

Long COVID & Traditional Chinese Medicine

A deep dive into Long COVID research and Traditional Chinese Medicine

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Overview

Persistent illness following SARS CoV 2 infection, commonly called Long COVID, affects a population whose routine laboratory results are frequently normal despite substantial functional impairment. This article does the following:

1. reviews six mechanisms documented in the research literature,
2. examines points of correspondence between those mechanisms and the observational categories of Chinese Herbal Medicine,
3. presents the self administered practices with the strongest supporting evidence, and
4. evaluates the clinical trial literature on herbal interventions.

Every substantive claim is assigned one of three evidence tiers, defined below. This article concludes with an analysis of why the herbal layer of this medicine is poorly suited to self directed experimentation, and recommendations to seek expert-led care.

Disclosure. I founded and run [jadewell](#), a company that delivers personalized Chinese Herbal Medicine formulas with practitioner oversight. I have a direct financial interest in some readers of this article becoming customers. That interest is why the evidence grading below is strict: readers should be able to check every claim against its source, and several sections of this article report findings that work against my commercial interest. I have included them anyway, because this readership has been failed too many times by confident summaries of weak evidence.

A note on evidence standards

Three tiers are used throughout, and no claim is permitted to blur between them.

Established in humans. Randomized controlled trials, systematic reviews, or well powered human clinical data. This tier does not mean settled beyond dispute; it means the claim rests on controlled human evidence, and remaining limitations are stated.

Preliminary. Animal studies, laboratory studies, small pilot trials, uncontrolled cohorts, or observational data. Findings at this tier are hypothesis generating. Most claims in the wellness industry that sound established belong here.

Traditional, not clinically proven. Claims resting on documented historical use and practitioner consensus, without supporting trials. This tier is reported because it is part of the intellectual record under review.

Where the underlying trials are unblinded, small, published only in one country, or drawn from a literature with documented publication bias, this is stated in the text rather than a footnote. Nothing in this article constitutes medical advice, and nothing in it diagnoses, treats, cures, or prevents any disease.

1. Introduction: the clinical picture

This article is written for a specific reader. Your laboratory results are repeatedly normal. Individual specialists have each excluded disease within their own domain, and each of them was likely correct within that domain. Your symptoms persist regardless, often dating from an identifiable infection. If that describes you, the gap between your test results and your lived function is not imagined, and the first half of this article documents why the standard testing pathway was structurally unable to see your illness.

A brief statement of background, so my perspective can be weighed. I trained and worked in biomedical research at The Jackson Laboratory, Washington University in St. Louis, Boston Medical Center, and Tufts University. I also grew up within Chinese Herbal Medicine as ordinary family practice. Those two trainings disagree about many things. They agree, more often than either camp expects, about how this particular illness behaves, and mapping that agreement honestly, with its many gaps intact, is the purpose of this article.

2. Documented mechanisms in long covid research

Six mechanisms recur across the research literature. Many are not traditionally detectable on a routine clinical panel, all are physical, and their evidence status varies many different ways. Each is presented with its principal citations and its tier.

2.1 Fibrinoid microclots and endothelial involvement

Work led by Etheresia Pretorius and Douglas Kell identified microscopic clots in platelet poor plasma from Long CVODI patients, formed from the clotting protein fibrin misfolded into an amyloid configuration that resists normal enzymatic breakdown. These particles were further shown to entrap inflammatory molecules, including molecules that themselves block clot clearance, alongside evidence of hyperactivated platelets ([Pretorius et al., Cardiovascular Diabetology, 2022](#)). A useful analogy is sediment in narrow pipes: flow continues, things get clogged up, and downstream factors are affected.

Standard coagulation panels (PT, INR, aPTT) assess whether blood clots predictably. They do not assess whether the body clears abnormal clots, and fibrinoid microclots are detected only by research techniques, principally fluorescence microscopy with amyloid binding dyes. Normal coagulation results are therefore uninformative about this mechanism in either direction.

Evidence status: the presence of microclots in Long COVID plasma is a replicated human finding. Whether microclots cause symptoms, rather than accompany the illness, remains actively contested in the hematology literature, and causation should be treated as an open question.

2.2 Mitochondrial dysfunction

Multiple human studies report impaired cellular energy production in Long COVID, including suppressed oxidative phosphorylation, altered mitochondrial structure, and shifted biomarkers of cellular energy stress ([Molecular Medicine, 2025](#)). The most direct evidence comes from a controlled exercise study in Amsterdam in which investigators obtained skeletal muscle biopsies from Long COVID patients and healthy controls before and after a standardized exercise challenge. Patient tissue showed structural abnormalities and local tissue damage that worsened after exertion, alongside reduced mitochondrial function ([Appelman et al., Nature Communications, 2024](#)).

The distinction this research shows is important because it's not the same as post-malaise exertion seen in patients with chronic fatigue syndrome/myalgic encephalomyelitis: the post exertional worsening characteristic of this illness is associated with measurable tissue level pathology rather than deconditioning alone. Rest can address fatigue. However, rest does not, by itself, repair impaired cellular machinery, which is consistent with the near universal patient report that sleep fails to restore function.

Evidence status: established in humans as a set of findings. No intervention has yet been shown to reverse these findings in long covid.

