

# GLOBAL JOURNAL OF ENGINEERING SCIENCE AND RESEARCHES

## BIOCHEMICAL STUDY OF ALLIUM CIPA FOR HEALTHY LIFE STYLE

Snehlata Hada & Minakshi Panwar

Christian Eminent Academy of Management, Professional Education and Research Indore(M.P). India

### ABSTRACT

Onions are cultivated and consumed across the world. They are usually served cooked. Whether it is uncooked onions or cooked onions, they are laden with benefits. Raw onions have higher levels of organic sulfur compounds that offer numerous benefits. This study reveals the chemical impact and benefits of onion for healthy lifestyle.

**Keywords:** *Onion, Row, Chemical, Sulphur, cultivated.*

### I. INTRODUCTION

Onion belongs to genus *Allium*. The bulb onion has short stem with fleshy leaves. It acts as a food reserve that helps the plant survive during harsh weather conditions. The onion plant has bluish-green leaves, and the bulb at the base begins to swell after a certain period. Onion contain many chemicals that are beneficial for healthy life style. It is observed that, men and women who eat raw onion have thick beautiful hair, also do not grey early. There is a correlation between onion and good physical condition.

#### Benefits of onion

1. Fight Cancer
2. Lower Blood Sugar Levels
3. Improve Heart Health
4. Promote Healthy Digestion
5. Maintain Bone Health
6. Prevent Inflammation and Other Allergies
7. Improve Immune System
8. Cure Ear Disorders
9. Promote Respiratory Health
10. Improve Sleep
11. Enhance Eye Health
12. Are Good For Oral Health
13. Aid In Cholera Treatment
14. Prevent Blood Clots
15. Give An Energy Boost
16. Improve Sexual Health
17. Enhance Brain Health
18. Help Cure Fever
19. Reduce Oxidative Stress
20. Ease Menopause Symptoms

#### Biochemical impact of onion

*Sulphur and Quercetin* present in onion help to enhance hair growth. Hair is made up of a special protein called keratin – which contain sulphur. The occurrence of sulphur imparts strength and elasticity to hairs; while its lack

may cause weak, brittle hair that is easily broken. Sulphur enhance blood circulation, oxygen supply and nutrients to scalp, so that hair grow healthy and strong.

Quercetin is a powerful antioxidant and anti-inflammatory. It helps to get rid of free radicals which can harm the cells of the body (including hair cells). It also protects our hair and skin from air pollution and other toxins. This sulfur can also stimulate collagen production – which, in turn, aids in the production of healthy skin cells, and, hair growth (by default, treating hair thinning too). Applying onion juice to hair and scalp can increase blood supply to the hair follicles, enhancing hair growth. It can also give voluminous hair. In one study, participants who washed their hair with onion juice had experienced more hair growth than those who hadn't. Onions also contain biotin (often touted as the 'hair growth vitamin'), flavonoids, and manganese, copper, vitamin C, phosphorous, and folic acids – all very significant for strong and gleaming hair. onions, are transformed into allicin post ingestion. Allicin, as per certain studies, has properties to fight cancer.

Allium and allyl disulphide, two phytochemicals in and diabetes (1). It can also decrease the rigidity of blood vessels and lower blood pressure levels. Onion and garlic combination have better reimbursement. They are known to be useful antidepressants, painkillers, anticoagulants, and anti-inflammatory. Contribution to weight loss indirectly.

### Nutritional composition of raw onions

One cup of chopped onion contains approximately:

- a) 64 calories
- b) 15 grams of carbohydrate
- c) 0 grams of fat
- d) 3 grams of fiber
- e) 2 grams of protein
- f) 0 grams of cholesterol
- g) 7 grams of sugar
- h) 10% or more of the daily value for vitamin C, vitamin B-6 and manganese.
- i) They also contain small amounts of calcium, iron, folate, magnesium, phosphorus and potassium and the antioxidants quercetin and sulfur.

## II. MATERIALS AND METHOD

Health comparison is done between two groups of people. One group eat and use onion but other not. These people were subjected to some analysis.

**Table 1: Group A (Onion user -Age Group 30-50)**

S.no.	Name	Blood-pressure	Sugar level (Fasting)	Sleep hours	Hair Fall Rate (percentage) by applying onion juice.
1	A	110/77	70 - 100 mg/dL	8	Reduce by 25 %.
2	B	122/85	100-126 mg/dL	8	Reduce by 35 %.
3	C	127/84	70 - 100 mg/dL	8	Reduce by 36 %.
4	D	139/88	70 - 100 mg/dL	8	Reduce by 55 %.
5	E	137/87	73 - 111 mg/dL	8	Reduce by 65 %.
6	F	127/84	72 - 112 mg/dL	8	Reduce by 25 %.
7	G	125/83	71 - 110 mg/dL	8	Reduce by 34 %.

