

Traditional Chinese Medicinal Herbs and Essential Oils for the Prevention and Treatment of COVID-19 and SARS

*Everything you wanted to
know about protecting yourself
from COVID-19 and future pandemics*

Scott Rauvers

Scott Rauvers

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*Compiled by Master Herbalist Scott Rauvers. Founder of the
Institute for Solar Studies on Behavior and Human Health*

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Dedication

This book is dedicated to those brave souls on the front lines fighting COVID-19 who risk their lives each and every day, working to end the pandemic

CONTENTS

Preface.....page 14

Introduction.....page 16

Chapter 1. Common Questions and Answers about COVID-19.....page 25

Chapter 2. Vitamin D, Coffee, Honey and Nigella sativa.....page 40

Coffee may help prevent COVID-19.....What are NF- κ B inhibitors?.....Nigella sativa and honey reduce complications caused by COVID-19.....Why Honey may help Increase the Strength of Body's Immune System.....Vitamin D and Omega 3's.....What is a cytokine storm?.....Vitamin D Meta Data Analysis Study Involving COVID-19.....Vitamin D Synergizes with Vaccines.....Vitamin D Reduces Admissions to ICUGeographical Latitude and COVID-19 Cases.....Engineered Good Bacteria to help defeat COVID-19
IvermectinStudies confirm COVID-19 Patients have Low Levels of Vitamin D.....Omega 3's Help Fight COVID-19.....COVID-19 Herbal Sachets.

Chapter 3. Exploring DCA, EPA and Omega 3's for the Prevention of COVID-19.....page 53

How Much DHA and EPA does my body require?.....Where can I find Docosahexaenoic and Eicosapentaenoic acids?.....Where do I Obtain Omega-3s?.....Vegetarian Sources of Omega 3's.....Why the Demand for Acerola juice

will soar in the coming years.....Vitamin C helps people
Diagnosed with COVID-19.

Chapter 4. How Edhedra is being used for the Prevention and Treatment of COVID-19.....page 62

Ephedra for Treatment and Prevention of COVID-19.....The
Amygdalus Communis Vas Formula.....Ephedra Helps Lower
Cytokine Storms. The Maxing Ganshi decoctionEphedra
for Inhibiting Influenza and Pneumonia.....Combining
Ephedra with GlycyrrhizaWhat does ACE2
mean?.....Ephedrine reduces coughing.....Ephedra relieves
AsthmaThe Huashi baidu Granule Formula.

Chapter 5. Chinese Herbs Scientifically Proven to Treat and Prevent COVID-19.....page 71

Traditional Chinese Medicines (TCM) for treating COVID-19.
.....COVID-19 Symptomology.....Herbal formulas used for
treating severe COVID-19 patients.....The Maxinshigan Tang
FormulaThe Baihegujin Tang FormulaThe Lian-Hua-
Qing-Wen Formula.....What does IL-6, IL-8 mean?.....A
Herbal Formula Recommended for the prevention and
treatment of COVID-19The Qingfei Paidu
Decoction.....Chemical Composition of the Qingfeipaidu
DecoctionThe Lianhua qingwen capsule
(LH).....RECOMMENDED HERBS FOR THE EARLY STAGES OF
COVID-19 INFECTIONHERBAL FORMULAS FOR THE
TREATMENT OF SEVERE COVID-19 CASES.....The 10 most
commonly prescribed herbs by Chinese province.....The
most frequently prescribed Herbal Combinations.....The top
10 active substances found in the most popular COVID-19
Herbal Treatments.....TCM and Western Therapy
Combination Treatments.....A combination of Qingfei Paidu

and InterferonThe Shufeng Jiedu Formula.....The Qingfeipaidu decoction (QFPD).....Scutellaria baicalensis in detail.....Honeysuckle (Flos Lonicerae Japonicae) in detail.....TCM Preparations for Enhancing Immune System Functioning in Patients with COVID-19.....The Sheganmahuang decoction (SMD).....Jinhuaqinggan granules (JHQG).....Recommended Herbs for Prevention and Treatment by the Country of India (AYUSH).....Nano curcumin significantly reduces fever and coughIndonesian Herbs used to Fight COVID-19.....Turkish Folk Medicinal Herbs used for treating COVID-10.....A Herbal COVID-19 Resistance Formula for the Elderly. The Eight-Section Brocade.

