

Summer Training Report

By

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"Learning the art of expressing gratitude will force you to focus on the positive."

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Report on Summer Training

NEED OF NATURAL IMMUNITY BOOSTER

ABSTRACT-

One of Nature's most fascinating invention is immune system. To defend us against millions of bacteria, viruses, fungi, toxins and parasites, it is an amazing protection mechanism. It is very complex. Immune system is made up of different types of protein and cells that have different jobs to do in fighting against foreign particles. If we have properly working immune system we are protected from danger caused by foreign particles. If we have not properly working immune system we suffer disease and illness. It is possible to improve immune system and make our immune system stronger using immune boosters. Boosters works in many ways to improve our immunity. They help immune system army to increase white blood cells and train them to fight against microbes causing diseases.

For this study the sample size taken in which 30 General physician and 110 patient in which 30 patient were above 40 year and remaining 80 were between 15 to 40 years old. So this study will give total 140 perceptions towards natural immunity booster. The motive of the research is to understand the need of natural immunity boosters. This study gives an overall view about some natural immunity booster.

Keywords

Immunity, immunity boosters, natural immunity, natural type of immunity boosters, need of natural immunity boosters, type of natural immunity boosters.

INTRODUCTION-

The immune system in which T cell and B cell intercede immunological memory, has grown generally as of late in vertebrate (netea, 2020). The immune system has been divided into two major parts , first one is innate and second is adaptive components, both parts has different role and functions (janeway, 2000). The main fact of innate immunity refers to the first line host defense that serves to limit infection in previous hours after contact to microorganisms (A.Hoffmann, 1999). Administrative T (Treg) cells assume a pivotal job in keeping up safe framework homeostasis by stifling over-receptive resistant reactions (Lf, 2012). Imperfections in Treg cells lead to immune system issue and immunopathology, though certain tumors are enhanced with Treg cells that stifle hostile to tumor insusceptible reactions (S, 2017). First part of immune system, which is innate immune system provides vital mechanism for the fast extraction and identifying of pathogen while second part of immune system which is adaptive immune system has developed to provide a wider and more

tuned repertoire of recognition for both self and non-self antigen (A.Bonilla, 2010). The worldview that lone adaptive immunity can create immunological memory has as of late been tested by examines demonstrating that cells from the inborn safe framework can experience useful reconstructing, encouraging a quicker and upgraded reaction to optional contaminations. The invulnerable framework was distinguished as a defensive factor during irresistible infections longer than a century prior. Current definitions and course reading data are still generally impacted by these early perceptions, and the invulnerable framework is regularly introduced as a resistance hardware. immunological barrier against microorganisms is expensive and just receptive, human enemy of microbe guard is likewise portrayed by proactive social components that hinder contact with microbes in any case. This social safe framework includes mental procedures that construe contamination chance from perceptual prompts, and that react to these perceptual signs through the initiation of aversive feelings, comprehensions and conduct driving forces.

LITERATURE REVIEW-

A NCBI ARTICLE ON Natural Health Products, Modulation of Immune Function and Prevention of Chronic Diseases Says that During the last century, current medication has contributed significant progressions to sanitation and general wellbeing activities and revelations like anti-infection agents and immunization. These productively prevented the movement of irresistible illnesses through the populace.

The natural framework is tribal and present in spineless creatures just as vertebrates. It is neither expectant (no memory) nor clonal and doesn't react to ecological changes. The intrinsic framework responds legitimately to a wide assortment of microorganisms through receptors for profoundly preserved and basic microbial particles, for example, lipopolysaccharides present on the cell mass of Gram-negative microscopic organisms and lipoteichoic acids present in Gram-positive microbes. For sure, the cells of the natural invulnerable framework speak to the primary line of barrier in the immunosurveillance arrange (S.Haddad, 2005).

A ScienceDirect ARTICLE ON Understanding nutrition and immunity in disease management writes invulnerable capacity by nourishments in people fluctuating from beneficial to those with bargained resistant frameworks have bolstered the general end that nourishments are fit for affecting intrinsic or even gained insusceptibility. Showing capacities for rewarding infection in undermined people, forestalling sickness in the individuals who are sound, and examining sustenance and its unpredictable impacts on insusceptibility have added to a rising order known as immunenutrition (Kaminogawa, 2017).

Bountiful exploration of common mixes, for example, honey and pomegranate as wellsprings of palliative and protection care for patients is picking up energy. The harming and poisonous impacts of chemotherapy and radiotherapy to human cells have animated an enthusiasm for nontoxic, normal anticancer specialists that may improve a patient's general wellbeing and even forestall the frequency of malignant growth. Nectar has been widely explored as regular anticancer operator. In spite of the fact that we despite everything don't completely comprehend its differed and various chemo preventive components, huge numbers of its

valuable properties are identified with its apoptotic, antiproliferative, antitumor, cell reinforcement, mitigating, estrogenic and immunomodulatory exercises (S.Ahmed, 2013).

