SPOTLIGHT ON LONG COVID

"Modern medicine has faced its biggest challenge from the smallest of organisms."

Neuroscientist Avindra Nath [i]

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Long COVID, one of the colloquial terms for post coronavirus disease 2019 (COVID-19) condition, is an umbrella term used to describe chronic outcomes of severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) infection, the virus that causes COVID-19. The adage "an ounce of prevention is worth a pound of cure" applies to long COVID. The best way to protect against it is to avoid getting infected with SARS-CoV-2. However, with the virus being highly contagious, many people will catch it and be at risk of developing long COVID. It is therefore becoming a growing niche area in clinical practice. [ii iii]

There is no magic bullet for the condition so treatment comes down to managing individual symptoms, with different therapeutic approaches, and providing supportive care. It has been recognised that age-related comorbidities such as Parkinson's disease, cancer, diabetes and cardiovascular diseases may lead to life-threatening illnesses in COVID-19-infected patients. Strengthening immunity, along with maintaining healthy living, is the best way to survive COVID-19 and long COVID. [iv v vi]

Preventing the transition from acute to long COVID

1. Ensure your patients do not catch COVID-19: There are studies to support **andrographis** *(Andrographis paniculata)* as an immune modulator which could be helpful in preventing viral infections and to support immune function. One study implies that most benefit would be achieved when andrographis is taken continuously. Other herbs to consider for prevention are **elderberry** *(Sambucus nigra)*, **holy basil** *(Ocimum tenuiflorum)* and **garlic** *(Allium sativum)*. [vii viii]
2. **If a patient gets COVID-19** it is important to manage the acute phase well with immune and antiviral herbs such as **andrographis**, **echinacea** *(Echinacea spp.)*, **holy basil,**

liquorice *(Glycyrrhiza glabra)*, **St. John's wort** *(Hypericum perforatum)*, **sweet wormwood** *(Artemisia annua)* and **thuja** *(Thuja occidentalis)*. Don't underestimate the power of fever management by using diaphoretic herbs such as **bupleurum** *(Bupleurum falcatum)*, **elder flowers** *(Sambucus nigra)*, **lime flowers** *(Tilia cordata)*, **peppermint** *(Mentha x piperita)* and **yarrow** *(Achillea millefolium)*. In a randomised controlled pilot study of andrographis as an add-on therapy in mild to moderate COVID-19, it reduced the severity of infection and halted the disease progression, probably by a reduction of inflammation. [ix] In a randomised, quadruple-blind, placebo-controlled trial of 86 people, a combination of andrographis and **Siberian ginseng** *(Eleutherococcus senticosus)* reduced the duration of disease, virus clearance, days of hospitalisation, accelerated the recovery of patients and significantly relieved the severity of inflammatory symptoms such as sore throat, runny nose and muscle pain. [x]

3. **In the late stage of the infection,** if the patient appears vulnerable and into the recovery period, prescribe tonic, anti-inflammatory and adaptogenic herbs such as **rhodiola** *(Rhodiola rosea)*, **schizandra** *(Schisandra chinensis)*, **Siberian ginseng** and **withania** *(Withania somnifera)*. [xi]

Natural Therapies for the Treatment & Prevention of Long Covid

Academic medical journals suggest that long COVID patients require an integrative health approach, one that combines:

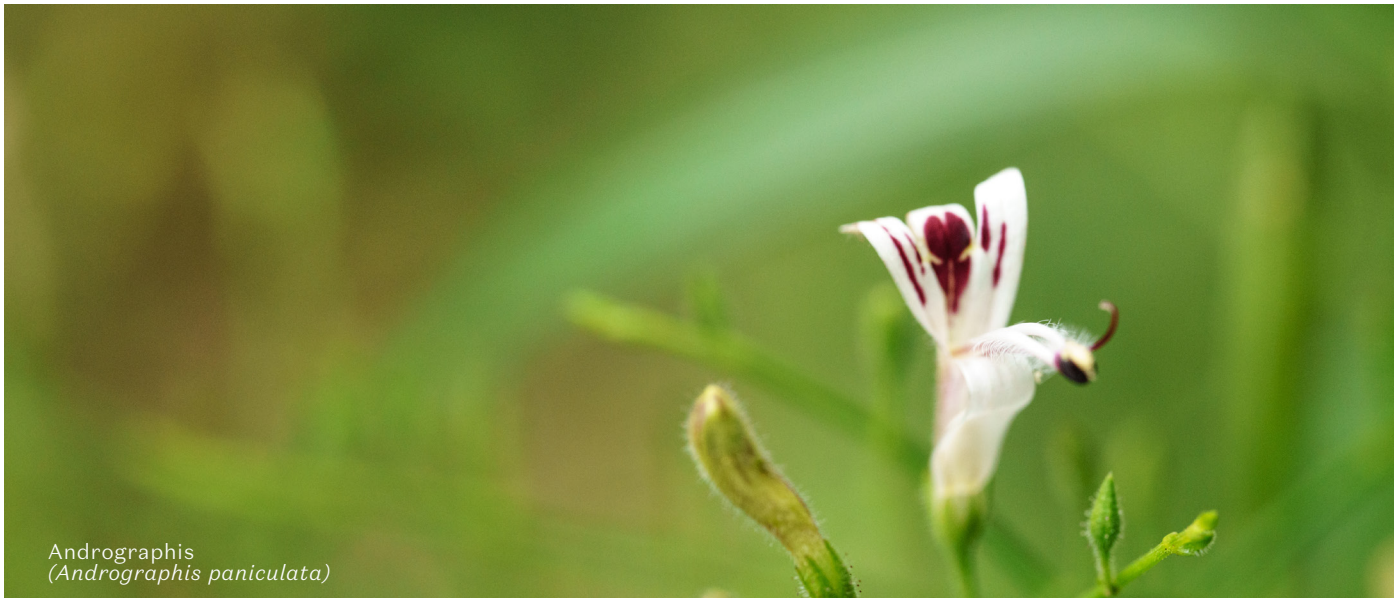
- traditional medical management
- non-pharmacological approaches
- behaviour and lifestyle changes [xii xiii]