Chapter 6. Interviews with Professional Herbalists and their recommend Herbs for Treating and Preventing COVID-19.....page 111

Plant Species.....Most Common Plants used to Treat COVID-19.....Principal Preparations.....Herbalists by Geographic Regions.....Eucalyptus Oil.....How does an Essential Oil Destroy Viruses?.....Essential Oils for Inhibiting COVID-19.....Herbs used in Steam Inhalation Therapy for combating COVID-19.....The anti-viral activity exhibited by TerpenoidsEssential Oils that Inhibit SARS-CoV-2Antiviral Essential Oils.....Citrus sp., Curcuma sp., Alpinia galanga, and Caesalpinia sappanUsing Terpenoids to defeat COVID-19.

Chapter 7. COVID-19 Resistance Herbs.....page 121

Persian herbsPiper BetelHerbs that specifically attack SARS-CoV-2.....A list of Plants Screened for their effectiveness against COVID-19.

Chapter 8. Chinese Herbal Tablets, Capsules and Polyphenols.....page 126

My personal COVID-19 Resistance Formula.....A formula to Strengthen The Lungs.....Substances in *Rhodiola rosea* may promote nerve regeneration.....*Echinacea*.....*Echinacea* Recommended Dosages.....Bee PropolisPolyphenols for Defeating COVID-19.....*Quercetin*.....The Herbal Composition called Gene-Eden-VIR/Novirin*Cinnamon*.....*Sang Ju Yin* plus *Yu Ping Feng San* Protects High Risk Workers from SARS.....*Astragalus*.....Traditional Chinese Medicine Herbs (TCM) used for the treatment of COVID-19. Case Reviews and Recent Studies.....How does Traditional Chinese Medicine (TCM) Work?.....The *Qing Fei Pai Du Tang* Formula.....The *Qing Fei Pai Du Tang* Formula.....Herbal formulas for critical patients with COVID-19 (15).....The 10 most Commonly used Herbs used to Treat COVID-19.....The *Sang Ju Yin* plus *Yu Ping Feng San* Extract.....Herbs Scientifically Proven for enhancing Lung Strength and Oxygen Capacity.....The *Lian Hua Qing Wen* Capsule Formula.....Traditional Chinese Medicine Herbs used for Treating Inflammation.....Traditional Chinese Medicine Herbs used for Treating Inflammation.....The *Shuang Huang Lian* Formula.....The *Dang Gui Long Hui* Pill Formula.....The *Sang Ju Yin* and *Yu Ping Feng San* Formulas.

Chapter 9. Herbs and Plants Scientifically Proven to Treat Fever, Cough, Asthma, Chronic bronchitis and the Common Cold.....page 142

Hedera helix L. - *Araliaceae* (Leaves).....*Justicia pectoralis* Jacq. (Jacq.)- *Acanthaceae* (Leaves).....*Magnolia officinalis* Rehder & E.H. Wilson - *Magnoliaceae* (Bark).....*Mikania*

glomerata Spreng and *M. laevigata* Sch.Bip. ex Baker
Asteraceae (Leaves).....*Ocimum gratissimum* L. -Lamiaceae
(Leaves).....*Salix alba* L., *Salix* sp. - Salicaceae (Cortex)
.....*Zingiber officinale* Roscoe - Zingiberaceae
(Rhizome).....Herbs used to fight the Influenza Virus.....The
Lian Hua Qing Wen Capsule Formula.....Herbs used to
combat the 2003 SARS Pandemic.....The Dayuan Decoction
(DYD).....The Chinese Rhubarb extract.....Herbs shown to
inhibit SARS 3CLpro activity.....Escin.....Quercetin Exhibits
potent Anti-Sars Activity.....Additional Herbs and Substances
to reduce COVID-19 Infection*Oleandrin*.....Minerals and
Vitamins for COVID-19 defense.....Vitamin KVitamin
C.....Selenium.....Zinc.....Elderberry Extract.....The latest
studies on Chloroquine and Hydroxychloroquine for
Defeating COVID-19.....How effective is
Remdesivir?.....Chlorine Dioxide.....MMS is banned for
commercial sale in the USA.