Investigating and breaking down birthplaces of resistance uncovers transformative and formative connections to eat less carbs and sustenance, old associations in capacity and advancement. Nourishments are fit for affecting resistant capacity. As of late extended information on invertebrate resistant components and their basic complex atoms offer a chance to use this data for planning remedial treatment. As an expanding number of ailments and wellbeing conditions do not have a fix, present day biomedicine is obliged to investigate every single potential alternative that guarantee understanding consideration. Ongoing disclosures and effective utilization of creature items and bioactive mixes uncover potential to affect present day medication. With advantageous results that incorporate maintaining a strategic distance from harmful impacts of chemotherapy, easing back senescence, and decreasing oxidative harm and aggravation, there is another danger. The test currently stays in coordinating elective medicines into national human services. Finding successful mixes with common sense applications give colossal chances to clinical progression whenever used and fused reasonably (Cooper, 2016)

This improved optional reaction isn't generally explicit, as it can likewise shield from diseases brought about by non-related microorganisms. This has been named intrinsic insusceptible memory or prepared insusceptibility. Prepared resistance not just includes overhauling the intracellular invulnerable motioning of inborn safe cells, yet in addition actuates significant changes in cell metabolic pathways, for example, glycolysis, oxidative phosphorylation, unsaturated fat and amino corrosive digestion, expanding the limit of the intrinsic safe cells to react to an auxiliary incitement. The comprehension of these intracellular procedures opens new helpful opportunities for the tweak of the intrinsic insusceptible reactions during diseases and provocative (Joosten, 2018).

protection is just a single sign of the resistant framework's general capacity in the support of tissue homeostasis and framework trustworthiness. Truth be told, the invulnerable framework is essential piece of key physiological procedures, for example, improvement, propagation and wound recuperating, and a nearby crosstalk between the resistant framework and other body frameworks, for example, digestion, the focal sensory system and the cardiovascular framework is clear. Examination and clinical experts in an extending scope of territories begin to perceive the ramifications of the resistant framework in their individual fields. This section gives a short chronicled viewpoint on how our comprehension of the invulnerable framework has advanced from a barrier framework to an all-encompassing reconnaissance apparatus to keep up tissue honesty (sattler, 2017).

immunological defence against pathogens is costly and merely reactive, human anti-pathogen defence is also characterized by proactive behavioural mechanisms that inhibit contact with pathogens in the first place. This behavioural immune system comprises psychological processes that infer infection risk from perceptual cues, and that respond to these perceptual cues through the activation of aversive emotions, cognitions and behavioural impulses. These processes are engaged flexibly, producing context-contingent variation in the nature and magnitude of aversive responses. These processes have important implications for human social cognition and social behaviour-including implications for social gregariousness, person

perception, intergroup prejudice, mate preferences, sexual behaviour and conformity. Empirical evidence bearing on these many implications is reviewed and discussed. This review also identifies important directions for future research on the human behavioural immune system--including the need for enquiry into underlying mechanisms, additional behavioural consequences and implications for human health and well-being (Schaller, 2011).

Objective -

The objective of the study is to –

1. Asses the needs of immunity booster in people
2. To understand the best way to boost immune system.

RESEARCH METHODOLOGY-

Type of research: Descriptive

Data collection: Primary data was collected from general population and general physician throughout the pan India. Secondary data was collected from Articles and Published journals etc.

Duration: 2 months (29/04/2020 – 30/06/2020)

Sample size: 140 (30 General physician and 110 General population of different age group ranges from 18 to 80)

Data analysis: The data analysis had been done by using MS Excel.
Inclusion and Exclusion criterion: everyone between the age of 18-80 are included in this study. Below the age of 18 years are excluded.

Study Area: Pan India.

Data Collection Method:

Primary Data collection: Structured Questionnaires were framed for Data Collection.

Secondary Data Collection: Journals, Articles, Books etc.

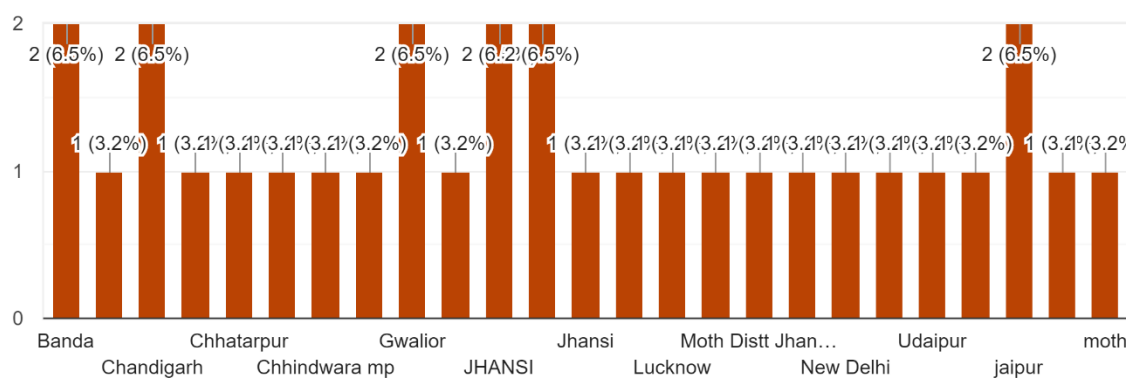
Data Collection and Analysis: The responses obtained was collected, filtered, and statistically analysed using Microsoft Excel.