Beyond the science, taking a naturopathic approach to post-viral chronic fatigue, the primary prescription would be:

- convalescence
- maximising self-care
- sleep
- relaxation
- sunshine
- gentle exercise
- fresh air
- nutrition [xiv xv]

It will take time.

Through careful case-taking and monitoring, practitioners will collaborate with their patients to develop an individualised management plan, and unique protocol, to support their recovery.

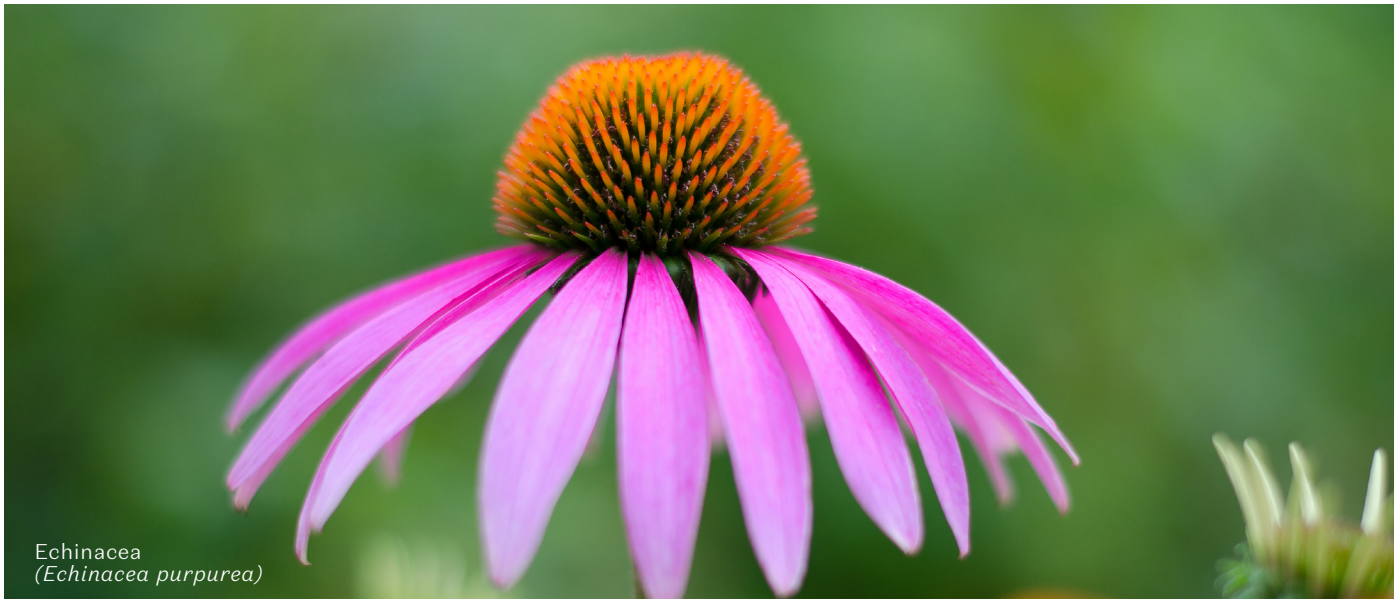


Andrographis
(Andrographis paniculata)

A focused plan of action can be achieved by identifying specific symptoms in the context of the patient's unique environment, lifestyle, triggers and history focusing on the foundations of health including diet, lifestyle and exercise. A good approach is to use herbs that overlap in activity.