2.3 Autonomic dysfunction

The autonomic nervous system regulates heart rate, blood pressure, temperature, and digestion without conscious input. In an international survey of 2,314 adults with post acute covid symptoms, 66 percent scored above 20 on COMPASS 31 (a validated autonomic symptom instrument) a threshold suggesting moderate to severe autonomic dysfunction, and this was independent of whether the initial infection required hospitalization ([Larsen et al., Frontiers in Neurology, 2022](#)). Common presentations include orthostatic tachycardia, blood pressure lability, thermal dysregulation, and a combination of daytime exhaustion with nighttime hyperarousal.

Evidence status: the association between Long COVID and autonomic dysfunction is established in humans at the level of symptom instruments and orthostatic testing. Several interventions currently promoted for it rest on small uncontrolled studies, a point developed in Section 4.

2.4 Mast cell activation

Mast cells are tissue resident immune cells that store histamine and other mediators. A subset of Long COVID patients presents with symptoms consistent with inappropriate mast cell mediator release: flushing, urticaria, tachycardia, gastrointestinal disturbance, and reactions to foods previously tolerated for decades, with symptoms that characteristically migrate and fluctuate. In one nonrandomized controlled study, patients treated with two antihistamines in combination, one blocking the H1 receptor and one blocking the H2 receptor, showed substantial improvement, with 29 percent of the treated group reporting complete symptom resolution at 20 days versus minimal change in matched controls (Salvucci et al., Journal for Nurse Practitioners, 2023). The study was small, unblinded, and requires replication; it is discussed further in Section 4.6 because it carries a practical implication.

Evidence status: preliminary.

2.5 Gut dysbiosis and serotonin

Enterochromaffin cells of the gut produce the large majority of the body's serotonin, with published estimates above 90 percent of total peripheral serotonin. Observational studies in Long COVID document reduced abundance of short chain fatty acid producing bacterial species, evidence of increased intestinal permeability, and impaired serotonin availability, with proposed downstream effects on vagal signaling and mood. This current pattern has been observed with no clinical studies done yet.

Evidence status: preliminary, observational.

2.6 Viral persistence and herpesvirus reactivation

The leading unifying hypothesis in the current literature holds that viral antigen, viral RNA, or replicating virus persists in tissue reservoirs after acute infection resolves, accompanied in many patients by reactivation of latent herpesviruses, most prominently Epstein Barr virus ([Davis, McCorkell, Vogel, and Topol, Nature Reviews Microbiology, 2023](#)). This hypothesis would parsimoniously explain the illness's most consistently reported temporal signature: symptom exacerbation following physiological stress, sleep disruption, or overexertion, with partial recovery between flares. Antiviral trials testing the hypothesis directly are in progress, and Section 4.6 describes how to locate them.

Evidence status: preliminary, and the subject of active controlled trials.

2.7 The gap between explanation and treatment

The findings above are collectively sufficient to explain how a patient can be disabled with normal routine bloodwork. What they are not, yet, is treatable by validated scientific protocols. Research characteristically explains faster than it treats. The remainder of this article is about what can responsibly be done during the interval of time before actionable treatments are available from current research.

3. The observational framework of Chinese Herbal Medicine

3.1 Methodology of a pre instrumental medicine

Chinese Herbal Medicine developed over approximately two thousand years without microscopy, biochemistry, or imaging. Its clinicians had access to one data source, the observable patient, and the system they constructed is best understood as a large, internally consistent taxonomy of illness behavior: how symptoms occur, what modifies them, whether rest restores function, whether an illness remits and relapses. The taxonomy's categories are phenomenological rather than mechanistic. This is a methodological limitation, and it is also, unexpectedly, the source of the framework's contemporary interest, because behavior is precisely the level at which Long COVID was first characterized, by patients, before any mechanism was documented.

Four correspondences between this taxonomy and the mechanisms of Section 2 are presented below. A rule governs how they should be read: correspondence is a reason for further investigation and is never evidence of efficacy. No trial connects any of these pairings, and each is labeled accordingly.

3.2 Impaired blood movement and the microclot hypothesis

In 1830, the physician Wang Qingren published a clinical text attributing a substantial fraction of refractory chronic illness to blood that had ceased to move properly through the body (i.e. circulation). His diagnostic evidence was necessarily surface level: dusky or purple discoloration of the tongue, visibly distended sublingual veins, pain fixed in location, darkened complexion. He organized treatment around restoring circulation he could not directly observe.

Set beside Section 2.1, the correspondence is notable. Wang was not describing microclots, a concept to which he had no possible access. Two systems separated by two centuries and an instrumentation gap nonetheless converged on impaired blood movement as a candidate root of unexplained chronic illness, and the modern system now possesses a proposed mechanism the older one could only infer from a tongue. *Traditional observation on one side; a replicated but causally contested human finding on the other; no connecting trials.*

3.3 Fatigue subtypes and cellular energetics

The older taxonomy did not treat fatigue as a single entity. It distinguished, as basic clinical grammar, between exhaustion that sleep resolves and exhaustion that sleep does not affect, assigning them different causes and different treatments. Contemporary medicine largely collapses both into one presenting complaint. The muscle biopsy findings of Section 2.2 supply a plausible substrate for the older distinction: where the energy producing machinery itself is damaged, rest is necessary but insufficient.