Measure of Ethics: Respondents were assured of privacy and confidentiality.

DATA INTERPRETATION AND ANALYSIS

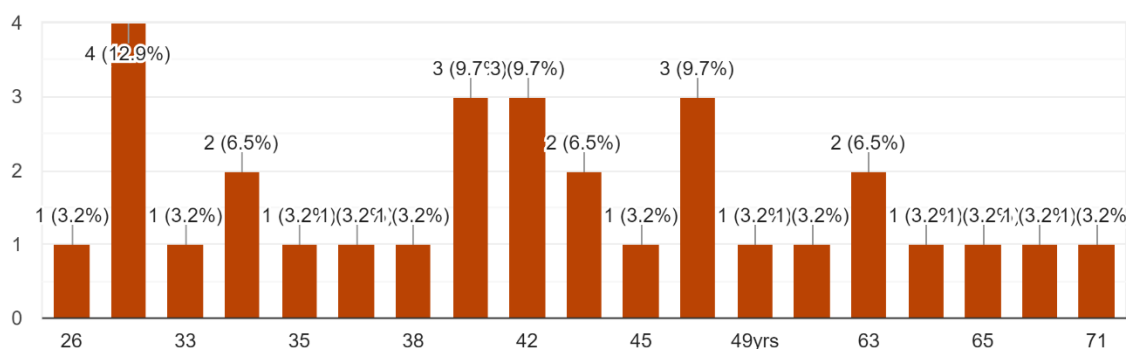
ANALYSIS OF DOCTOR'S SURVEY

CITY:



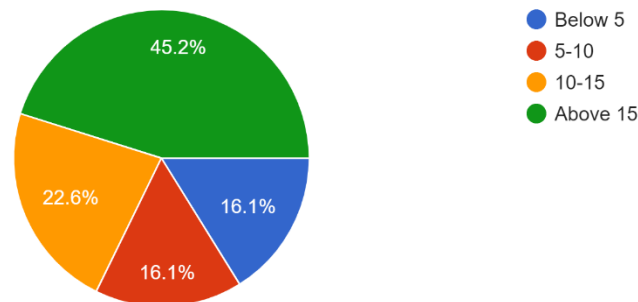
Analysis: For the survey this questionnaire sent to pan India's Doctors. Out of which 30 doctors given their response who belongs from these given cities.

AGE:



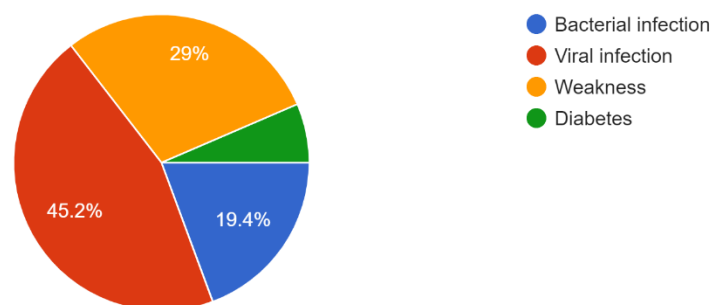
Analysis: This survey form sent to various age group doctors. This graph has a clear picture that 30 and above age are more interested in giving their responses and share their experience. This survey form filled by (26-71) year age group.

YEAR OF EXPERIENCE:



Analysis: This Pie chart shows that the questions of this study are attempt by different year of experience group. Mainly 45.2% doctors have above 15 year experience and 22.6% have 10-15 year experience. while below 5 and 5-10 year experience doctors have same 16.1% ratio.

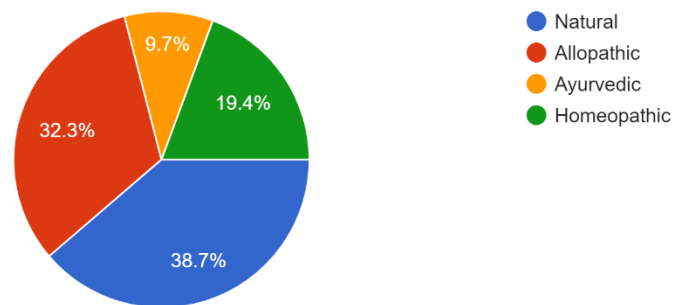
SYMPTOMS OF COMPROMISED IMMUNE SYSTEM:



Analysis: The immune system protects the body against disease or other potentially damaging foreign bodies. According to the respondent doctors these are the symptoms- 45.2% respondents suggest that main symptom of compromised immunity is viral infection

