

Deterrent to COVID-19 Infection - Adopting a Srilankan University Research Study

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EDITORIAL

A simple widely available deterrent therapy to reduce severity or prevent COVID-19 infection is suggested. Mechanism of action is the astringent activity, where tannins complex with surface proteins of viral particles denaturing these and disabling the virus. Home experiment: Dilute and mix some amount of egg white with an equal amount of water, add a small amount of tea/coffee infusion. Dull brownish albumen-tannin complex, a soft precipitate is formed and sinks to the bottom.

Slight modification to the common house hold practice of drinking plain tea [kahata] or black coffee infusions in diarrheal [bacterial/viral?] diseases are the two proposed antiviral measures. Infusion should reach the furthest points in the respiratory tract so that maximum number of viral particles is trapped, it is necessary to hold the infusion rolling about for a little while ~20 seconds in the mouth before swallowing. Gargling with the infusion is better.

Tannins in tea or coffee infusions will complex with the 4-5 types of viral surface proteins [spikes] drastically disabling them in their functions. Protein-tannin astringent complexation is a fundamental chemical reaction and is bound to act unlike specific antimetabolite, enzyme mediated actions of antibiotics. In fact tannins react to some extent with cell lining of mucous membranes of mouth and stomach. Tannins also chelate iron [Fe] and other metal ions required for many of the metabolic reactions of micro-organisms [viruses?] depriving these nutrients, further retarding their propagation.

Two gargles daily 12 hours apart suggested to keep virus disabled and eventually to perish. The procedure disables free viruses before tissue invasion. Therefore earlier the gargle commences better. Suspected contacts should preferably have three daily 8 hourly gargles. Astringent activity is an added activity of tea and coffee demonstrated in our study [using bacteria] to that of immune boosting action generally spoken about.

Research study

In the research project,

- Astringent activity of selected ingredients demonstrated.
- Drastic reduction in colony counts of *E. coli* and *Salmonella* by tea and coffee infusions was amply demonstrated.
- Stronger astringents were identified but tea and coffee are suggested as these are widely available safe beverages. Avoid too strong infusions that may irritate mucous membrane. Infusions were prepared quite similar to usual domestic practices.

Only additional step here compared to regular use of tea and coffee is the 20 second holdup, gargle in the mouth.

Aug 11th, 2020: Prepare black tea/coffee infusion by boiling 2 g in 150 ml water; allow standing for 15 minutes and strain. Also aluminum chloride and zinc chloride (both non-toxic) solutions could be prepared using same quantities but without boiling. Both these solutions are as much or nearly as powerful as tea and coffee.

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