## Summary outcomes from the clinical trials on alternative medicines

Only 3 studies out of 41 have its results released in indexed publications. The results are promising for some items and limiting for others. Here we will discuss the issued results. Then will explore the results of other medication out of the included clinical trials. Table 1 lists the outcome of alternative medicine clinical trials.

**Tabel 1 List of the outcomes of alternative medicine clinical trials**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| NCT Number | Trial Name | Final Outcomes | Indexed Publication | Preliminary Results | First posted/last updated |
| [NCT04412395](https://clinicaltrials.gov/ct2/show/NCT04412395) | “Clinical Assessment of Oral Lactoferrin as a Safe Antiviral and Immunoregulatory in Treating COVID-19 Disease (COVID-19\_LF)” | Yet to be determined |  | Not Available | June 2, 2020; November 15, 2021 |
| [NCT04427865](file:///C:\Users\bassa\Downloads\NCT04427865) | “Utility of Lactoferrin as a Preventive Agent for Healthcare Workers Exposed to COVID-19” | Yet to be determined |  | Terminated | June 11, 2020; June 16, 2020 |
| [NCT04475120](https://clinicaltrials.gov/ct2/show/NCT04475120) | “Efficacy and Safety of Liposomal Lactoferrin in COVID-19 Patients With Mild-to-Moderate Disease and in COVID-19 Asymptomatic Patients” | Yet to be determined |  | Not Available | July 17, 2020; May 14; 2021 |
| [NCT04368351](https://clinicaltrials.gov/ct2/show/NCT04368351) | “Bacteriotherapy in the Treatment of COVID-19 (BACT-ovid)” | Yet to be determined | 25922396 | SivoMixx, can play role in enhancing the immunity health | April29, 2020; May 4; 2020 |
| [NCT04395768](https://clinicaltrials.gov/ct2/show/NCT04395768) | “International ALLIANCE Study of Therapies to Prevent Progression of COVID-19” | Yet to be determined |  | Not Available | May 20, 2020; September 11, 2020 |
| [NCT04664010](https://clinicaltrials.gov/ct2/show/NCT04664010) | “Efficacy and Safety of High-dose Vitamin C Combined With Chinese Medicine Against Coronavirus Pneumonia (COVID-19)” | Yet to be determined |  | Not Available | December 11, 2020; December 11, 2020 |
| [NCT04356495](https://clinicaltrials.gov/ct2/show/NCT04356495) | “Trial of COVID-19 Outpatient Treatment in Individuals With Risk Factors for Aggravation (COVERAGEFrance)” | Yet to be determined |  | Not Available | April 22, 2020; February 4, 2022 |
| [NCT04363840](https://clinicaltrials.gov/ct2/show/NCT04363840) | “The LEAD COVID-19 Trial: Low-risk, Early Aspirin and Vitamin D to Reduce COVID-19 Hospitalizations (LEAD COVID-19)” | Yet to be determined |  | Withdrawn | April 27, 2020; December 27, 2021 |
| [NCT04482673](https://clinicaltrials.gov/ct2/show/NCT04482673) | “Vitamin D Supplementation in the Prevention and Mitigation of COVID-19 Infection (VitD-COVID19)” | Yet to be determined |  | Not Available | July 22, 2020; February 28, 2022 |
| [NCT04335084](https://clinicaltrials.gov/ct2/show/NCT04335084) | “A Study of Hydroxychloroquine, Vitamin C, Vitamin D, and Zinc for the Prevention of COVID-19 Infection (HELPCOVID-19)” | Yet to be determined |  | Not Available | April 6, 2020; October 21, 2021 |
| [NCT04386850](https://clinicaltrials.gov/ct2/show/NCT04386850) | “Oral 25-hydroxyvitamin D3 and COVID-19” | Yet to be determined |  | Not Available | May 13 , 2020; June 12, 2020 |