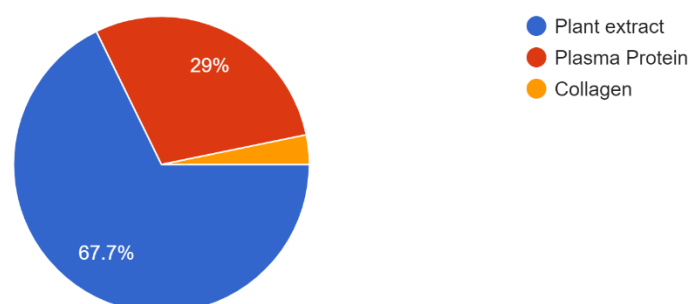
while 19.4% suggest that it is because of bacterial infection.29% says weakness is main symptom of compromised immune system.

TYPE OF IMMUNITY BOOSTER PRESCRIBE BY DOCTORS:



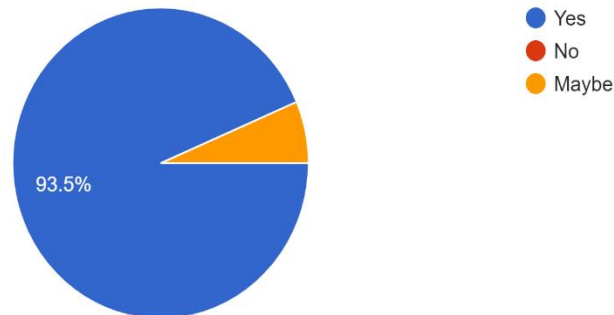
Analysis: Mainly there are four type of immunity boosters (Natural, Allopathic, Ayurvedic, Homeopathic) are available in market. According to the choices of patient and Doctors, prescription percentage is-38.7% Doctors prescribe Natural type. 32.3% believes in Allopathic and 19.4% and 9.7% prescribe Homeopathic and Ayurvedic. This graph clearly shows that Natural immunity boosters are most prescribed type of immunity boosters.

MOSTLY USE FULL TYPE OF NATURAL IMMUNITY BOOSTERS:



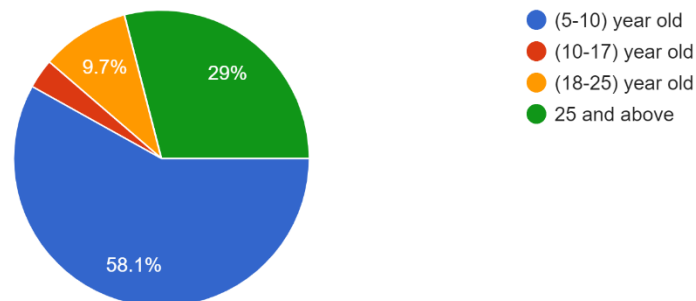
Analysis: Above data is very clear picture that 29% respondents prefer plasma protein while 67.7% prefer plant extract. Plant extracts are also a natural type of immunity boosters. It is mostly preferred by doctors.

ROLE OF NATURAL IMMUNITY BOOSTER TO FIGHT AGAINST VIRAL INFECTION:



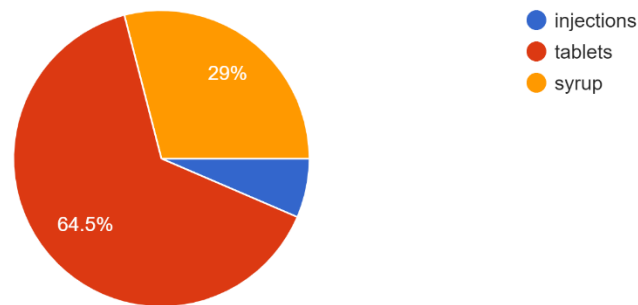
Analysis: This graph has loud and clear picture that 93.5% Doctors believes that natural immunity booster are better than other type of immunity boosters.

POPULATION AT MORE RISK OF VIRAL INFECTION:



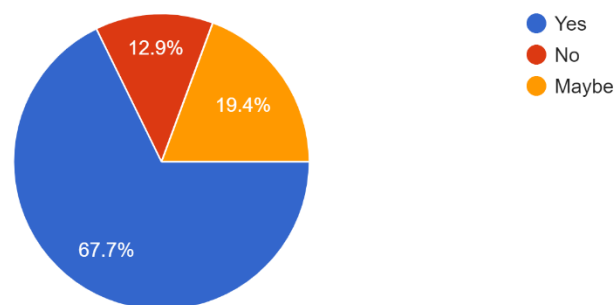
Analysis: According to this graph 58.1% Doctors believe (5-10) year old population are at more risk because this age group has undeveloped immune system while 29% believes 25 and above age group has at more risk of viral infection.