Chapter 10. Anti-HCoV agents active against anti-SARS-CoV activity and the common cold.....page 166

Chamaecyparis obtusa (Cupressaceae)Betulonic acid
.....*Euphorbia neriifolia*The Natural Products Guestrin, 3-
theaflavin-3-gallate and Amentoflavone.

Chapter 11. Using Bald's Eyesalve to fight Antibiotic Resistant Bacteria.....page 174

Chapter 12. Facts about Chlorine Dioxide.....page 177

The City of Sacramento California approves the use of Chlorine Dioxide for Killing COVID-19 Germs.....Chlorine

Dioxide is Cost Effective over the Long Term.....A Chlorine Dioxide Gargle that may Kill the COVID-19 Virus..... Chlorine Dioxide is Scientifically Proven to Kill Viruses.....Dental Uses of Chlorine Dioxide in Preventing the Spread of Coronavirus (COVID-19).....Studies confirming the Virus Killing Effectiveness of Mixing Sodium Chlorite with Citric Acid.....Physical Reactions to Chlorine DioxideHow to Make Chlorine Dioxide.

Chapter 13. The Powerful Healing of the Natural Antibiotic Ajwain.....page 188

My Personal Experiences Using Ajwain.....Why Ajwain is a Powerful Natural Antibiotic.....Ajwain Effectively Kills numerous types of Colon Cancer Cells.....The Healing Power of Thymol.....Ajwain Oil is Fungi Toxic.....Anti-Malarial Potential of Ajwain Oil..... A Detailed Scientific Analysis of Ajwain Seed.....Ajwain Protects Against Oxidative Stress.....Ajwain Boosts Estrogen.

Chapter 14. The Universal Healing Properties of Black Cumin Seed.....page 200

Thymoquinone Protects against methionine induced hyperhomocysteinemia.....Thymoquinone is one of Nature's Most Powerful Natural Antioxidants.....Thymoquinone Protects Mammals against Diesel Exhaust Pollution.....Black Cumin Protects against Indoor Air Pollution.....Black Cumin Reduces the Side Effects of Strong Antibiotics.....Black Cumin Protects against Drug Overdose.....Black Cumin Oil Exhibits Synergy with Vitamin C.....A scientific analysis of Black Cumin SeedRecommended Dosage.

Chapter 15. Immune System Boosting Nutraceutical Formulas You can Make at Home.....page 210

Giloy Herbal ExtractThe Black Cumin Exercise Recovery Formula.....The Yogurt Mix Formula.....Probiotics Enhances the Immune System of the Elderly.....Vaccine and Probiotics Synergy.....How to Make The St. Germain Formula.....St. Germain Rejuvenation Synergy.....To Remove Excessive Summer Heat Stress.....The Overnight Rejuven-Essence Formula.....The Natural Probiotic Formula.

Chapter 16. Prescription Antibiotics Alter the Healthy Concentration of Stomach Microflora.....page 221

SCFA's.....Do abnormalities in Healthy Stomach Microflora Contribute to Depression?.....Enhancing the Effectiveness of Antibiotics using Ultrasound.

Chapter 17. Herbal Energy Supplements You Can Make from Home.....page 227

A July 2020 Study reveals that Exercise Enhances Memory.....A formula that Relaxes and Renews the Muscles.....Mega Strength Body FormulaNeurocognition Protector Formula.....N.Z.T. Super Neurocognition Enhancer.....A formula to Help Reduce Feelings of Depression.....A Room Temperature Probiotic that needs no refrigeration.....The Brain Food Mix.....The Carnosine Synergy Formula.....A formula for rapid Recovery from Exercise.....A formula for boosting Sexual Endurance.

