Immunomodulatory measures to strengthen the body during Covid outbreak

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ABSTRACT
COVID-19 is a disease caused by coronavirus; it is also called a SARS-COV-2 virus. Over the last six months, it has spread rapidly worldwide and made it a pandemic. The pandemic has forced people to stay indoors and work, which may increase chronic diseases among them. Immunomodulators are the substances which influence the immune system. It includes some medications as well as some activities like exercise, Yoga, meditation etc. Elderly citizens who used to walk generally before lockdown may suffer from pedestrian problems including hyperthyroidism, sugar problems blood. When the media used to do the work regularly, we had one kind of stress to do all the desired or targeted work on time. But now the person became very lazy due to self-reliant schedule that may lead to many diseases. So physical exercise is essential in this pandemic situation. Physical activity results in better immune response, which may result in many health benefits. An individual who regularly does physical exercises is healthy and fit in every aspect that can beat any of the diseases. It can also refine cardiovascular risk factor. In addition to this, it also enhances - pro thrombogenesis, improves endothelial functions, increases inculcation, depletes sympathetic tone and some other undefined factors. But all these have been put at bay due to Covid-19 pandemic. It is challenging to keep up an exercise routine due to daily restricted movements. Physical exercise helps in boosting the immune system of our body which reduces stress, anxiety. Brain gets the supplement of endorphins, chemicals that revitalise one's mind and body enriching the mental and spiritual faculty of an individual.

INTRODUCTION
The surge of novel Corona Virus disease began on 30th January 2020. It was declared a pandemic and a health emergency throughout the world (WHO Statement, 2005). Later, on 11th March 2020, COVID-19 was characterised as a more pandemic situation (WHO Director-General, 2020). On 20th April 2020, WHO reported 2,314,621 confirmed cases of COVID-19 and a total of 157,847 deaths in the world (Situation Report, 2020). At most 50% population was affected by the COVID-19 kind of natural disasters with uncertain final consequences (The New York Times, 2020). Due to the facing situation daily exercise routine getting ruined
and affecting the health and causing the diseases like obesity, hypertension, diabetes etc. Disturbed routine causes sedentary behaviour, decreased physical activeness and caused negative health consequences. It is causing risk for future disease manifestation imposing towards burden on tomorrow’s generation (Owen et al., 2010). So it’s time to enhance our immunity to fight against infectious diseases. But increasing resistance is not an entity of body only; it includes mental health as well. Immunomodulators are the substances which influence the immune system. It consists of some medications as well as some activities like exercise, yoga, meditation etc. Due to exercise in the aging period causes adaptive immunity for the people, such as lymphocytes like T and B lymphocytes (Turner, 2016). As exercise provides positive effects in preventing health issues, it plays significant role nowadays (Schuch et al., 2016), decreases anxiety (Stubbs et al., 2017), improving learning (Winter et al., 2007), and is beneficial for cognitive metabolism in older adults (Bangsbo et al., 2019).

RESULTS AND DISCUSSION

During this pandemic, a survey was done among people, and many of them had, had the habit of doing physical exercises and Yogasanas during the lockdown. It has been noted that out of 20, 15 people had done the Yogasanas on regular aspect and gained good results of it and also increased their immunity. But three people’s immune system was affected very severely as they were affected by respiratory diseases like cough, sinus problem etc. and other two got a severe acute respiratory infection (Yang, 2009), (See Figure 1).

Covid-19, the pandemic from which the world is suffering from can be avoided by increasing the immunity. This virus and disease both were unknown before the upsurge began in Wuhan, China, in December 2019. But now, COVID-19 has become a pandemic situation (Q&A on coronaviruses, 2020).

Immunomodulation by Ashtang Yoga

There are many ways one can do exercises to maintain health. One of them is “Yoga”, which helps one to support the vital functions of the body. "Yoga" means to connect, unite or yoke. Patanjali is known as the father of modern Yoga. It has many asanas that enhances immunity, thus building resistance. At this pandemic, it is relevant to talk about Yoga. Ashtanga Yoga is one of the most beneficial ways to make the perfect lifestyle. It was introduced by “Patanjali”. Ashtanga Yoga can be described in this way given below: The eight limbs of Yoga, i.e. Ashtang Yoga are Yama (Abstinences), Niyama (Observances), Asana (Yoga Postures), Pranayama (Breath Control), Pratyahara (Withdrawal of the senses), Dharana (Concentration), Dhyana (Meditation) And Samadhi (Absorption)” (Ashtang, 2020), (See Table 1).

Do’s and Don’ts during Covid 19

There are some guidelines given by government should be followed by all during this outbreak of Covid-19 pandemic (The Hindu Business, 2020), (See Table 2).