3.4 Migratory symptoms and mast cell behavior

The taxonomy contains a category for illness defined by movement: symptoms that migrate throughout the body anatomically, appear and remit unpredictably, and vary with weather and food. Classical texts named the category after wind, a label that encodes its defining behavior. The mast cell presentation described in Section 2.4, with its migrating urticaria, episodic flushing, and day to day variability, fits the behavioral definition closely. The candidate mechanism arrived roughly two millennia after the behavioral description. *Traditional category; preliminary modern mechanism; no connecting trials.*

3.5 Latent pathogen theory and viral persistence

Across centuries of epidemic medicine, the older system developed a formal concept of a pathogen incompletely cleared: it withdraws to deeper tissue, becomes clinically silent, and re-emerges when the host is depleted. Classical physicians debated its anatomy and its extraction at length. The structural resemblance to Section 2.6, tissue reservoirs and latent herpesviruses reactivating under stress, is difficult to miss and easy to overstate. *Traditional*

theory beside a preliminary modern hypothesis. No herbal formula has been shown to clear a viral reservoir, and marketing that implies otherwise is unsupported by any evidence.

3.6 The sequencing principle and the withdrawal of graded exercise therapy

By approximately 200 AD, the older system had formalized a treatment sequencing principle: a patient must not be treated/strengthened while a pathogenic process remains active. The canonical image, closing the door with the intruder still inside, encodes the predicted failure mode: premature strengthening consolidates the underlying problem, and the patient deteriorates.

The modern half of this explanation is a matter of guideline record. Graded exercise therapy, defined by fixed incremental activity increases independent of symptom response, was for decades the standard recommendation for post viral fatigue conditions. Patient reported harms accumulated for years. In 2021, following a formal evidence review, the United Kingdom's National Institute for Health and Care Excellence removed graded exercise therapy from its guidance for these conditions and recognized post exertional malaise, the delayed symptom exacerbation following overexertion, as a core diagnostic feature ([NICE guideline NG206, 2021](#)).

4. Self administered practices: evidence and safety

This section reports the non herbal practices with the strongest evidence, each graded, each with stated limitations, and all filtered through the central safety constraint of this population: post exertional malaise. Read the full section before beginning any practice.

4.1 Pacing and the energy envelope

Pacing, defined as operating within current energy capacity and stopping activity before the point of felt necessity, is the closest thing this field has to a consensus recommendation, and it is endorsed in the [NICE guidance](#) that replaced graded exercise therapy. It is also recognizably the sequencing principle of Section 3.6 in modern form: capacity is rebuilt only when doing so does not increase risk of deterioration.

The practical protocol requires two to three weeks of simple daily activity and symptom logging, with one methodological adjustment that determines whether the log produces usable data. Because the characteristic crash is delayed by roughly one to three days. Logs analyzed same day therefore fail to reveal the cause of the fatigue, leading patients to conclude their crashes are random and to abandon the one variable under their control. The correction: for

every bad day recorded, examine the activity of the preceding three days. This single change converts a diffuse complaint into a dose response pattern a clinician can act on.

Evidence status: guideline endorsed consensus. Every practice below is subordinate to this rule, including the published protocols cited.

4.2 Respiratory practices

The best supported self administered practice in this article is slow paced breathing at approximately six breaths per minute with prolonged exhalation, for example four seconds in and six seconds out, performed seated or supine for several minutes once or twice daily.

The physiological rationale is well characterized. At approximately 0.1 Hz, respiratory rhythm entrains with the intrinsic oscillation of the arterial baroreflex, producing measurable increases in heart rate variability and baroreflex sensitivity. Bernardi and colleagues demonstrated in *Circulation* that breathing at six breaths per minute significantly increased baroreflex sensitivity in both healthy controls and cardiac patients (Bernardi et al., *Circulation*, 2002), and a 2024 case control study reported heart rate variability modulation from five minutes of slow paced breathing in healthcare workers with long covid (*American Journal of Medicine*, 2024). For an autonomic system exhibiting the dysregulation described in Section 2.3, this is among the few directly accessible levers.

One respiratory intervention deserves separate mention because it was tested in long covid patients specifically, a rarity in this article. A randomized controlled trial of 150 adults with persistent post covid breathlessness evaluated ENO Breathe, a six week online breathing retraining program developed by the English National Opera using singing technique, and found significant improvement in breathlessness during physical activity and in the mental health component of quality of life, with no serious adverse events ([Philip et al., *Lancet Respiratory Medicine*, 2022](#)).

The older system agrees on these points as well. Its movement traditions are constructed around slow abdominal breathing, and one classical practice consists entirely of six prolonged exhalations, each shaped by a distinct soft sound, traditionally assigned to specific organ systems. *The organ assignments are traditional and not clinically proven.*

Safety parameters: no breath holding, no rapid or forced techniques, discontinue if lightheaded. Hyperventilatory breathwork styles circulating online are contraindicated in autonomic dysregulation.

4.3 Acupressure and auricular protocols

Acupressure, sustained fingertip pressure at defined anatomical points, does not historically have strong clinical support. Zick and colleagues randomized 288 fatigued breast cancer survivors to self administered relaxing acupressure, stimulating acupressure, or usual care, with the acupressure arms taught to apply gentle pressure for approximately three minutes per point daily. At six weeks, 66.2 percent of the relaxing acupressure group achieved normal range fatigue scores versus 31.3 percent with usual care, and the relaxing protocol additionally improved sleep quality (Zick et al., JAMA Oncology, 2016). Two notes of this trial. First, its population: cancer survivors, and the result has not been replicated in Long COVID. Second, its internal comparison: the relaxing and stimulating point sets were not interchangeable, with the relaxing set superior for fatigue with sleep disturbance, which is direct trial evidence that point selection can carry consequences.