| [NCT04468139](https://clinicaltrials.gov/ct2/show/NCT04468139) | “The Study of Quadruple Therapy Zinc, Quercetin, Bromelain and Vitamin C on the Clinical Outcomes of Patients Infected With COVID-19” | Yet to be determined |  | Not Available | July 13, 2020; July 13, 2020 |
| [NCT04525820](https://clinicaltrials.gov/ct2/show/NCT04525820) | “High Dose Vitamin-D Substitution in Patients With COVID-19: a Randomized Controlled, Multi Center Study (VitCov)” | Yet to be determined |  | Not Available | August 25, 2020; September 21, 2021 |
| [NCT04682574](https://clinicaltrials.gov/ct2/show/NCT04682574) | “Role of Mega Dose of Vitamin C in Critical COVID-19 Patients” | Yet to be determined |  | Not Available | December 23, 2020; December 28, 2020 |
| [NCT04401150](https://clinicaltrials.gov/ct2/show/NCT04401150) | “Lessening Organ Dysfunction With VITamin C - COVID-19 (LOVIT-COVID)” | Yet to be determined |  | Not Available | May 26, 2020; January 24, 2022 |
| [NCT04709744](https://clinicaltrials.gov/ct2/show/NCT04709744) | “Impact of Vitamin D Level and Supplement on SLE Patients During COVID-19 Pandemic” | Yet to be determined |  | Not Available | January 14, 2021; January 15; 2021 |
| [NCT04411446](https://clinicaltrials.gov/ct2/show/NCT04411446) | “Cholecalciferol to Improve the Outcomes of COVID-19 Patients (CARED)” | Yet to be determined |  | Not Available | June 2, 2020; July 30, 2021 |
| [NCT04621058](https://clinicaltrials.gov/ct2/show/NCT04621058) | “Efficacy of Vitamin D Treatment in Mortality Reduction Due to COVID-19.” | Yet to be determined |  | NCT04621058 | November 9, 2020; December 23, 2020 |
| [NCT04489628](https://clinicaltrials.gov/ct2/show/NCT04489628) | “Tele-health Enabled Clinical Trial for COResolving Inflammatory Storm in COVID-19 Patients by Omega-3 Polyunsaturated Fatty Acids -VID-19” | Yet to be determined |  | Withdrawn | July 28, 2020; February 7, 2022 |
| [NCT04495816](https://clinicaltrials.gov/ct2/show/NCT04495816) | “COVID-19 Anosmia Study” | Yet to be determined |  | Not Available | August 3, 2020; January 19, 2022 |
| [NCT04647604](https://clinicaltrials.gov/ct2/show/NCT04647604) | “Resolving Inflammatory Storm in COVID-19 Patients by Omega-3 Polyunsaturated Fatty Acids” | Yet to be determined |  | Not Available | December 1, 2020; January 5, 2020 |
| [NCT04869579](https://clinicaltrials.gov/ct2/show/NCT04869579) | “Selenium as a Potential Treatment for Moderately-ill, Severely-ill, and Critically-ill COVID-19 Patients. (SeCOVID)” | Yet to be determined |  | Not Available | May 3, 2021; August 3, 2021 |
| [NCT04342689](https://clinicaltrials.gov/ct2/show/NCT04342689) | “The Role of Resistant Starch in COVID-19 Infection” | Yet to be determined |  | Not Available | April 13, 2020; September 17, 2021 |
| [NCT04655716](https://clinicaltrials.gov/ct2/show/NCT04655716) | “Urine Alkalinisation to Prevent AKI in COVID-19” | Yet to be determined |  | Not Available | December 7, 2020; August 12, 2021 |
| [NCT04530448](https://clinicaltrials.gov/ct2/show/NCT04530448) | “Coronavirus Induced Acute Kidney Injury: Prevention Using Urine Alkalinization” | Yet to be determined |  | Not Available | August 28, 2020; August 5, 2021 |
| [NCT04615949](https://clinicaltrials.gov/ct2/show/NCT04615949) | “The Study of Quadruple Therapy Zinc, Quercetin, Bromelain and Vitamin C on the Clinical Outcomes of Patients Infected With COVID-19” | Yet to be determined |  | Not Available | July 13, 2020  July 13, 2020 |