**Chapter 18. Understanding the link between our
Brain and our Immune System.....page 242**

**The Placebo Effect and Knee Surgery.....Excessive Stress
Contributes to Physical and Mental Illness.....The Link
Between Stress and CancerGratitude has been
Scientifically Proven to Strengthen the Human Immune
System.....Short term stress is good for the Immune
System.....How To Listen To Your Body's Subtle Messages To
Enjoy Good Health.**

**Chapter 19. Stimulus Check Information for United
States Residents....page 249**

Preface

Clarity in a time of Information Overload
It is a known fact that today we live in a period of information overload, Hence excess information about COVID-19 has lead to a false anxiety and fear about the facts regarding COVID-19. Therefore this book has been purposely kept simple and factual, reducing the chance of one contracting what I term "paralysis by analysis". This book is specifically designed for the common layman seeking to gain a more deeper understanding of the COVID-19 pandemic and how to effectively protect oneself from contracting it. If you are a doctor or other medical professional specializing in TCM herbs (Traditional Chinese Medicine) for treating your patients, I have included a special chapter on herbs that have been scientifically proven effective to help prevent and treat COVID-19.

The Economic Burden from COVID-19
COVID's impact on the economy
COVID-19 is viewed as a temporary shock to economic growth, especially in developing countries. According to the Brookings Institute, compared to 2019, poverty around the world could rise by 120 million people due to the Coronavirus Pandemic. The biggest impact is most likely to be felt in India. Many people living in India have recently escaped poverty, due to strong economic growth. However as of 2020, India's per capita growth rate has steadily been in decline (to about -11 percent). This drop happens to be one of the deepest recessions in the world. Nigeria is also experiencing a deep recession, adding 85 million new people this year to its poverty rolls.

The reason COVID-19 is most likely to impact economically disadvantaged people the most is because many economically disadvantaged people dwell in

overcrowded accommodation. For example —7% of people defined as the poorest 20% of English households live in overcrowded housing. This presents a significant risk for the rapid spread of lower respiratory tract infections.

Secondly economically disadvantaged people are employed in occupations that do not provide a work from home option. Examples of these occupations include warehouse and supermarket workers, bus drivers and those in government services that serve the public such as police officers, ambulance workers and firemen. These occupations are also associated with increased stress and anxiety. Sudden heightened stress has been shown to weaken the human immune system; thus increasing the likelihood of one contracting a wide range of various diseases.

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Seegerstrom S.C., Miller G.E. Psychological stress and the human immune system: a meta-analytic study of 30 Years of inquiry. Psychol Bull. 2004 Jul:601–630.

Further

Reading

Poverty, inequality and COVID-19: the forgotten vulnerable. J.A. Patel. May 2020.

Introduction

Welcome to the second edition of The Official COVID-19 Guidebook of Published Studies, Resources, Supplements, Antivirals and TCM Herbs. Since the release of this first edition in 2020, many new published studies have become available, showing the best herbs and plants that help protect the body from COVID-19 as well as for treatment. Many of these new studies are by leading universities and scientific laboratories. I have included in this 2021 revised edition Essential Oils scientifically proven for Inhibiting the COVID SARS-CoV-2 virus as well as antiviral essential oils that exhibit the same effect.

It is obvious that by now most of us are all taking steps to fight COVID-19 in our own unique ways. The collective consciousness of the newly collaborating worldwide population that is working together to defeat COVID-19 is helping provide mankind a clear understanding as to why COVID-19 began. I would like to list a quote by the doctor Frank Ryan, author of *Tracking the Killer Plagues* -

"It serves little purpose to be scared by viruses. But it serves a good deal of purpose to understand them"

Having authored thousands of pages on anti-aging medicine, cumulating in over a dozen books over the last decade, I began to notice that plant based medicines, unlike

pharmaceuticals don't cause antibiotic resistance. Herbs and plants used to treat conditions are ecologically sound, safe and renewable, cost far less and do not need a prescription. To cite one example, I show in this book the herb Ajwain is as effective as some antibiotics. Also I would like to point out that many substances that are anti-malarial, anti-HIV and anti-cancer have been shown to have potential for the treatment and prevention of COVID-19.

Over the course of thousands of years, plants have learned how to deal with viruses in such a way that they naturally build up a resistance to them. This is because a plant can't just pack up and move to avoid a virus, it has to stay put and learn to make the ideal chemistry necessary for its survival.