Point location in this tradition uses the patient's own hand as a proportional ruler: the thumb's width at the knuckle is one unit; the four fingers together at the widest knuckle are three units.

Inner forearm point PC6. Three finger widths proximal to the wrist crease, between the two central tendons. This is the most extensively studied acupressure application in existence: a Cochrane review of 40 trials and 4,742 participants found stimulation at this point reduced postoperative nausea with a relative risk of 0.68, with the evidence graded low quality ([Lee and Fan, Cochrane Database of Systematic Reviews](#)). Commercial anti nausea wristbands target this location. *Established in humans, low certainty, for nausea.*

A calming point set Yintang. Drawn from the same family used in the Michigan trial: the midpoint between the eyebrows; the point at the wrist crease on the little finger side, in the depression beside the tendon; and the inner forearm point above. Traditional indications are sleep disturbance and mental hyperarousal. *The indications are traditional and not clinically proven; the delivery method has established human support in a different population.*

Below the knee point ST36. Four finger widths below the inferior border of the kneecap, one finger width lateral to the tibia. Classically the most prominent point in the tradition, indicated for fatigue and digestion. It carries a frequently misrepresented piece of modern neuroscience: in 2021, investigators identified the specific sensory neuron population beneath this location which, under low intensity electroacupuncture in mice, drives a vagal adrenal reflex that suppresses systemic inflammation ([Liu et al., Nature, 2021](#)). The finding is support for electrical stimulation in mice. Manual pressure in humans has not been shown to reproduce it. *Preliminary, animal.*

Auricular acupressure. Small seeds or pellets taped to defined points on the external ear and pressed briefly several times daily, worn for several days per application. A meta analysis of 15 trials reported improved sleep outcomes versus sham with fewer adverse effects than hypnotic medication, with the constituent trials small and unblinded ([PMC review](#)). One anatomical fact is relevant to mechanism: a region of the external ear is the only cutaneous territory innervated

by the vagus nerve, and early pilot studies of electrical stimulation there in long covid report improvement in fatigue and autonomic symptom scores in small uncontrolled samples. Seeds deliver pressure rather than current, so the extrapolation is hypothesis level. *Preliminary throughout; cost and risk are minimal; inspect skin on removal.*

Safety parameters: in pregnancy, avoid strong stimulation of the point in the first web space of the hand and the point four finger widths above the medial ankle, both traditionally contraindicated. And the individualization theme recurs with trial support behind it: the calming and stimulating point sets produced different outcomes in the one strong trial available, meaning an incorrect selection is plausibly counterproductive rather than merely inert.

4.4 Dietary principles

This subsection reports principles rather than a prescriptive diet. Please complete your own research and nutritionalist/dietician if necessary.

Where the traditional and modern literatures converge, the convergence is practically useful. The traditional kitchen for illness recovery is organized around cooked over raw, warm over cold, soft textures over tough, and small frequent meals over large infrequent ones, with long simmered rice porridge as its archetypal recovery food. Modern investigation has documented delayed gastric emptying and gut microbial disruption in Long COVID patients, and established management of delayed gastric emptying independently specifies smaller meals, softer cooked textures, and reduced raw fiber load. An old kitchen instinct and a modern motility literature arrive at the same recommendations by different routes. *The traditional principles are not clinically proven as treatments; although their overlap with established gastroparesis management has been shown.*

Two documented conflicts follow:

Sodium. Traditional teaching counsels salt restraint during recovery. Contemporary management of postural orthostatic tachycardia runs opposite: the 2021 expert consensus recommends aggressive fluid intake and substantially increased sodium, on the order of several grams daily, to expand circulating volume ([Vernino et al., Autonomic Neuroscience, 2021](#)). The supporting trial evidence for sodium loading is short term and of modest quality, and the physiological rationale is sound and the practice is standard of care. For a predominantly orthostatic presentation, the modern recommendation supersedes the traditional one.

Warming foods and histamine. The TCM recovery pantry emphasizes long developed foods classified as warming: bone broths, fermented condiments, aged and cured ingredients, warming spices. These are disproportionately histamine rich or histamine liberating, and a patient with the mast cell presentation of Section 2.4 may react to this category. For balance,

the restrictive low histamine diet promoted in patient communities is itself unsupported by trial evidence, with dietetic professional bodies noting both the absence of research and a documented risk of nutritional inadequacy. *A traditional principle on one side, an unproven modern restriction on the other, and no trial adjudicating between them.*

The dietary guidance appropriate for one reader of this article is contraindicated for another, the distinction depends on which mechanisms dominate that individual's body constitution, and no food list, traditional or modern, contains that information.

4.5 Movement practices

The governing constraint is restated first because it is the finding most often omitted from enthusiastic coverage: any movement practice can provoke delayed post exertional deterioration if it exceeds individual capacity, including every practice below. Safety in this population is a property of dose, never of category.

Within that constraint, the traditional Chinese movement forms possess structural advantages over conventional exercise prescriptions. They are slow, low intensity, breath coordinated, contain no mandated progression schedule, can be truncated at any point, and the best studied form exists in a fully seated version.