| [NCT03944447](https://clinicaltrials.gov/ct2/show/NCT03944447) | “Cannabidiol in Patients With COVID-19 and Cardiovascular Disease or Risk Factors” | Yet to be determined |  | NCT04621058 | November 4, 2020January 20, 2022 |
| [NCT04467918](https://clinicaltrials.gov/ct2/show/NCT04467918) | “CANnabiDiol for CoviD-19 pATiEnts With Mild to Moderate Symptoms (CANDIDATE)” | Yet to be determined | 34619044 | Cannabidiol has no role in improving the clinical symptoms of COVOD-19 patients | July 13, 2020, September 28, 2021 |
| [NCT03944447](https://clinicaltrials.gov/ct2/show/NCT03944447) | “Outcomes Mandate National Integration With Cannabis as Medicine for Prevention and Treatment of COVID-19 (OMNI-Can)” | Yet to be determined |  | Not Available | May 9, 2019, February 21, 2022 |
| [NCT04542876](https://clinicaltrials.gov/ct2/show/NCT04542876) | “Efficacy and Safety of Guduchi Ghan Vati in the Management of Asymptomatic COVID-19 Infection” | Yet to be determined |  | Not Available | September 9, 2020September 9, 2020 |
| [NCT04480398](https://clinicaltrials.gov/ct2/show/NCT04480398) | “Efficacy and Safety of Guduchi Ghan Vati for Covid-19 Asymptomatic Patients” | Yet to be determined |  | Not Available | July 21, 2020July 22, 2020 |
| [NCT04767087](https://clinicaltrials.gov/ct2/show/NCT04767087) | “Honey and Nigella Sativa in COVID-19 Prophylaxis (HNS-COVID-PK)” | Yet to be determined |  | Not Available | February 23, 2021July 2, 2021 |
| [NCT04553705](https://clinicaltrials.gov/ct2/show/NCT04553705) | “Omega-3, Nigella Sativa, Indian Costus, Quinine, Anise Seed, Deglycyrrhizinated Licorice, Artemisinin, Febrifugine on Immunity of Patients With (COVID-19)” | Yet to be determined |  | Not Available | September 17, 2020September 18, 2020 |
| [NCT04291053](https://clinicaltrials.gov/ct2/show/NCT04291053) | “The Efficacy and Safety of Huai er in the Adjuvant Treatment of COVID-19” | Yet to be determined |  | Not Available | March 2, 2020March 17, 2020 |
| [NCT04847518](https://clinicaltrials.gov/ct2/show/NCT04847518) | “Assessment of Efficacy of KAN-JANG® in Mild COVID-19” | Yet to be determined |  | Not Available | April 19, 2021September 22, 2021 |
| [NCT04278963](https://clinicaltrials.gov/ct2/show/NCT04278963) | “Yinhu Qingwen Decoction for the Treatment of Mild / Common CoVID-19” | Yet to be determined |  | Suspended | February 20, 2020July 7, 2021 |
| [NCT04310865](https://clinicaltrials.gov/ct2/show/NCT04310865) | “Yinhu Qingwen Granula for the Treatment of Severe CoVID-19” | Yet to be determined |  | Suspended | March 17, 2020July 7, 2021 |
| [NCT04668222](https://clinicaltrials.gov/ct2/show/NCT04668222) | “Changing Susceptible Body Constitution for COVID-19 Prevention by Chinese Medicine in Hong Kong Residents” | Yet to be determined |  | Not Available | December 16, 2020April 28, 2021 |
| [NCT04279197](https://clinicaltrials.gov/ct2/show/NCT04279197) | “Treatment of Pulmonary Fibrosis Due to COVID-19 With Fuzheng Huayu” | Yet to be determined |  | Not Available | February 21, 2020January 3, 2022 |
| [NCT04400890](https://clinicaltrials.gov/ct2/show/NCT04400890) | “Randomized Proof-of-Concept Trial to Evaluate the Safety and Explore the Effectiveness of Resveratrol, a Plant Polyphenol, for COVID-19” | Yet to be determined | 34545357 | Resveratrol has a positive effect on COVID-19 treatment as it can reduce the need of hospitalization | May 26, 2020August 26, 2021 |

