



Opinion

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Contributing Editor



A Proposed Herbal Formulation: Targeting to Strengthen Inner Immunity to Fight Infectious Diseases

Rationale of the Herbal Medicine

Use of herbal medicine largely relies on bioactive formulations of medicinal herbs, which can provide a viable alternative for elevating person's targeted immune response and reducing pathophysiology (Samy et al. 2008; Agrawal et al. 2010). Herbal medicines could be beneficial in improving the immune system and stimulating immunomodulatory response of human body to fight against infectious diseases (de Meija et al. 2009; Lee et al. 2015). Especially, in these difficult times of COVID-19 pandemic, use of appropriate herbal formulations could be an advantageous pathway to boost the immune system to mitigate the disease. This could be an alternative form of therapeutics in the absence of any proven therapeutics or vaccines that are not yet available to break the infection chain of Coronavirus.

Proposed Herbal Formulation

We propose most specifically, the combined use of fresh Ginger, basil leaves, black

pepper, and honey, which are considered to be of high medicinal values. Various scientific literatures have proved the antiviral activity of fresh ginger and basil against human respiratory syncytial virus (HRSV), Influenza (Cold/Flu), and others viral infections those affecting human upper and lower respiratory tracts through cell lines (HEp-2, A549) based research (Denyer et al. 1994; Chrubasiket al. 2005; Sookkongwaree et al. 2006; Schnitzler et al. 2007; Koch et al., 2008). The active compounds have shown to stimulate anti-viral cytokines, reducing virus-induced plaque formation, and inhibition of viral attachment to the human receptors (like ACE2 in case of Novel Coronavirus), and internalization as well as excellent antimicrobial against cold causing bacterial pathogens like *Streptococcus* spp. (sore throat) (Wang et al. 2011; Chang et al. 2012). Among several other beneficial traits, reducing anti-inflammatory activities by inhibiting synthesis of prostaglandins and/or cytokines, chemokines, direct and indirect anti-hypertensive effect, gastrointestinal

protection against ulcer and emesis, antioxidant, and radioprotective effects have been proved for bioactive compounds of both ginger and basil (Chrubasiket al. 2005; Ali et al. 2008; Chang et al. 2013). Taking cue from

previous studies, we propose a formulation mix for antiviral herbal decoction. We believe that with prescribed dose that might reduce the chance of viral infection in the respiratory system could be beneficial for strengthening the host immunity.