Immunomodulation by Rasayana(Rejuvenation) Therapy

Rasayana therapy is a branch of Ayurveda medicine which nourishes Dhatu (Tissues), improves the Agni (Digestive capacity), Srotas (Systems of the body) etc. leading to the prevention of ageing process, improvement in physical as well as mental health, and resistance against many diseases (Rasayana, 2015). As Covid 19 is a respiratory infection, there are some Ayurveda herbal medicines which primarily act on the respiratory tract.
Table 1: AshtangYoga and its information

<table>
<thead>
<tr>
<th>S. No</th>
<th>Ashtanga Yoga</th>
<th>Meaning</th>
<th>Content</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>Asana</td>
<td>Yoga postures</td>
<td>Balance of ease and steadiness is asana.</td>
</tr>
<tr>
<td>4</td>
<td>Pranayama</td>
<td>Breath control</td>
<td>Techniques to direct the prana.</td>
</tr>
<tr>
<td>5</td>
<td>Pratyahara</td>
<td>Withdrawal of the senses</td>
<td>Opposing the external influences of the world</td>
</tr>
<tr>
<td>6</td>
<td>Dharana</td>
<td>Concentration</td>
<td>Pre-meditative stage to focus the mind.</td>
</tr>
<tr>
<td>7</td>
<td>Dhyana</td>
<td>Meditation</td>
<td>Complete inward absorption of mind</td>
</tr>
<tr>
<td>8</td>
<td>Samadhi</td>
<td>Absorption</td>
<td>Union with the supreme.</td>
</tr>
</tbody>
</table>

Table 2: Do’s and Don’ts during Covid 19

<table>
<thead>
<tr>
<th>Do’s</th>
<th>Don’ts</th>
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<tbody>
<tr>
<td>Stay at your residence unless and until the situation urges.</td>
<td>If you are suffering from a cough, then don’t come in contact with any person and be self-quarantined.</td>
</tr>
<tr>
<td>In the regular interval of time, please wash your hands or sanitise them properly.</td>
<td>Avoid frequent touching eyes, face, nose and tongue.</td>
</tr>
<tr>
<td>Sneeze into your elbow or handkerchief and do not spit out at any place. Wash your hanky after sneezing as well as sanitise your hands thoroughly.</td>
<td>Avoid coughing or sneezing without covering your face with a handkerchief.</td>
</tr>
<tr>
<td>Ensure proper nutrition and homemade food to improve immunity.</td>
<td>Avoid going outside for food.</td>
</tr>
<tr>
<td>Exercise and meditation.</td>
<td>Avoid self-medicine.</td>
</tr>
<tr>
<td>Take your medicines regularly.</td>
<td>Avoid handshakes or hug</td>
</tr>
<tr>
<td>Postpone elective surgeries (if any)</td>
<td>Avoid going to the hospital for a routine checkup, mostly have a telephone consultation.</td>
</tr>
<tr>
<td>Frequently touched surfaces should be washed often.</td>
<td>Avoid going to crowded places.</td>
</tr>
<tr>
<td>Monitor health.</td>
<td>Avoid going out unless it is essential.</td>
</tr>
</tbody>
</table>
**Tulsi:** (*Ocimum sanctum*)

*Tulsi* is also famous by the phrase “Queen of herbs”, “Elixir of Life”. It is prescribed as a treatment for conditions like upper respiratory tract disorders, Asthma, cough as it actions like antiviral, antimicrobial etc (Cohen, 2014).

**Guduchi:** (*Tinospora cordifolia*)

In Ayurvedic medicine *Guduchi* is considered as Amrit plant. Amrit means nectar of gods. Guduchi is well known to treat any of the disorders. Some formulations of Guduchi, which acts on the respiratory tract are Haridrakhanda, Sanjivanivati, Guduchi avaleha etc (Prajwala et al., 2019).

**Sunthi:** (*Ginger officinalis*)

Although it acts on respiratory tract infection, it is a good immunity booster also. It is a potent mucolytic agent and acts as an effective remedy for respiratory tract infection and used in respiratory disorders like sinusitis, common cold & cough. Some of the formulations are Trikatu Churna, Trisama Gutika, Hingwashtak Churna etc. (Krishnamoorthy et al., 2012).

**Chyawanprash**

Chyawanprash Avleha is a powerful immune booster as well as detoxifies the body and cleanses the lungs too. *Chyawanprash* can do an incredible job of promoting lung power. It helps in maintaining the respiratory passage clean and nourishes the mucous membrane. It is often used as a tonic, as it supports natural resistance, energy and combat infections by boosting overall health (Amazing Benefits of Chyawanprash, 2020).

**CONCLUSIONS**

People are over stressed by the force and compulsion of social distancing and physical barrier methods. They are expected to find ease and bear in some of the traditional practices that may guard them against the infection and its associated devastating situation. Immunomodulatory measures like exercise, Yoga, meditation and some medication are engaging the community in creating a more positive and healthy environment. It is high time to hold integration with an open mind.

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**Conflicts of interest**

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**REFERENCES**