The Surprise Arrival of COVID-19
Being a writer, I have had the opportunity to connect with people from all walks of life. At the start of the pandemic, many government officials stated things would "get back to normal" within about 8 months. As Thanksgiving approaches, when I think about that statement I feel myself cringe. Being a published science nutrition writer, keeping up to date with all the latest, knew what we considered "*normal*" was not going to occur anytime soon for the vast majority of us.

It is painfully obvious (*no pun intended*) that many state and federal agencies were totally ill-prepared to handle a pandemic of such epic proportions. This has resulted in, many unanswered questions about COVID-19, leaving a huge gap in our understanding as the pandemic rages on. We have all witnessed how the World Health Organization has handled the pandemic due to the numerous political pressures placed upon it. People with chronic disease and the elderly are the groups most at risk for contracting

COVID-19. It is a sad unfortunate fact that some COVID-19 deaths were the result of systematic government misconduct. The unfortunate death of these people should not be regarded as a mere statistic used to argue differences between nations. A person who has died of COVID-19 in New York is just as important as a person who died in Wuhan, China. We should remain aware about COVID-19 becoming an exercise towards radical dehumanisation.

My Background and Qualifications

My writing skills were honed as a student studying writing at Weber State University in Utah with my anti-aging research and publishing from studying Gerontology (the science of aging) also at Weber. On December 11th, 2020 I published a short article on my website about the shortcomings of the COVID-19 vaccine, why it was rushed and questioned its safety. I specifically stated that the virus would mutate in the coming months as the vaccine was rolled out. It just so happened that on Jan. 3, 2021 the first reported mutation of the COVID-19 virus was discovered in Minnesota, USA and is expected to soon be the main dominant virus in the United States. I don't state this fact to brag, but to let the reader know that I am able to follow the data and information faithfully and write about it factually.

Secondly, I would like to make clear that I am not a doctor or medical practitioner. My knowledge of healing and herbs stems from the past 10 years of researching and using anti-aging herbal formulas and longevity extracts. This experience has taught me to interpret the data in scientific published studies and associated literature and make it easy for anyone to understand the information.

Many of us have felt frustrated when reading a published paper and are sometimes confused as to the terminology used. This book is simply an interpretation of

the latest published studies on COVID-19 as they relate to herbal medicine, along with a few of my own popular energy and immune system boosting formulas included along the way. Hence, you could spend days or months seeking the latest and best information on plants and herbs that fight COVID-19 and not understand the terms used. Hence, this book has done all the work for you, saving you countless hours of time and frustration. Keep this book as a reference for when the next pandemic strikes, which is inevitable and you will not be caught unaware.

In summary, the purpose of this book is to give to you the very best information on broad-spectrum systematic antiviral herbs that have been scientifically proven to be very effective COVID-19 viral infections, as well as herbs for treating influenza and pummenoia. Many of these plants and herbs can be easily obtained and can be grown in your own backyard or in a kitchen garden. They can also be made into Tinctures / Extracts allowing you to use far less, making them last for years. For those of you new to extracts I have written a book on how anyone can make their own extracts at home. The book is called *The Official Guidebook of How to Make Tinctures and Alchemy Spagyric Formulas* and thankfully has received a good rating from my fans over the years.

Today many researchers around the globe, especially in mainland China, have been forced to come to the realization and understanding that some antiviral herbs are more effective than some prescription antibiotics, especially when a change of lifestyle is added (*reduction in stress and a moderate change in diet*). This new "green gold rush" has resulted in many labs, both corporate and academic, to identify the most potent herbs and plants, their ideal growing conditions and how best to prepare them.

We as a human race need to embrace this new paradigm of ecologically friendly healing, because the technology to make this a reality is now only just becoming economically viable. As nature inspires and motivates us, common sense tells us that this new paradigm is not just human friendly, but helps us to more clearly connect with each other on a global level.

Humanity is at a cross roads. We as a species have the opportunity to create something new, where we can more perfectly regain our health and heal the earth in the process. I believe that this is one important clue as to why COVID-19 began in the first place; to teach humanity to work together for the first time on a global scale.

It is my sincere wish that you find the material revealed to you in these pages stimulating to your thinking.....allowing you to step outside the box of traditional mainstream medicine.

