021 [1].

Coronavirus makes up a large family of viruses- *Coronaviridae*. These viruses have a single stranded, positive-sense Ribonucleic Acid (RNA) genome. These can infect both birds and humans [2]. The transmission of the virus can take place from human-to-human through close contact or transfer of droplets from an infected individual via their cough/sneeze. In addition to this, *Sushruta Samhitā*, a treatise of *Āyurveda* talks about the mode of transmission for *Apasargika Roga* (Communicable/Infectious Diseases) which includes physical intimacy, touch by body parts, breath (droplet), sharing food/utensils, sleeping/sharing bedding, sitting very close or sharing clothes/jewellery/cosmetics with an infected person/carrier. [3,4]:

**Prasangāt Gātrasamsparsāt Nihshvāsāt Sahabhojanāt |  
Sahashaiyyāsanaṭ chāpi Vastramālyānulepanāt || (Su. Ni.5/32-33)**

The incubation period for COVID-19 infected subjects varies from 2 to 14 days during which they may have no symptoms and the virus can be transmitted [5]. However, the most common symptoms that subjects present are throat pain, fever, cough, sneezing and shortness of breath [2]. The only way to encounter this virus is to maintain distance from the infected person, take good care of personal hygiene and sanitation, and most importantly develop a stronger immune system.

Immunity is the body's self defence mechanism to fight against infection, disease or unwanted biological invasions like that of bacteria, virus, parasite and yeast. It comprises of a plethora of

cells, tissues and organs, that work in tandem, in order to defend the host against any foreign invasions. The immune system can be classified into innate and adaptive, wherein the former is activated by Pathogen Associated Molecular Patterns (PAMPs) while the latter is dependent on antigen specific B and T lymphocytes [6].

However, even though the pathogen remains to be the same, its interaction with host immune system shows great variations that can be dependent upon certain individualistic factors like diet and lifestyle practices. These along with possible preventive measures are therefore indispensable for combatting the spread of COVID-19 and boosting host immunity to fight against this disease.

## DISCUSSION

### Risk Factors for Compromised Immunity with special reference to COVID-19

**Age:** There are various age related changes in pulmonary function due to lung infection [7]. Although COVID-19 can affect any age group, a study suggests that older people possess serious risk to COVID-19 mortality and morbidity [8]. Young children may remain asymptomatic and do not present severe disease despite high viral exposures. Due to ageing, lung microenvironment undergoes alterations in dendritic cell maturation and migration to lymphoid organs. Thus, it leads to defects in the process of T-cell activation [9].

**General lifestyle factors:** Lifestyle in general comprises of *Āhāra* (Dietary Habits), *Vihāra* (Daily Regimen), *Āchāra* (Conduct) and *Vihcāra* (Thoughts) [10]; derangements in which lead to lowered immunity and increased susceptibility to infections. Researchers have assessed the relationship of lifestyle factors like physical activity, smoking and alcohol consumption with the risk of COVID-19 and found that lifestyle modifications can not only diminish the severity of infection but also help to improve the prognosis [11].

# Quality Assessment of Sprouted Mung Beans at Various Storage Temperatures

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## Abstract

The present study was conducted with an objective to assess the quality of sprouted mung beans stored at different temperatures. Mung beans sprouts were processed at laboratory in controlled conditions, packed in LDPE pouches and were stored at summer room temperature (SRT) (30-32°C), winter room temperature (WRT) (15-18°C) and refrigeration temperature (RT) (7°C). Shelf life studies were conducted periodically for physical, chemical and microbiological parameters for 5 days at their respective storage temperatures. During shelf life studies, several changes were observed in sprouted samples of mung beans. There was a significant ( $p < 0.05$ ) increase in shoot length of sprouted mung beans samples stored at SRT followed by WRT and RT. Decrease in moisture content was significantly ( $p < 0.05$ ) more at RT followed by WRT and SRT. Vitamin - C content increased significantly ( $p < 0.05$ ) up to 1<sup>st</sup> day of storage at SRT and WRT, with decrease thereafter. Whereas at RT significant ( $p < 0.05$ ) increase was observed till 2<sup>nd</sup> day of storage followed by decrease afterwards. Vitamin - C content retained better at RT (16.6%) followed by WRT (6.3 %), while at SRT loss of 6.9% was observed. Acidity increased significantly at all three storage temperatures followed by subsequent decrease. Microbial count in terms of total plate count, yeast and mold count was comparatively higher at SRT followed by WRT and RT, though within acceptable range, whereas Coliform count was not detected at any stage. Thus it can be concluded that at RT (7°C) within two days of storage, optimal retention of physicochemical and microbiological qualities are achieved.

**Keywords:** Mung beans, sprouts, shelf life, storage, temperatures, quality

## Introduction

Mung bean (*Vigna radiata*) belongs to species leguminous, family Leguminosae (*Fabaceae*) and is grown for its protein rich

edible seeds (pulse). In India, mung bean ranks third among the pulse crop, after chick pea and pigeon pea<sup>1</sup>. India is the largest producer and consumer of legumes in the



## Vitamin-C Retention in Commercially Available Mung Bean (*Vigna radiate*) Sprouts

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### Abstract

The present study was conducted with an objective to assess the retention of vitamin-C over a time period in commercially available mung bean sprouts (CMBS). Mung beans sprouted samples were procured from market and compared with mung beans sprout samples processed at laboratory scale (LMBS) in controlled condition. Both sprouted samples were stored at 7°C in refrigerator. Shelf life studies were conducted periodically on physical, chemical and microbiological parameters during the storage time period of 0-96 h. During shelf life studies, several differences were observed among CMBS and LMBS samples. Keeping quality of sprout samples in terms of its appearance and odour started deteriorating after 48 h in CMBS and 96 h for LMBS. Shoot length increased significantly till 48 h in CMBS whereas till 72 h in LMBS. Moisture loss in CMBS and LMBS was 22 and 28% respectively. Titrable acidity in CMBS and LMBS decreased with increase in storage period. Vitamin-C content shows significant increase till 24 h in CMBS, till 48 h in LMBS followed by subsequent decrease thereafter. Vitamin-C retention in CMBS was 2%, while 16.6% in LMBS. Microbial load was considerably higher in CMBS as compared to LMBS, with rapid increase in Coliform count during storage in CMBS, while in LMBS it was not detected. Thus it was concluded that, to gain optimal vitamin-C content CMBS must be consumed within 24 h. However LMBS should be consumed within 48 h, yet its vitamin-C retention was comparatively more till 96 h of storage.

**Keywords:** Mung beans, sprouts, vitamin-C, retention, quality, shelf life

### Introduction

In today's scenario people are more aware and concerned about their health, which encourages them to select safe and healthy food particularly

of plant origin, since most of our Indian population is vegetarian. This has resulted into an increased consumption of raw, fresh produce such as sprouts. Thus the question arises "whether the

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<b>Research Projects (Major Grants/Research Collaboration)</b>
NA
<b>Awards and Distinctions</b>
<b>Sushma Sharma award for highest marks in MSc. Dissertation</b>
<b>Association With Professional Bodies</b>
<b>Nutrition Society of India</b>
<b>Other Activities</b>
<ul style="list-style-type: none"> <li>• <b>Worked as member in various committees like- NAAC, Admission, Examination, Timetable, Cultural, Student union advisory, Canteen, IT, Happiness club and B.A. Prog.</b></li> <li>• <b>Organized departmental competitions like (Recipe, poster, e poster, slogan, debate, rangoli, essay) during National Nutrition Week</b></li> <li>• <b>Co-Ordinator in departmental orientation programme, freshers, food fest, farewell.</b></li> </ul>