A 2023 systematic review pooling 13 randomized trials and 1,187 patients with chronic fatigue syndrome found that traditional Chinese mind body exercise probably reduces fatigue relative to passive control, with a standardized mean difference of 0.85 (95 percent confidence interval 0.64 to 1.07, moderate certainty), with smaller effects on depression (0.53) and anxiety (0.29), and no serious adverse events identified across trials ([Kong et al., Journal of Global Health, 2023](#)). A meta analysis restricted to the most common form, an eight movement sequence practiced in China for roughly eight centuries and standardized in 2003, found a pooled fatigue reduction of 0.49 standardized units across ten trials in multiple diseases ([PMC review](#)). In respiratory populations, a community cluster randomized trial in COPD reported improvements in symptoms, six minute walk distance, and mood after six months of practice, and a small randomized trial in pulmonary fibrosis found practice preserved walking capacity while controls declined ([BioPsychoSocial Medicine, 2025](#)).

In clinically defined Long COVID, almost nothing has been completed. The single completed randomized trial in a post covid fatigue population reported improvement on every measured outcome, and enrolled 40 participants, used a waitlist control, was unblinded, published without extractable effect sizes, and did not assess post exertional malaise ([Mohamed et al., 2025](#)). No completed trial of any of these forms, in any population, has formally measured post exertional malaise as an outcome, which is the single most consequential gap in this literature. Additionally, movement practices cannot be blinded, so subjective outcome effect sizes across

this entire evidence base are likely inflated by expectancy. *Established in humans at moderate certainty for adjacent conditions; preliminary at best in long covid.*

A conservative beginner's protocol, seated form only ([example QiGong exercise](#)):

Two to three movements at low repetitions, held well within the envelope established in Section 4.1, with practice terminated while the participant still feels unstressed. Log under the three day rule. Hold the dose constant for at least one week before any increase. A delayed crash indicates the dose exceeded capacity, and the corrective is reduction, never persistence. This is the inversion of a training plan by design: the practice adjusts to the body, never to a calendar. A final individualization note: the standing versions taught in most instructional media are inappropriate starting points for anyone with orthostatic symptoms.

4.6 Clinical communication and research access

The following are tools you can complete at home/without a licensed practitioner's oversight.

Presenting language. The sentence to state, verbatim: "My fatigue is worse twenty four to forty eight hours after exertion." The generic complaint of tiredness routes to a standard workup of thyroid, iron, and sleep hygiene. Delayed post exertional worsening is a distinct clinical picture with a recognized name, documented in [national guidance](#) a clinician can consult, and its accurate report changes the differential a careful clinician considers. One sentence, materially different appointment.

Laboratory requests, with honest framing. D dimer and fibrinogen are inexpensive, standard assays that give a clinician a starting point on coagulation; neither detects fibrinolytic microclots, and normal values do not exclude the mechanism, because microclot detection currently exists only as a research technique ([Pretorius et al.](#)). The consumer corollary: no validated clinical microclot assay exists, and a clinic selling one should be asked which validated assay it uses and what its reference range is. For orthostatic symptoms, an in office comparison of heart rate and blood pressure supine and then standing across ten minutes is among the least expensive informative tests in medicine and converts a dismissible complaint into a documented finding. For the presentation of Section 2.4, the phrase to raise is mast cell activation, and the specific question is whether a supervised trial of H1 and H2 antihistamines in combination is appropriate, since the combination is what the available study tested. Combining medications without supervision is explicitly discouraged.

Research access. Recruiting interventional trials are indexed at [clinicaltrials.gov](#); searching long COVID, filtering to recruiting status and geography, requires approximately four minutes and no account, and most eligible patients never learn a trial existed. Search construction determines literature quality: post exertional malaise retrieves the clinical literature where generic fatigue terms retrieve noise, and fibrin amyloid microclot long COVID retrieves primary

research where microclot alone retrieves commerce. Two research groups that publish continuously and communicate their findings publicly: Akiko Iwasaki's laboratory at Yale, and David Putrino's group at Mount Sinai.

4.7 Synthesis: the individualization problem

Section 4 has now equipped you with a pacing method and its three day analytical rule, a breathing protocol with characterized physiology and a named randomized trial in this condition, an acupuncture protocol borrowed from a strong trial design, the most evidence backed nausea point in the literature, an auricular option for sleep, dietary principles aligned with motility research, a seated movement form with moderate certainty evidence in adjacent conditions, and the language, tests, and registries that change what happens in a clinical encounter.

It has also demonstrated a single finding six consecutive times, once per subsection. The breathing protocol that stabilizes one autonomic system produces presyncope in another. The calming and stimulating point sets produced different trial outcomes, so selection of these points are important. The convalescent porridge and the histamine rich broth come from the same traditional pantry yet can deliver different results in the same patient population. The sodium one body requires is the sodium another tradition restricts. The movement that reconditions one patient can crash a different patient. In every instance, the deciding variable is located in the individual's unique manifestation of symptoms.

The practices of Section 4 tolerate this individualization problem because they share two properties: feedback is fast, and stakes are low. Trial and error is affordable.

The herbal layer of this medicine possesses neither property, and the next section examines it under the same evidence standards.

5. The herbal evidence base

5.1 Clinical trials in Long COVID

Given the disclosure at the head of this article, this is the section in which my claims should be checked most carefully against their sources. The evidence is therefore presented at its actual size, beginning with its limitations.