Scott Rauvers

Author

Plant Based Medicine is gaining widespread recognition
Research is discovering what herbalists have known for centuries, that plants are an important source of substances for defeating many types of viruses and bad bacteria. In North America, The Andrew Weil Center for Integrative Medicine recommends the polyphenol-rich plants such as licorice herb, onions, apples, chamomille, Chinese skullcap, tomatoes, oranges, nuts, berries, turmeric root, green tea, parsley and celery in order to reduce the risk of infection (*Alschuler et al., 2020*).

Several studies in 2020 have been published researching the best plants and herbs to defeat COVID-19; some of which may serve as leads for developing new drugs. The details of some of the studies below will be shared in greater detail later on in this book -

Natural products for COVID-19 prevention and treatment regarding to previous coronavirus infections and novel studies. Boozari, M et al. *Phyther. Res.* 2020.

Natural products and their derivatives against coronavirus: A review of the non-clinical and pre-clinical data. Islam, M.T. et al. *Phyther. Res.* 2020, 34, 2471–2492.

Traditional Chinese medicine in the treatment of patients infected with 2019-new coronavirus (SARS-CoV-2): A review and perspective. Yang, Y. et al. *Int. J. Biol. Sci.* 2020, 16, 1708–1717.

Antiviral and Immunomodulatory Effects of Phytochemicals from Honey against COVID-19: Potential mechanisms of action and future Directions. Al-Hatamleh et al. *Molecules* 2020, 25, 5017.

The development of Coronavirus 3C-Like protease (3CLpro) inhibitors from 2010 to 2020. Liu, Y et al. *Eur. J. Med. Chem.* 2020, 206, 112711.

Discovering small-molecule therapeutics against SARS-CoV-2. Tiwari, V et al. *Drug Discov. Today* 2020, 25, 1535–1544.

Current Findings Regarding Natural Components with Potential. Zhou, J et al. *Anti-2019-nCoV Activity. Front. Cell Dev. Biol.* 2020, 8, 589.

Natural products' role against COVID-19. da Silva Antonio, et al. *RSC Adv.* 2020, 10, 23379–23393.

Screening for natural and derived bio-active compounds in preclinical and clinical studies: One of the frontlines of fighting the coronaviruses pandemic. Khalifa, S.A.M et al. *Phytomedicine* 2020, 153311.

Anti-SARS-CoV Natural Products with the Potential to Inhibit SARS-CoV-2 (COVID-19). Verma, S et al. *Front. Pharmacol.* 2020, 11, 561334.

Potential roles of medicinal plants for the treatment of viral diseases focusing on COVID-19: A review. Adhikari, B et al. *Phyther. Res.* 2020.

Natural Products and Natural-Product-Inspired Chemicals as Potential Counters to SARS-CoV-2 Infection. Wang, Z et al. *Front. Pharmacol.* 2020, 11, 1013.

Traditional Chinese herbal medicine for treating novel coronavirus (COVID-19) pneumonia: protocol for a

systematic review and meta-analysis. Zhang, Y., et al. (2020). *Syst. Rev.* 9, 1–6. doi: 10.1186/s13643-020-01343-4

In the News: Coronavirus and “Alternative” Treatment (*National Institute of Health*). Available at: <https://www.nccih.nih.gov/health/in-the-news-coronavirus-and-alternative-treatments>. NIH (2020).

Dietary therapy and herbal medicine for COVID-19 prevention: A review and perspective. Panyod, S., Ho, C.-T., and Sheen, L.-Y. (2020).

Challenges at the Time of COVID-19: Opportunities and Innovations in Antivirals from Nature. *Planta Med.* 86, 659–664. doi: 10.1055/a-1177-4396. Hempel, G., et al. (2020)

Herbal medicine and pattern identification for treating COVID-19: a rapid review of guidelines. *Integr. Med. Res.* 9, 100407. doi: 10.1016/j.imr.2020.100407. Lee, M. S. et al. (2020a).