MOST PREFERRED DOSES FORM:



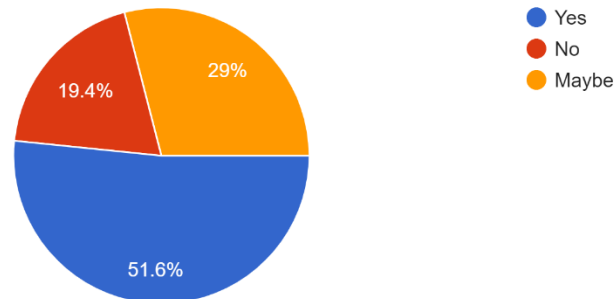
Analysis: This pie chart shows clearly that Tablets are most preferred doses form. According to the survey 64.5% doctors agree that tablet is most preferred by patients. And rest 29% doctors said syrup is also preferred by patient. Injections are least preferred by patients.

IMMUNITY BOOSTERS AS A SUPPLEMENT:



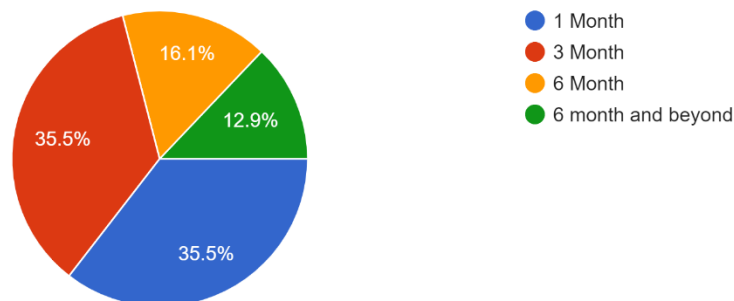
Analysis: In this survey 67.7% Doctors agree on that they prescribe immune booster as a supplement but 19.4% doctors are not sure about prescribing immune boosters as supplement while 12.9% doctors denied to prescribe immunity boosters as a supplement.

RECOMMENDATION OF REGULAR USE OF IMMUNITY BOOSTERS:



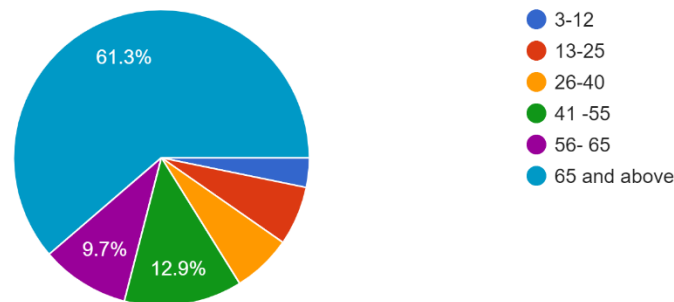
Analysis: This graph shows 51.6% Doctors recommend regular usages of immunity boosters and 19.4% Doctors does not recommend regular use of immunity boosters. 29% doctors are not sure about the regular use of immunity boosters so they did not recommend it.

FREQUENCY TAKING IMMUNITY BOOSTERS:



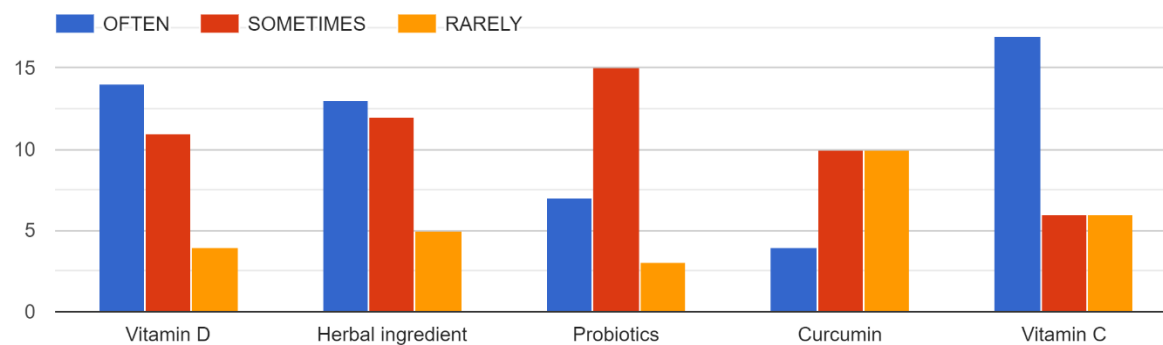
Analysis: This graph says most of the doctors recommend immunity boosters 1 month to 3 month. According to the survey 35.5% doctors recommend it for only one month. On the other hand same ration of the Doctors (35.5%) recommend it for 3 month. 16.1% respondents suggest that it should be taken for 6 month and 12.9% agree to take it 6 month and beyond.