**Table 2: Group B (Non onion user Age Group 30-50)**

S.no.	Name	Blood- pressure	Sugar level (Fasting)	Sleep hours	Hair Fall Rate (percentage) by not applying onion juice.
1	A	98/67	77 - 110 mg/dL	8	No change
2	B	97/65	100-126 mg/dL	7	Reduce by 4 %.
3	C	140/210	82 - 100 mg/dL	7	Reduce by 5 %.
4	D	139/240	90 - 110 mg/dL	7	Reduce by 3 %.
5	E	130/87	86 - 120 mg/dL	8	Reduce by 6 %.
6	F	120/84	99 - 118 mg/dL	7	Reduce by 4 %.
7	G	135/110	200 - 400 mg/dL	6	No change

### III. RESULT AND DISCUSSION

As onion contain 10 % or more of vitamin C, vitamin B-6 and manganese. Vitamin C is water-soluble and powerful antioxidant, it helps the body form and maintain connective tissue, including bones, blood vessels, and skin. Manganese is an important trace mineral needed for many vital functions, including nutrient absorption, production of digestive enzymes, bone development and immune-system defenses. Vitamin B12 is a nutrient that helps keep the body's nerve and blood cells healthy and helps make DNA, the genetic material in all cells. Thus onion help in Preventing blood clots, Give an energy boost, Improve sexual health. Enhance brain health. It contain allicin, which help to prevent cancer. As per serve examination it is clear that the people eating and applying onion show less hair fall and are much healthy then the group which do not eat and apply onion.

### IV. CONCLUSION

Onions have high nutritional value. Onion whether raw or cooked are beneficial and must include in diet. Overlook the price rise, onions should be there in our plate. The research suggests that healthy hairs could be achieved through use of onion in daily diet. Onion is of great importance. Survey result show that the group of person eating onion have less hair fall rate , blood pressure may get enhanced, as onion make blood thin and thus reduce blood clots. Onion also help in curing cancer, Lower Blood Sugar Levels Cure Ear Disorders, Promote Respiratory Health, Improve Sleep, Enhance Eye Health, Are Good For Oral Health, Aid In Cholera Treatment, Prevent Blood Clots, Give An Energy Boost, Improve Sexual Health, Enhance Brain Health, Help Cure Fever, Reduce Oxidative Stress, Ease Menopause Symptoms.

### REFERENCES

- [1] "Antioxidative compounds from the outer scales of onion". Gifu University, Japan. 2005 October.
- [2] "Red onions pack a cancer-fighting punch, study reveals". University of Guelph, Canada. June 2017.
- [3] "Red onions could beat cancer by destroying tumor cells". Express. 2017 June.
- [4] "20 foods that can stop heart disease". Express. 2015 March.
- [5] "Organosulfur compounds and cardiovascular disease". National Council of Research, Argentina. 2010 October.
- [6] "Onions power!" Dr. Mercola. 2016 January.
- [7] "Quercetin reduces systolic blood pressure...". Cambridge University Press. 2009 October.
- [8] "Effect of essential oil of onion...". Ravindra Nath Tagore Medical College, India. 1976 July.
- [9] "Onion extract may improve high blood sugar and cholesterol". The Endocrine Society. 2015 March.
- [10] "Polyphenols and glycerin control". University of South Australia. 2016 January.
- [11] "Effect of the prebiotic oligofructose on relapse of...". Derriford Hospital, United Kingdom. 2005 May.
- [12] "Fiber and prebiotics...". University of Minnesota, USA. 2013 April.
- [13] "Onion dehydration...". Indian Institute of Technology, India. 2011 April.
- [14] "Onions may fight osteoporosis". WebMD. 2005 April.



**[FRTSSDS- June 2018]**  
**DOI: 10.5281/zenodo.1308708**

**ISSN 2348 – 8034**  
**Impact Factor- 5.070**

- [15] *"The association between onion consumption and bone density..."*. Medical University of South Carolina, USA. 2009 July.
- [16] *"Onions can help prevent inflammation"*. Arthritis Foundation.
- [17] *"A guide to natural ways to alleviate allergy..."*. Integrative Medicine.
- [18] *"Anti-bacterial action of onion..."*. Yongin University, Republic of Korea. 1997 September.
- [19] *"Antibiotics in onions and garlic"*. US National Library of Medicine National Institutes of Health. 1945 July.
- [20] *"Complementary treatment of the common cold and flu with medicinal plants..."*. University of Tartu, Estonia. 2013 March.
- [21] *"Parents are swearing by an onion earache cure"*. Business Insider. 2015 October.
- [22] *"Treatment for acute middle ear infections"*. US National Library of Medicine. 2016 December.
- [23] *"Respiratory and allergic diseases..."*. State University of New York, USA. 2002 June.
- [24] *"Onions and the asthma benefits"*. Penn State.