**3.4.1 Probiotics, such as SivoMixx, can play role in enhancing the immunity health**

Probiotics have a promising role in enhancing the immunity status of the patients, yet it needs more studies to be evidenced, This what was claimed by the published article [[118]](https://d.docs.live.net/67aed81b3a14c474/المستندات/Patel,%20R.,%20&%20DuPont,%20H.%20L.%20(2015).%20New%20approaches%20for%20bacteriotherapy:%20prebiotics,%20new-generation%20probiotics,%20and%20synbiotics.%20Clinical%20infectious%20diseases%20:%20an%20official%20publication%20of%20the%20Infectious%20Diseases%20Society%20of%20America,%2060%20Suppl%202(Suppl%202),%20S108–S121.%20https:/doi.org/10.1093/cid/civ177) indexed to the clinical trial, [NCT04368351](https://clinicaltrials.gov/ct2/show/NCT04368351), which addressed the effect of SivoMixx, as a bacteriotherapy against COVID-19 infection. Probiotics gain more importance, as it may be difficult to maintain healthy and nutritional supplements during COVID-19 outbreaks, due to movement restrictions. So, a well-balanced diet, can be approached by probiotics and bacteriotherapy treatment.

**3.4.2 Cannabidiol has no role in improving the clinical symptoms of COVOD-19 patients**

At the given doses in the study, [NCT04356495](https://clinicaltrials.gov/ct2/show/NCT04356495), Cannabidiol did not enhance the clinical symptoms and failed to alter the prognosis of COVID-19 infection. This what was revealed by the results of this study, which were published in its indexed publication [[119]](https://d.docs.live.net/67aed81b3a14c474/المستندات/Crippa,%20J.%20A.%20S.,%20Pacheco,%20J.%20C.,%20Zuardi,%20A.%20W.,%20Guimarães,%20F.%20S.,%20Campos,%20A.%20C.,%20Osório,%20F.%20D.%20L.,%20...%20&%20Cannabidiol%20for%20COVID-19%20Patients%20(CANDIDATE)%20Trial%20Investigators.%20(2021).%20Cannabidiol%20for%20COVID-19%20Patients%20with%20Mild%20to%20Moderate%20Symptoms%20(CANDIDATE%20Study):%20A%20Randomized,%20Double-Blind,%20Placebo-Controlled%20Clinical%20Trial.%20Cannabis%20and%20Cannabinoid%20Research.). Anyway, there was a recommendation to have more studies but with higher doses of Cannabidiol.

**3.4.3 Resveratrol has a positive effect on COVID-19 treatment as it can reduce the need of hospitalization**

The clinical trial, [NCT04400890](https://clinicaltrials.gov/ct2/show/NCT04400890), which took place in US, reached to results that support Resveratrol as a potential treatment against CPVID-19 [[120]](https://d.docs.live.net/67aed81b3a14c474/المستندات/McCreary,%20M.%20R.,%20Schnell,%20P.%20M.,%20&%20Rhoda,%20D.%20A.%20(2021).%20Randomized%20Double-blind%20Placebo-controlled%20Proof-of-concept%20Trial%20of%20Resveratrol%20for%20Outpatient%20Treatment%20of%20Mild%20Coronavirus%20Disease%20(COVID-19).%20Research%20square,%20rs.3.rs-861831.%20https:/doi.org/10.21203/rs.3.rs-861831/v1). Given its anti-viral, antioxidant and anti-inflammatory effects, Resveratrol can be an effective adjunct treatment. Being safe and easy production added value to its use in treatment protocol, as per the indexed publication related to this clinical trial.

As mentioned not all the included trials have published its results. We searched other clinical trials that may not be registered under <https://clinicaltrials.gov>, to review the issued results regarding the impact of some herbal or dietary supplements.

**3.4.4 Lactoferrin can be a potential preventive treatment against COVID-19**

A study performed by Serrano et al, in Spain [[121]](https://d.docs.live.net/67aed81b3a14c474/المستندات/Serrano,%20Gabriel,%20Iulia%20Kochergina,%20Arturo%20Albors,%20Eva%20Diaz,%20Mar%20Oroval,%20Guillen%20Hueso,%20and%20Juan%20M.%20Serrano.%20%22Liposomal%20lactoferrin%20as%20potential%20preventative%20and%20cure%20for%20COVID-19.%22%20Int.%20J.%20Res.%20Health%20Sci%208,%20no.%201%20(2020):%208-15.), revealed that Lactoferrin can provide immune-modulating and anti-inflammatory features in addition to its antiviral effect. This was manifested by the results issued by this study which indicate that Lactoferrin can reduce the hospitalization risk and enhance the symptoms of COVID-19.

**3.4.5 Effectiveness of Vitamin C still need more investigation**

Although Vitamin C succeeded in suppressing the cytokine storm, and improving the outcomes of COVID-19 treatment, as per many studies [[122]](https://d.docs.live.net/67aed81b3a14c474/المستندات/Liu,%20F.,%20Zhu,%20Y.,%20Zhang,%20J.,%20Li,%20Y.,%20&%20Peng,%20Z.%20(2020).%20Intravenous%20high-dose%20vitamin%20C%20for%20the%20treatment%20of%20severe%20COVID-19:%20study%20protocol%20for%20a%20multicentre%20randomised%20controlled%20trial.%20BMJ%20open,%2010(7),%20e039519.%20https:/doi.org/10.1136/bmjopen-2020-039519),[[123]](https://d.docs.live.net/67aed81b3a14c474/المستندات/Milani,%20G.%20P.,%20Macchi,%20M.,%20&%20Guz-Mark,%20A.%20(2021).%20Vitamin%20C%20in%20the%20Treatment%20of%20COVID-19.%20Nutrients,%2013(4),%201172.), its role still in need for more investigation. The underlying reasons are mainly related to that the clinical improvement cannot be linked to Vitamin C alone, as it is used as a part of treatment, and to the different settings of the studies which addressed the effect of Vitamin C in COVID-19 treatment.