AGE GROUP SHOULD TAKE IMMUNITY BOOSTERS ON REGULAR BASIS:



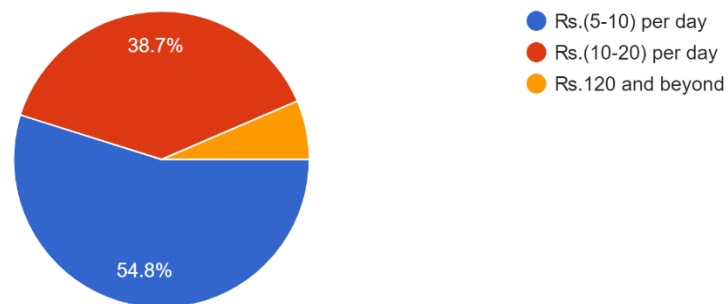
Analysis: The graphs shows clearly that 61.3% doctors are suggest that 65 and above age bracket should take immunity boosters on regular basis.12.9% doctors believes 41-55 age bracket should take immunity boosters on regular basis. while 9.7% Doctors suggest it to (56-65) age group. According to this survey (41-65 and above) age group should take immunity boosters on the regular basis.

MOSTLY PRESCRIBE IMMUNITY BOOSTERS CONTAINING THE FOLLOWING ELEMENTS:



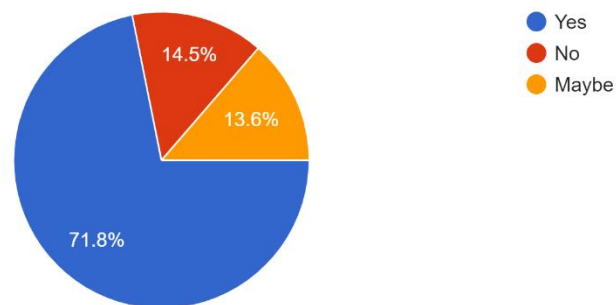
Analysis: According to this graph Vitamin D and Vitamin C is highly recommended by the doctors to increase the immunity. Herbal ingredients are also recommended by the doctors. But curcumin is not that much recommended by the doctors while some doctors believes that sometime use or probiotics is also helpful to boost immunity.

COST OF IMMUNITY BOOSTERS PER DAY:



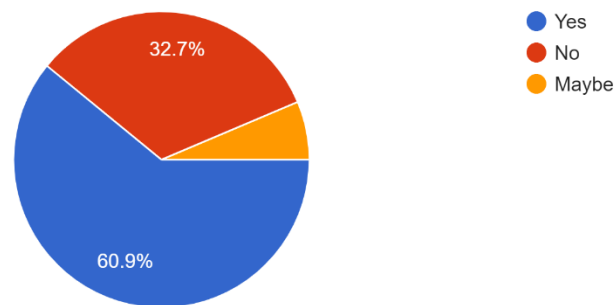
Analysis: This graph says that 54.8% doctors believes that 5-10 rupee per day is sufficient for immunity booster while 38.7% Doctors says the cost of per day immunity booster of one person is (10-20)rupee per day.

KNOWLEDGE ABOUT IMMUNITY



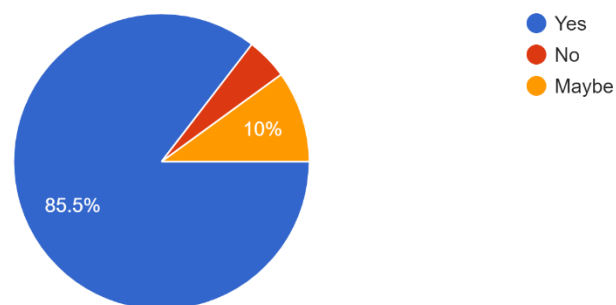
Analysis: This graph shows 71.8% of the population aware about the immune system. While 14.5% population does not know about the immunity and 13.6% of the population is not sure about it.

USED ANY PRODUCT TO IMPROVE YOUR IMMUNITY:



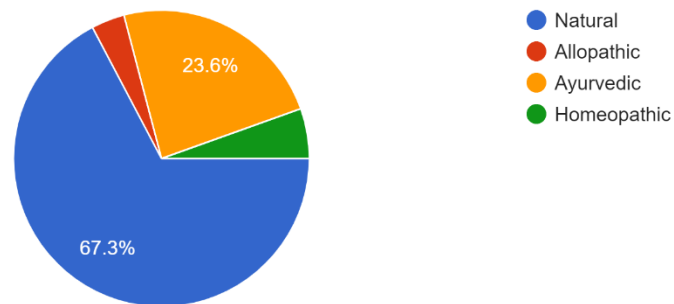
Analysis: According to the survey 60.9% of the population use products to improve their immune system. But on the other side 32.7% population does not use any product to increase or improve their immune system.

POST COVID-19 BELIEVE TO TAKE IMMUNITY BOOSTERS:



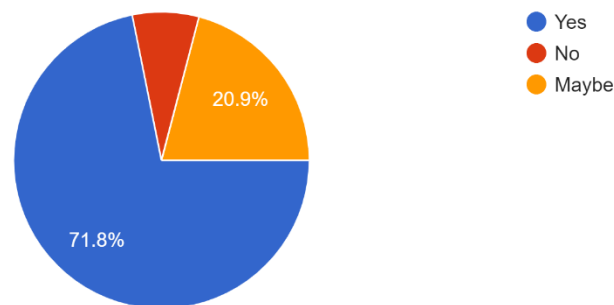
Analysis: In the situation of Covid-19 everyone is trying to improve their immune system. This graph shows the same result. 85.5 % of the population believes to take immunity boosters post covid-19. Only 10% of the population does not sure about to take immunity boosters.

