

Culture Counters Corona

Corona war is Pandemic endangering human lives& Economies of all Countries

- Imported Disease is Corona
- Chinese culture of eating raw meat originated corona
- Indian culture of permitting all overseas travellers brought to India

As on 19th April 2020 the statistics are below:

Incidence	Number of Cases	Number of Death
India	15722	521
Africa	19827	1020
USA	738830	39014
UK	114217	15464
Italy	175925	23227
Germany	143724	4538
Spain	194416	20639
China	82735	4632

Total Cases : 2330937

Total Death :160755

Upon reading through this data I could observe something striking i.e. the Infection& Death is more in the highly Developed Nations of the world.

Less incidence in Moderate Developing Nations

Very less incidence in under Developed Nations

Immediately I started Analysing why this difference is happening ?

In Infections, three Parameters are counted:

1. **Agent** -Covid 19 is same Globally .It doesn't change with Nations.

According to a Chinese study in Peking university on 103 patients, they identified two strains of COVID 19, the original S type and L type, which is a mutated type ; but their study found more of L type. It suggests that L type is more aggressive mutated form. We don't know which type is predominant in India?

2. **Host Immunity**

The host factor is very important in an epidemic. The infectivity and severity of the disease, as well the mortality are determined by immune response of the host. The COVID 19 causes more suffering in elderly and more mortality.

We have two types of immunity. The first line is Innate immunity and 2nd line is Adaptive immunity. The innate immunity does not have a memory. The Adaptive immunity is mediated by T and B lymphocytes and it needs a memory

3. **Environments**

let's see the temperature and latitude of the affected countries! The 'Global Virus Network ' has predicted that weather modeling can explain spread of COVID 19. A temperature rise of 12 degrees Celsius or higher, the viral transmission may be difficult. A study in China also found that that the virus transmission is best at a temperature 8.72 degree Celsius and with every 1 degree rise in minimum temperature , the total number of cases go down

Hence the difference lies in Host Immunity & Environment

Let me share my thought process On Indian Immunity & Environment scenario with my colleagues :

Indian Habits & Cultures

1. Mothers breast feeding for years gives prolonged inherent immunity against many diseases.
2. Bad environmental and personal hygiene leads to the presence of cocci and bacilli which leads to absence of many viral organisms.
3. Subclinical exposure to many viral diseases like measles, mumps, influenza, etc leads to antibodies, immunity and crossed immunity for other viral diseases.
4. Hand washing before and after food also helps a lot in keeping the cleanliness compared to eating with spoon and fork.

5. Yoga, vegetarianism, discipline and religion increases mental peace and good physical habits.
6. No paper – water washing –Bottom may be advantageous
7. Chilies Native Antiviral Antioxidant Ginger, Onion , pepper , garlic fenugreek, Turmeric, in food
8. Climate – Hot in India disadvantage to virus
9. Namaste – No hand shaking
10. Except the beneficiaries of National immunization mission most of Indians above 40 years are exposed to acute and chronic immune system challenges from air, water, food, soil for decades
11. Dirtiness is part of Indian culture because in all our outdoor activities we never care about sanitized or sterile environment
12. Herd immunity develops automatically among Indian communities and huge congregations like Kumbh have shown the resilience of Indians assembling in huge numbers
13. Water of sacred Ganga river is teeming in viruses but millions take dip and come out unscathed
14. Fermented foods are integral part of Indian culture this developing a totally different Indian gut microbiome
15. The diverse tropical and subtropical ecological and environment conditions in Indian subcontinent makes it difficult for temperature and humidity sensitive respiratory viruses to produce mass morbidity in a genetically heterogeneous population divided in four distinct racial types

Indian Immunity

Legacy is ingrained in your spirits

- Genetic Predisposal of Asians to CAD Genomic Immunity
- Dirtiness – Indian Heritage Genomic susceptibility
- Dirty Child -? Immunity
- Mr.Clean – Mr. Dirty -Researches take a call
- Religious places Temples, Mosques & Churches are overcrowded ; festivals are very much crowded
- Dirt offer protection; clean make susceptible ?

- Compulsory BCG Vaccine Children; Flu vaccine for Diabetics & Elderly – Protective ?
- **Culture: Positive** – Slum & Gutter Living – Immunity – Bacteria Virus
Negative–Pollution , GUT Infection

Indian culture is a Blessings in Disguise ?

Host Factors & Environment are different between India & Developed Nation, like Europe & USA

Observational Facts:

Facts	Indian	US/UK
Climate	Hot & Humid	Cold
Vaccine	BCG Mandatory Measles Given	Not Mandatory
Physical Activities	More Labor	Less
Infections Rate	High	Negligible
Washing & Wiping	Water	Paper
Yoga / Breathing Exercises	Common	Less
Greeting	Namaste	Hand Shaking
Smoking	Less	more
Alcohol	Less	more
Diet	Hot – chilies etc..	Soft with Sauce
Wiping Table, Door	Wet cloth	With vacuum cleaner
Genetics	Immunity ?	Susceptibility?
Financials	Poor to Moderate	Richness

Same Scenerio applicable to Africa, Srilnaka too.

What does Science say.....

1. Indians, compared to other worldpopulations carry more NK cells that can detect and terminate infections at early stage. We have a stronger first line defense, may be as we are exposed to more infective agents. Mortality is less still in Malaria endemic areas. We still don't know the causal relationship. BCG vaccine is given in children to modulate their immunity against tuberculosis. It actually enhances T cell mediated immunity which is a form of Adaptive immunity, So BCG, Tuberculosis and Innate immunity all seem to link together.

We are aware BCG Vaccine is undergoing trials.

References:



By Tennnews.In On Mar 29, 2020

[//academic.oup.com/nsr/advance-article/doi/10.1093/nsr/nwaa036/5775463](https://academic.oup.com/nsr/advance-article/doi/10.1093/nsr/nwaa036/5775463)

2. Micro RNA in Indians may reduce severity of corona attack, says study

Researchers at the International Centre for Genetic Engineering and Biotechnology (ICGEB), New Delhi, has revealed Unique microRNA, called has –**miR 27b**, which successfully mutates the corona virus responsible for Covid-19. Host antiviral miRNAs play a crucial role in the regulation of immune response to virus infection.

Ref : DHINESH KALLUNGAL@T'Puram

Inference :

- Western Culture favors Corona 19 Infections due to low Host Immunity & Disadvantageous Environmental factors
- Indian Culture resists corona 19 due to high Innate Immunity & favourable Environmental factors.

Yes, Indians have Innate & Acquired Immunity against Infections.

Recommendations:

- To follow Vaccine Schedule – BCG / Viral
TB or no Tbfor Immunity
- Adequate washing using water & soap.
- Add Ginger, Garlic, pepper, onion etc.. to the food
- To do Active Physical Exercises & more labor
- Undertake Yoga or some form of Breathing Exercises
- Expose to Warm climate often. Global warming may be a blessing in disguise.
- Stop Smoking & Alcohol Consumption
- But let us not recommended dirtiness but recommend & adopt Cleanliness.

Cleanliness is Health

- Maintain Social Distancing
- Maintain Respiratory hygiene
- Wipe the Door, window, Table etc. with wet cloth .

Let us be clean – Swatch Bharat

**World Citizen are trilled which cultures to follow, Western or Indian
Future and Research will surely Address this mystery.**

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