Two systematic reviews published in 2025 pooled the randomized controlled trials of Chinese Herbal Medicine in Long COVID. The first included 7 trials and 1,519 patients and found

clinically meaningful reductions in depression scores (mean difference 6.0 points, 95 percent confidence interval 4.44 to 7.56) and anxiety scores (mean difference 6.1 points, 95 percent confidence interval 4.53 to 7.67), a small and low certainty effect on fatigue, and no demonstrable effect on breathlessness, with the confidence interval crossing null ([Tsang et al., Journal of Integrative Medicine. 2025](#)). The second included 10 trials and 2,401 patients and found statistically significant improvement in chest tightness (relative risk 1.40, 95 percent confidence interval 1.21 to 1.61) and insomnia (relative risk 1.23, 95 percent confidence interval 1.03 to 1.47), with fatigue (relative risk 1.58, 95 percent confidence interval 0.95 to 2.64) and breathlessness trending toward benefit without reaching significance ([Wang et al., Journal of Translational Medicine. 2025](#)). Neither review identified serious adverse events.

The methodological accounting carries more weight than the point estimates. Every included trial was conducted in mainland China, within a literature with documented publication bias toward positive results for this medicine. In the second review, one trial of ten was rated at low risk of bias. Most trials were unblinded. The first review's authors characterized safety reporting across the included trials as questionable, a term denoting inadequate ascertainment rather than detected harm, which is a meaningfully worse property for a reader trying to assess risk.

For completeness of reporting, the constituent trials tested named commercial preparations. A blinded multicenter placebo controlled trial in convalescent patients evaluated a capsule combining astragalus root, red peony root, and psoralea over 90 days and found improved six minute walk distance and greater radiographic resolution on chest imaging ([Chen et al., Journal of Ethnopharmacology. 2022](#)). Other trials evaluated a classical three ingredient preparation of ginseng, ophiopogon root, and schisandra berry for cardiopulmonary recovery, a cordyceps preparation, and a tablet for persistent cough. These are reported results from a scientific study. I am not recommending these specific herbs for you because I am not your practitioner.

5.2 Formula architecture and compound level research

A formula in Chinese Herbal Medicine is a designed herbal combination with internal role structure, and this architecture is the most important technical fact about how the medicine is constructed. One ingredient carries the principal therapeutic intent. Others amplify it. At least one is typically included to counteract the principal ingredient's adverse tendencies, and another directs the combination's activity. The consequence of role structure is that ingredients modify one another's behavior, so the properties of a combination are poorly predicted by the properties of its parts, in the same way that removing the acid from a braise does more than subtract sourness; it changes how every remaining component interacts. This is why Chinese Herbal Medicine rarely administers single herbs in isolation, and why a retail bottle of one isolated ingredient is a categorically different object from the medicine this system actually practices.

Within these formulas, individual compounds have accumulated laboratory research addressing the specific mechanisms of Section 2. Four programs of work are representative, and each is reported with its tier permanently attached.

Astragaloside IV, a saponin isolated from astragalus root, has repeatedly activated mitochondrial biogenesis pathways in laboratory and animal models, upregulating the transcriptional programs that build new mitochondria and increasing measured cellular energy output ([Chinese Medicine, 2025](#); [PMC, 2025](#)). This is the mechanism class of Section 2.2. *Preliminary, animal and laboratory. No human trial in Long COVID.*

Baicalin and baicalein, flavonoids from the root of *Scutellaria baicalensis* (Huang Qin in Mandarin) were identified early in the pandemic as inhibitors of the SARS CoV 2 main protease, the enzyme essential to viral replication, in enzymatic assays and infected cell culture at low micromolar concentrations ([Su et al., Journal of Enzyme Inhibition and Medicinal Chemistry, 2021](#)), and separately suppress activation of the NLRP3 inflammasome, a central inflammatory switch, in cell and animal models ([PMC, 2023](#)). The standard translational caution applies with full force: a concentration achievable in culture is frequently unachievable in human tissue after oral administration. *Preliminary. No human trial in Long COVID.*

Compounds from *Salvia miltiorrhiza*, also called Dan Shen in Chinese medicine, is the root around which the tradition organized its blood movement treatments for two centuries, show documented effects on platelet aggregation, fibrinolysis, and endothelial function in laboratory and animal studies ([Journal of Ethnopharmacology, 2023](#)), and the classical multi ingredient combinations built for blood movement demonstrate measurable modulation of platelet activation pathways in animal models ([PMC, 2024](#)). Read against Section 2.1, this is the most provocative correspondence in the article, and it is doubly conditional: the compound evidence is preclinical, and the microclot mechanism it would address is itself causally contested. *Preliminary on both ends. No connecting human trial.*

Glycyrrhizin, the principal triterpenoid of licorice root, also called Gan Cao in Chinese medicine, inhibited replication of Epstein Barr virus and related herpesviruses in cell studies ([Lin, Antiviral Research, 2003](#)), a finding whose interest derives from the reactivation hypothesis of Section 2.6. *Preliminary. This compound reappears in Section 6.1 with a substantially different risk profile.*

5.3 The structural case against self experimentation

The argument of this subsection is assembled from findings already established above.

From Section 4.1: the characteristic adverse signal in this illness arrives one to three days after its cause, a delay that defeats attribution even for discrete activities. A daily herbal preparation administered into that delay cannot be cleanly recorded; the self experiment fails to generate

interpretable data about itself. From Section 4.7: the deciding variable in every difference in case outcome was the individual's unique body constitution, and the herbal option multiplies those divergences. From Section 3.6: the sequencing principle holds that strengthening interventions administered at the wrong phase produce deterioration, and the strengthening ingredients are precisely those a fatigued patient selects first. From Section 5.2: an herb's role architecture means ingredients modify one another, so single ingredient evaluation, the only kind a consumer can perform, does not predict combination behavior. And from Section 6, immediately following: several ingredient classes carry pharmacology with real stakes, including hemostatic, blood pressure, electrolyte, and immunological effects.