MOSTLY USED PRODUCT:



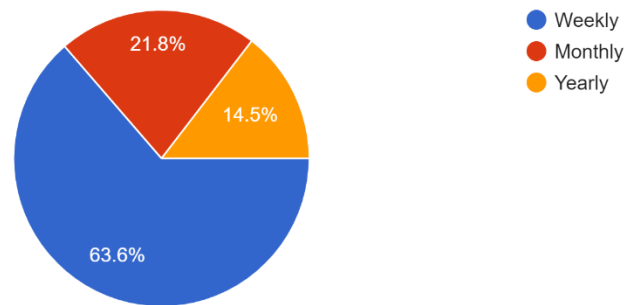
Analysis: There are many type of immunity boosters available in the market. In which four type (Natural, Allopathic, ayurvedic, Homeopathic) of immunity boosters are mainly use. According to the graph 67.3% of the population use Natural type of immunity boosters while 23.6% of population believes in Ayurvedic. Allopathic and Homeopathic are least preferred by the patients.

AVAILABILITY OF IMMUNITY BOOSTERS IN MARKET:



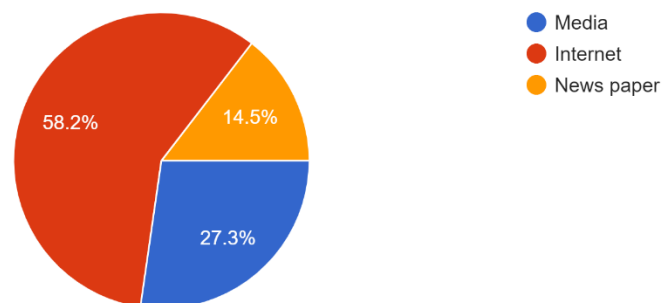
Analysis: This pie chart shows that 71.8% Of the population gets immunity boosters in market easily while 20.9% does not sure about availability of immunity booster in market.

FREQUENCY OF CONSUMING IMMUNITY BOOSTERS:



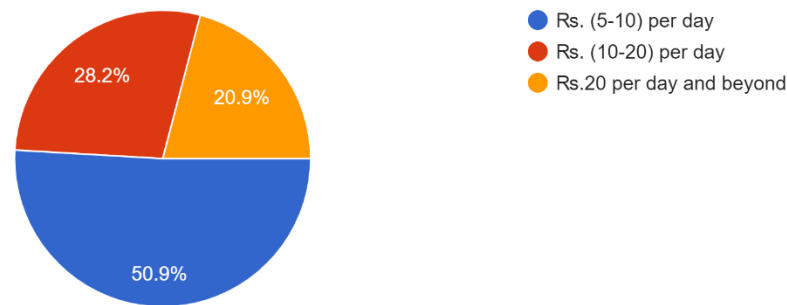
Analysis: The use of the immunity booster depends on the different type of the population. This graph shows that 63.6% of the population consume immunity boosters on weekly basis while 21.8% of the population believes that monthly use of immune boosters are sufficient for them and 14.5% of the population take it yearly.

SOURCE OF INFLUENCE TO TAKE IMMUNITY BOOSTERS:



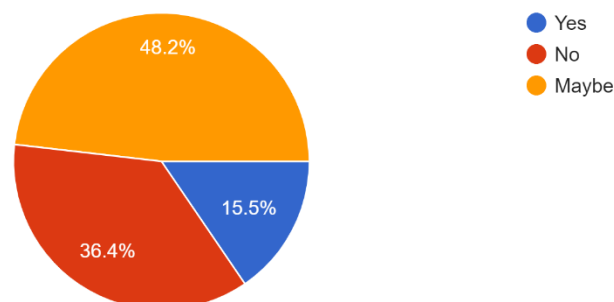
Analysis: In the world of technology most of the population is highly influenced by the internet. This piechart also has a clear picture that 58.2% of patient influence to take immunity booster by internet and some (27.3%) are influenced by media. And 14.5% of the population is influenced to take immunity booster by reading new paper.

COST OF IMMUNITY BOOSTERS PER DAY:



Analysis: This graph gave estimate price of immunity boosters per day. 50.9% of the population says that Rs. (5-10) per day is the cost of their immunity boosters. While 28.2% spend Rs. (10-20) per day on their immunity boosters. And 20.9% of the population spend their Rs. (20 and beyond) per day.