**3.4.6 Vitamin D is an effective adjuvant treatment against COVID-19 infection**

The link between Vitamin D deficiency and higher risk of COVID-19 symptoms has been evidenced in many studies [[124]](https://d.docs.live.net/67aed81b3a14c474/المستندات/Yisak,%20H.,%20Ewunetei,%20A.,%20Kefale,%20B.,%20Mamuye,%20M.,%20Teshome,%20F.,%20Ambaw,%20B.,%20&%20Yitbarek,%20G.%20Y.%20(2021).%20Effects%20of%20vitamin%20D%20on%20COVID-19%20infection%20and%20prognosis:%20a%20systematic%20review.%20Risk%20management%20and%20healthcare%20policy,%2014,%2031.),[[106]](https://d.docs.live.net/67aed81b3a14c474/المستندات/Ali,%20N.%20(2020).%20Role%20of%20vitamin%20D%20in%20preventing%20of%20COVID-19%20infection,%20progression%20and%20severity.%20Journal%20of%20infection%20and%20public%20health,%2013(10),%201373-1380.). Based on that, many clinical trials were proposed to evaluate the role of Vitamin D in enhancing the clinical outcomes. One clinical trial was held in France [[125]](https://d.docs.live.net/67aed81b3a14c474/المستندات/Annweiler,%20C.,%20Hanotte,%20B.,%20de%20l’Eprevier,%20C.%20G.,%20Sabatier,%20J.%20M.,%20Lafaie,%20L.,%20&%20Célarier,%20T.%20(2020).%20Vitamin%20D%20and%20survival%20in%20COVID-19%20patients:%20A%20quasi-experimental%20study.%20The%20Journal%20of%20steroid%20biochemistry%20and%20molecular%20biology,%20204,%20105771.), prove Vitamin D as an effective, well tolerated treatment against COVID-19 infection that can reduce both the severity and the mortality rate in elderly patients.

**3.4.7 KAN-JANG® is a suitable treatment against URTI, and can be used in COVID-19 treatment**

As demonstrated by a clinical trial held in Sweden, KAN-JANG was proven as an effective treatment against upper respiratory tract infection [[126]](https://d.docs.live.net/67aed81b3a14c474/المستندات/Narimanyan,%20M.,%20Jamalyan,%20K.,%20Balyan,%20A.,%20Barth,%20A.,%20Palm,%20S.,%20Wikman,%20G.,%20&%20Panossian,%20A.%20(2021).%20Early%20intervention%20with%20Kan%20Jang®%20to%20treat%20upper-respiratory%20tract%20infections:%20A%20randomized,%20quadruple-blind%20study.%20Journal%20of%20traditional%20and%20complementary%20medicine,%2011(6),%20552-562.). It reduced the inflammation severity and reduced the recovery days of YRTI patients. These features can be used against URTI associated by the authors of this clinal trials, although there is an ongoing clinical trial, [NCT04847518](https://clinicaltrials.gov/ct2/show/NCT04847518) addressing the role of KAN-JANG against COVID-19.

**3.4.8 Guduchi Ghan Vati is demonstrated to be prophylactic measure against COVID-19 infection**

A clinical study held in India [[127]](https://d.docs.live.net/67aed81b3a14c474/المستندات/Kumar,%20A.,%20Prasad,%20G.,%20Srivastav,%20S.,%20Gautam,%20V.%20K.,%20&%20Sharma,%20N.%20(2020).%20Efficacy%20and%20Safety%20of%20Guduchi%20Ghan%20Vati%20in%20the%20Management%20of%20Asymptomatic%20COVID-19%20Infection:%20An%20Open%20Label%20Feasibility%20Study.%20medRxiv.), where it provided this herbal preparation to a community area and collected the related data, revealed that Guduchi Ghan Vati can help as a prophylactic measure against COVID-19 infection. As claimed by the authors of this study, these data can form a basis for future studies.