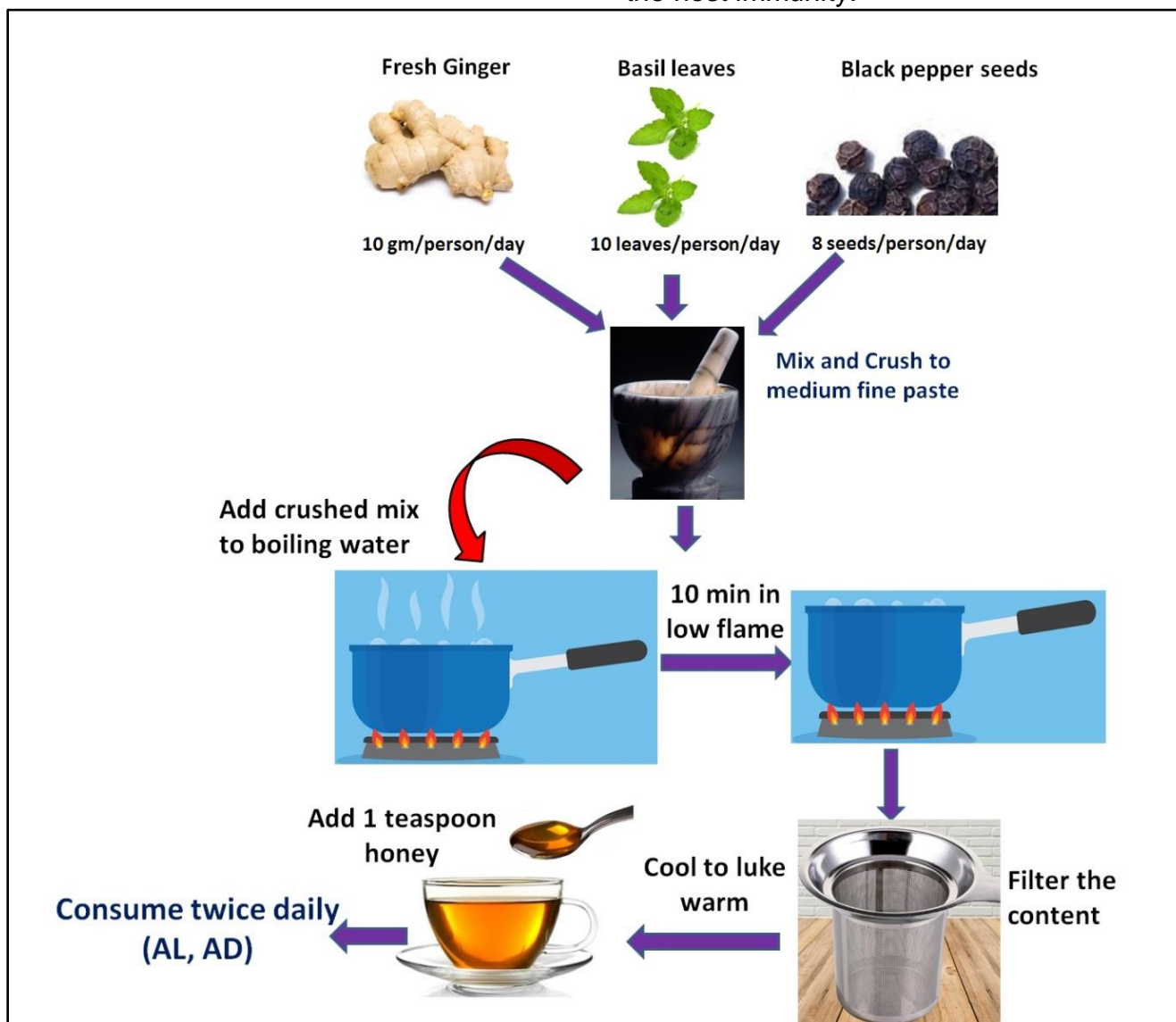


Figure 1. Depicting the easy steps for preparation of herbal immune booster to be taken at home to increase innate immunity to fight against infectious disease including COVID-19. AL: (After Lunch); AD: (After Dinner).

This herbal immune booster could be beneficial in countries such as India, where people are at home following lockdown and those who are prone to respiratory infections.

For average person, a suggested does is about 250 mL of the medicine consisting of, fresh ginger 10 gm, 10 basil leaves and 8 pepper balls. The solution is prepared by

boiling for 15 min after crushing all the components. The prepared liquid is subsequently filtered, which is followed by adding 1 teaspoon honey. The prepared medicine is then mixed and used 2 times in a day. The pictorial (diagrammatic) illustration of the process to make the decoction is presented in Figure 1.

Doses, Age Groups and Potential Side Effects

This decoction is suitable for age group > 15-16 years to an elder population of 65-70 age-group. For adults (> 15- 40 years), half-cup (around 50 mL) of decoction is appropriate, twice a day, after lunch and dinner. For older age group (> 40-70 years), less than a full cup (75 % of a cup, around 70 mL) of decoction is appropriate, once a day. Further,, as the decoction works as a mild laxative, it may stimulate/alter the bowel movement and make it the bowel disturbed , if consumed in excess. For better results, a tiny quantity of lemon juice can be added for supplementing vitamin-C to the body, as vitamin-C is found to be effective during flu/other viral infections. Drinking higher amount of water is also recommended, if this decoction is consumed twice a day.

Acknowledgements

I would like to acknowledge my mother Mrs. Gitanjali Mohapatra for providing valuable insight on standardizing the herbal formulation and its uses.

References for Further Reading

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