SIDE EFFECTS OF IMMUNITY BOOSTERS:



Analysis: According to this survey 36.4% of the population denied that immunity boosters have ant side effect but 48.2% population has no clear opinion about its side effects. 15.5% of the population says that immunity boosters have side effects.

RESULT-

The survey was conducted in pan India during April 2020 to July 2020 . these include 140 respondents in which 30 are General physicians and 110 are patient in which 80 patients are (15-40) age group and 30 are (40 and above) age group. This survey form filled by different age group doctors (23-71) age group and patients (15-40 and above) age group.45.2% doctors have above 15 year experience though 22.6% have 10-15 year of experience. : The immune system protects the body against disease or other potentially damaging foreign bodies. 45.2% doctors suggest that main symptom of compromised immunity is viral infection while 19.4% suggest that it is because of bacterial infection.29% says weakness is main symptom of compromised immune system. According the survey 38.7% doctors recommend Natural immunity booster and almost same ration of doctors believes in ayurvedic. The 67.7% of doctors and 67.3% of patient agree that natural immunity boosters are more helpful also 93.5% of doctors says that natural immunity boosters are helpful to fight with viral infection. 58.1% of doctors confirm that (5-10) year old has more risk of viral infection. According to the Doctors (64.5%) and patient most suitable form of doses is tablets. Immunity boosters are prescribed by the 67.7% of doctors as a supplement and 51.6% Of the doctors recommend it for regular uses. Most of the Doctors says that immunity boosters should be use one month to 3 month according to the patient condition and above 65 age group it should be consume on daily basis (according to 61.3% of doctors). Vitamin D, Vitamin C, and probiotics, herbal ingredients are mostly preferred in immunity boosters. Patient(50.9%) and doctors (54.8%) agree that per day cost of immunity booster is Rs.(5-10) per day.

71.8% of the population knows about the immune system and 60.9% use products to improve their immunity. Also 85.5% of the population believe to take immunity boosters post covid-19. According to 71.8% Of population easily able to get immunity boosters in market. 63.6% population weekly use the immunity boosters. Internet plays a very important role to aware the population about the immunity. 58.2% Of the population influence by internet to take immunity booster.36.4% of population confirmed that immunity boosters have no side effects.

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ANNEXURE:

Perception of doctors towards Need of natural immunity boosters:

1.Name

2.City

3.Age

4. Year of Experience:

- Below 5
- 10-15
- Above 15

5. According to you what are the symptoms of compromised immune system?

- bacterial infection
- viral infection
- weakness
- diabetes

6. What type of Immunity booster you prescribe to patient?

- Natural
- Allopathic
- Ayurvedic
- Homeopathic

7. What type of natural immunity booster are more use full?

- Plant extract
- Plasma Protein
- Collagen

8. Do you think natural immunity booster helpful to fight against viral infection?

- YES
- NO
- MAYBE

9. What kind of population are at more risk of viral infection?

- (5-10) year old
- (10-17) year old
- (18-25) year old
- 25 and above

10. Which doses form are more preferred by patient?

- injections
- tablets
- syrup

11. Do you prescribe immune boosters as a supplement?

- Yes
- No
- Maybe

12. Do you recommend regular usage of immunity boosters?

- Yes
- No
- Maybe

13. How often do you recommend your patients to take immunity boosters –

- 1 Month
- 3 Month
- 6 Month
- 6 month and beyond

14. According to you which age bracket should take immunity boosters on a regular basis.

- 3-12
- 13-25
- 26-40
- 41 -55
- 56- 65
- 65 and above

15. How often do you prescribe immunity boosters containing the following elements-

	OFTEN	SOMETIMES	RARELY
Herbal ingredient			
Vitamin D			
Melatonin			
Probiotics			
Curcumin			
Vitamin C			

16. How much do you think patient can afford for immunity booster?

- Rs.(5-10) per day
- Rs.(10-20) per day
- Rs.120 and beyond

Perception of patients towards Need of natural immunity boosters:

1. The ability of an organism to resist a particular infection or toxin by the action of specific antibodies or sensitized white blood cells. Do you know about it?
 - Yes
 - No
 - Maybe
2. Do you use any product to improve your immunity?
 - Yes
 - No
 - Maybe
3. Post covid-19 do you believe to take immunity booster?
 - Yes
 - No
 - Maybe
4. If yes, what kind of product you use?
 - Natural
 - Ayurvedic
 - Allopathic
 - Homeopathic
5. Are immunity booster easily available in market?
 - Yes
 - No
 - maybe
6. How often do you use immunity booster?
 - Weekly
 - Monthly
 - yearly
7. Which doses form do you prefer mostly?
 - Syrup
 - Tablet
 - Injections
8. What influence you to take immunity booster?
 - Media
 - News paper
 - Internet
9. Any brand of immunity booster you remember/use?
10. At what price you use immunity booster?
 - Rs. (5-10) per day
 - Rs. (10-20) per day
 - Rs.20 per day and beyond
11. Do you think immunity boosters have any side effects?
 - YES
 - NO
 - MAYBE