The practices of Section 4 were offered for independent use because their feedback is fast and their stakes are low. The herbal layer inverts both properties while adding interaction effects and phase dependence. That combination, slow feedback, real stakes, person dependent direction, and non additive components, is not suited for trial and error without practitioner oversight.

6. Risk considerations

Each entry below is an instance of the finding from Section 4.7, now with clinical consequences attached: an identical presentation admitting opposite correct answers, with the deciding information located in the whole patient.

6.1 Glycyrrhizin and licorice root

The compound with the antiviral laboratory profile of Section 5.2 also inhibits the enzyme 11 beta hydroxysteroid dehydrogenase type 2, producing sodium retention, potassium loss, and elevated blood pressure. In a hypotensive orthostatic presentation managed with volume expansion, this pharmacology pushes in the therapeutically intended direction. In a patient with hypertension, or one taking any medication that depletes potassium, the identical pharmacology points toward electrolyte emergency. The practical exposure is broad: licorice root appears in a large fraction of Chinese Herbal Medicine formulas, typically in a supporting role, labeled variously as licorice, Glycyrrhiza, or Gan Cao. Gan Cao is typically used in small doses in formulas to bind or harmonize the formula, and is rarely a chief ingredient.

6.2 Anticoagulant and antiplatelet interactions

Using herbs that are typically blood moving without practitioner oversight do not account for concurrent medication. Combined with anticoagulant therapy, aspirin, or the fibrinolytic enzyme supplements circulating in Long COVID communities, effects may be additive, and can increase bleeding risk. The interaction between *Salvia miltiorrhiza* and warfarin is specifically documented in the pharmacology literature. Any anticoagulant in the medication list places the entire blood moving ingredient class behind a requirement for professional oversight with prescriber communication.

6.3 Immunostimulation in immune mediated presentations

Several prominent strengthening herbs measurably upregulate immune activity in laboratory models. In presentations involving autoantibodies or the mast cell process of Section 2.4, upregulation may be the wrong direction, and patient communities consistently report histamine type flares from the same tonic ingredients that others are able to tolerate.

Preliminary as mechanism; consistent enough as structured patient report to warrant respect.

6.4 Phase timing

The tonic ingredients most attractive to an exhausted patient are the ones the tradition spent eighteen centuries warning its own clinicians to time correctly during a patient's recovery period, on the stated grounds that premature administration worsens the patient.

6.5 Product quality

Herbal preparations are manufactured goods, therefore high quality herbs must be tested and made under Good Manufacturing Practices. In addition, chromatography studies are used to confirm plant identification. Every batch of herbs should have an associated batch number and Certificate of Analysis.

6.6 The supervised alternative

Competent practice in this medicine begins with a licensed herbalist reading the complete presentation before any ingredient is selected: full symptom history, every concurrent medication and supplement, blood pressure, the direction each ingredient's pharmacology would run in this specific body, and the phase question of what to address first and what to defer. A specific combination is then composed for that presentation and adjusted as it evolves. Each risk item in this section, 6.1 through 6.5, is a question a trained practitioner asks when reviewing an intake. Without a trained practitioner, many risks arise (see Section 6 for examples).

7. Conclusion

You now hold a map of six documented mechanisms invisible to routine testing, each labeled at its true evidentiary strength. You hold an older observational framework that characterized several of the same phenomena by behavior, centuries early, including one sequencing principle that modern medicine relearned at a cost (post-exertion malaise). You hold the self administered toolkit of Section 4, which you can begin this week. And you hold an accurate account of the herbal layer: promising at the trial level, preliminary at the compound level, architected in interacting combinations, and structurally unsuited to solo experimentation for reasons that are epistemic before they are commercial.

What no article can determine is which presentation is yours. Reading a complete presentation is a trained clinical skill. At jadewell, it is the first thing that happens and the condition for everything after: you provide the full picture, and a licensed herbalist reads it before anything is composed or shipped.

If you want to see what your picture looks like, it starts here: pattern.jadewell.me.

If you want to find a local Traditional Chinese Medicine practitioner, you can use the official accreditation directory here: directory.ncbhm.org.

This article is educational and does not constitute medical advice. It does not diagnose, treat, cure, or prevent any disease and is not a substitute for care from your clinician. Statements regarding herbal ingredients and isolated compounds describe published research and traditional use; none of that research has established effectiveness in long covid. Readers who are pregnant, taking anticoagulant or antiplatelet medication, or managing blood pressure or potassium disorders should discuss any new practice or preparation with their clinician first.