The key treatment goals for long COVID include addressing:

- **Dysbiosis** using **bitter tonics** to speed recovery by stimulating the appetite as well as digestion such as **dandelion root** *(Taraxacum officinale)* and **gentian** *(Gentiana lutea)*.
- **Inflammation:** Persistent interleukin (IL)-6 (a proinflammatory cytokine) dysregulation and/or activity of other inflammatory markers may contribute to COVID-19-related long-term fatigue, sleeping difficulties and depression or anxiety. The brain fog, cognitive impairment and general fatigue may be due to mast cell related neurovascular inflammation. Herbs such as **baical scullcap** *(Scutellaria baicalensis)*, **ginger** *(Zingiber officinale)*, **nigella** *(Nigella sativa)*, **perilla** *(Perilla frutescens)*, **rehmannia** *(Rehmannia glutinosa)*, **turmeric** *(Curcuma longa)*, **white willow** *(Salix alba)*.
- **Mitochondrial dysfunction.** The roles of mitochondrial damage and inflammatory responses caused by SARS-CoV-2 in the development of long COVID are still being elucidated. SARS-CoV-2 infections can alter the mitochondria responsible for energy production in cells. This alteration leads to mitochondrial dysfunction which, in turn, increases oxidative stress. Ultimately, this results in a loss of mitochondrial integrity and cell death. Moreover, viral proteins can bind to mitochondrial complexes, disrupting mitochondrial function and causing the immune cells to over-react. This over-reaction leads to inflammation and potentially long COVID symptoms. [xvii] Herbs such as **ginkgo** *(Ginkgo biloba)*, **hawthorn** *(Crataegus monogyna)*, **Korean ginseng** *(Panax ginseng)*, **rhodiola**.
- **Endothelial and microcirculatory dysfunction:** Mounting evidence suggests that SARS-CoV-2 infection leads to multiple instances of endothelial dysfunction deeming COVID-19 a (micro) vascular and endothelial disease. [xviii] Employ antioxidant herbs that have protective activity on the microvasculature such as **arjuna** *(Terminalia arjuna)*, **bilberry** *(Vaccinium myrtillus)*, **ginger**, **ginkgo, gotu kola, green tea** *(Camellia sinensis)*, **hawthorn, maritime pine** *(Pinus pinaster)*, **pomegranate** *(Punica granatum)*, **rosemary** *(Rosmarinus officinalis)*, **turmeric**.
- **Immune function.** Support and modulate the



Echinacea
(Echinacea purpurea)

immune system. The virus can trigger some sort of autoimmune process which persists which could be due to molecular mimicry between pathogen and host proteins. Herbs such as **andrographis, astragalus** *(Astragalus membranaceus)*, **bupleurum, cat's claw** *(Uncaria tomentosa)*, **echinacea, garlic, glossy privet** *(Ligustrum lucidum)*, **hemidesmus** *(Hemidesmus indicus)*, **reishi** *(Ganoderma lucidum)*, **Siberian ginseng**.

- **Potential viral reservoir and coinfection:** The COVID-19 virus could still be lingering in the body in a reservoir site and patients are still being exposed to COVID-19 antigens. Dormant viruses in the body can be reactivated by COVID-19. These dormant viruses include the Epstein-Barr virus (EBV) (that causes glandular fever), the chickenpox virus (that can cause shingles) as well as human herpesvirus 6, which causes herpes simplex viruses, herpes zoster, as well as the common childhood illness sixth disease. These viruses can be harmless and symptomless, kept at bay by a healthy immune system, until reactivated by things such as an infection or stress. Herbs such as **albizia** *(Albizia lebbeck)*, **elderberry, liquorice, St. John's wort, sweet wormwood, thuja, turmeric.**
- **Malnutrition** with nutritive and tonic herbs to replenish minerals and vitamins spent during the illness and to assist general strength, increase energy levels, stabilise mood and reduce depression. Herbs such as **alfalfa** *(Medicago sativa)*, **fenugreek** *(Trigonella foenum-graecum)*, **nettle leaf** *(Urtica dioica)*, **oats green** *(Avena sativa)*, **rose hips** *(Rosa canina)*.
- **Cognition and sleep.** Improve sleep, cognition and cognitive defects of the microvasculature plus support any cardiac and circulatory abnormalities. Herbs such as **arjuna, bacopa** *(Bacopa monnieri)*, **butcher's broom** *(Ruscus aculeatus)*, **codonopsis** *(Codonopsis pilosula)*, **ginkgo, hawthorn, horsechestnut** *(Aesculus hippocastanum)*, **maritime pine, motherwort** *(Leonurus cardiaca)*, **passion flower** *(Passiflora incarnata)*, **prickly ash** *(Zanthoxylum clava-herculis)*, **St. John's wort, scullcap** *(Scutellaria lateriflora)*, **valerian** *(Valeriana officinalis)*.
- **Support hypothalamic-pituitary-adrenal (HPA) axis dysregulation** which can be a driver for stress (long and short term). Herbs, especially adaptogens, such as **holy basil, Korean ginseng, liquorice, magnolia** *(Magnolia officinalis)*, **rehmannia, reishi, rhodiola, schizandra, Siberian ginseng, withania.**
- **Lung damage:** Ongoing respiratory symptoms (shortness of breath, cough) may be related to a type of pneumonia that is unresolved. Herbs such as **adhatoda** *(Justica adhatoda)*, **elecampane** *(Inula helenium)*, **ginkgo, gotu kola, ivy leaf** *(Hedera helix)*, **mullein** *(Verbascum thapsus)*, **thyme** *(Thymus vulgaris)*.

"True resilience is fundamentally underpinned by robust health."

Resources

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