References

1. Pretorius E, et al. Prevalence of symptoms, comorbidities, fibrin amyloid microclots and platelet pathology in individuals with Long COVID/PASC. Cardiovascular Diabetology. 2022. <https://pubmed.ncbi.nlm.nih.gov/35933347/>
2. Appelman B, et al. Muscle abnormalities worsen after post exertional malaise in long COVID. Nature Communications. 2024. <https://www.nature.com/articles/s41467-023-44432-3>

3. Novel biomarkers of mitochondrial dysfunction in long COVID patients. *Molecular Medicine*. 2025. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC11979091/>
4. Larsen NW, et al. Characterization of autonomic symptom burden in long COVID. *Frontiers in Neurology*. 2022. <https://doi.org/10.3389/fneur.2022.1012668>
5. Salvucci F, et al. Antihistamines improve cardiovascular manifestations and other symptoms of long COVID attributed to mast cell activation. *Journal for Nurse Practitioners*. 2023.
6. Davis HE, McCorkell L, Vogel JM, Topol EJ. Long COVID: major findings, mechanisms and recommendations. *Nature Reviews Microbiology*. 2023. <https://www.nature.com/articles/s41579-022-00846-2>
7. National Institute for Health and Care Excellence. Myalgic encephalomyelitis (or encephalopathy)/chronic fatigue syndrome: diagnosis and management. NICE guideline NG206. 2021. <https://www.nice.org.uk/guidance/ng206>
8. Bernardi L, et al. Slow breathing increases arterial baroreflex sensitivity in patients with chronic heart failure. *Circulation*. 2002.
9. Philip KEJ, et al. An online breathing and wellbeing programme (ENO Breathe) for people with persistent symptoms following COVID 19: a randomised controlled trial. *Lancet Respiratory Medicine*. 2022. [https://doi.org/10.1016/S2213-2600\(21\)00589-3](https://doi.org/10.1016/S2213-2600(21)00589-3)
10. Zick SM, et al. Investigation of 2 types of self administered acupressure for persistent cancer related fatigue in breast cancer survivors: a randomized clinical trial. *JAMA Oncology*. 2016.
11. Lee A, Fan LTY. Stimulation of the wrist acupuncture point P6 for preventing postoperative nausea and vomiting. *Cochrane Database of Systematic Reviews*. <https://doi.org/10.1002/14651858.CD003281.pub4>
12. Liu S, et al. A neuroanatomical basis for electroacupuncture to drive the vagal adrenal axis. *Nature*. 2021. <https://www.nature.com/articles/s41586-021-04001-4>
13. Auricular acupressure for insomnia: systematic review and meta analysis. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4425871/>
14. Vernino S, et al. Postural orthostatic tachycardia syndrome (POTS): state of the science and clinical care. *Autonomic Neuroscience*. 2021. <https://doi.org/10.1016/j.autneu.2021.102828>
15. Kong L, et al. Traditional Chinese mind body exercise for chronic fatigue syndrome: systematic review and meta analysis. *Journal of Global Health*. 2023. <https://doi.org/10.7189/jogh.13.04157>
16. Efficacy of Baduanjin for treatment of fatigue: systematic review and meta analysis. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC10419663/>
17. The effect of Baduanjin exercises on functional capacity, respiratory function, and quality of life in idiopathic pulmonary fibrosis: randomized controlled trial. *BioPsychoSocial Medicine*. 2025. <https://bpsmedicine.biomedcentral.com/articles/10.1186/s13030-025-00346-8>

18. Mohamed A, et al. Efficacy of Baduanjin exercise in patients with idiopathic chronic fatigue who survived COVID 19 contraction. 2025.
https://www.hrpub.org/journals/article_info.php?aid=15230
19. Tsang MS, et al. Chinese herbal medicine for dyspnea and persistent symptoms of long COVID: systematic review and meta analysis of randomized controlled trials. *Journal of Integrative Medicine*. 2025. <https://pubmed.ncbi.nlm.nih.gov/39971694/>
20. Wang Y, et al. Efficacy and safety of traditional Chinese medicine for post COVID 19 syndrome: systematic review and meta analysis. *Journal of Translational Medicine*. 2025. <https://link.springer.com/content/pdf/10.1186/s12967-025-06830-7.pdf>
21. Chen Y, et al. Efficacy and safety of Bufe Huoxue capsules in the management of convalescent patients with COVID 19 infection: multicentre, double blind, randomised controlled trial. *Journal of Ethnopharmacology*. 2022.
<https://pubmed.ncbi.nlm.nih.gov/34763045/>
22. Su H, et al. Anti SARS CoV 2 activities in vitro of Shuanghuanglian preparations and bioactive ingredients: baicalin and baicalein as inhibitors of the 3CL protease. *Journal of Enzyme Inhibition and Medicinal Chemistry*. 2021.
<https://pubmed.ncbi.nlm.nih.gov/33491508/>
23. Baicalin and NLRP3 inflammasome suppression in inflammatory models. 2023.
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC10458126/>
24. Bioactive components and molecular mechanisms of *Salvia miltiorrhiza* in promoting blood circulation. *Journal of Ethnopharmacology*. 2023.
<https://www.sciencedirect.com/science/article/abs/pii/S0378874123005652>
25. Buyang Huanwu decoction attenuates platelet activation via the PI3K/Rap1/integrin pathway. 2024. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC11331649/>
26. Lin JC. Mechanism of action of glycyrrhizic acid in inhibition of Epstein Barr virus replication in vitro. *Antiviral Research*. 2003.
<https://www.sciencedirect.com/science/article/abs/pii/S0166354203000305>
27. Astragaloside IV and AMPK/PGC1 alpha mediated mitochondrial function. *Chinese Medicine*. 2025. <https://link.springer.com/article/10.1186/s13020-025-01092-3>
28. Astragaloside IV and formononetin: oxidative stress and mitochondrial biogenesis. 2025. <https://pmc.ncbi.nlm.nih.gov/articles/PMC11765978/>