It is from the above information that Official Chinese TCM Prescriptions recommended for the Treatment and Diagnosis of COVID-19 were developed. These are the following and will be reviewed in detail in this book - The Qingfei Paidu decoction (QFPDD), The Maxing Shigan decoction (MXSGD), The Shufeng Jiedu formula (SFJD), Lianhua Qingwen capsules (LHQW), Huoxiang Zhengqi capsules (HXZQ), The Dayuan decoction (DYD), The Huashi Baidu formula (HSBD), The Huashi Baidu formula (HSBD) and Jinhua Qinggan granules (JHQG).

Reference

Research progress of traditional Chinese medicine against COVID-19. Wei Ren et al. February 2021.

Herbal Advisory

For those of you using herbs and their associated formulas, it can help to keep a diary of the herbs (or medication) that you are taking in order to inform doctors and other health care professionals in the rare case you or a loved one are hospitalized.

Anesthesia and Herbs

Research has documented that herbal medicines interact with anesthesia (*Levy et al., 2017; AANA, 2020*). Hence anesthesiologists advise against taking the following herbs before surgery or other medical procedures -

- Echinacea - theorized to increase the risk of liver damage
- Ginkgo, St. John's wort and valerian - may increase the effects of anesthesia and make it harder to wake-up. They may also cause irregular heart rhythms.
- Ginseng, licorice and milk thistle - may cause a rapid heart rate and high blood pressure
- Garlic, ginkgo, green tea, ginger, Saw palmetto and feverfew - may cause prolonged bleeding. Garlic may increase the effects of some pain relievers.

Chapter 1. Common Questions and Answers about COVID-19

When was the first case of COVID-19 reported?

The first case of Coronavirus was officially reported on December 30, 2019, in the city of Wuhan, Hubei province, China ⁽¹⁾. A few months later on March 11, 2020 the SARS-CoV-2 virus (*now officially COVID-19*) was declared as a global pandemic by World Health Organization (*K. Kumari et al. 2020*).

What is the current Relapse Rate of COVID-19?

Statistically speaking the total rate of relapse is 0.1 % of 8000 cases. As of 2021, no published data exists stating relapses have occurred in many hospitals.

How similar is SARS-CoV to COVID-19?

The coronavirus shares a 79.5% sequence identity with SARS-CoV (*Stoermer M. Feb 2020*). SARS-CoV is the virus that became a regional pandemic in China between 2002 and 2003. Similarities exist in the symptoms between COVID-19 and SARS with COVID-19 mainly targeting the lower airway region of the chest, possibly due to the COVID-19 virus being so small. SARS-CoV-2 results in inflammatory and immune system responses, leading to cytokine storms. Pathological observations have discovered inflammation can take place in the early stages COVID-19 pneumonia. Hence, effective potent anti-inflammatory and antiviral herbs and drugs are recommended for COVID-19 patients that show signs of pneumonia.

Does SARS-CoV cause COVID-19?
SARS-CoV has a high level of sequence identity to SARS-

CoV-2. SARS-CoV-2 is the agent that causes COVID-19. This is why many researchers use the SARS-CoV during their research to find cures for COVID-19.

Where did the COVID-19 virus first originate?

While there is no evidence of the direct cause of COVID-19, scientists looking for the origin of SARS-CoV-2 and its related animal-to-human transmission stated in a recent research study published in February 2021 stated a Thai cave that housed bats had a single isolate (named RacCS203) that was most likely related to the RmYN02 isolate found in *Rhinolophus malayanus* in Yunnan, China. The bats also exhibited SARS-CoV-2 neutralizing antibodies as well as bats at a wildlife checkpoint in Southern Thailand. In summary the discovery of the isolate (RaTG13 bat coronavirus) in China suggests a high probability that the virus first manifested itself inside bats that live in caves.

Further Reading
Evidence for SARS-CoV-2 related coronaviruses circulating in bats and pangolins in Southeast Asia
Supaporn Wacharapluesadee. Chee Wah Tan et al.

Which 4 countries have the lowest death count from COVID-19?

According to John Hopkins, as of November 2020, the countries with the lowest numbers of deaths are - Papua New Guinea, Iceland, New Zealand and Vietnam. These are the places to be if you want to ride out the pandemic over the long term.

It is interesting to note here that a nasal spray that is derived from New Zealand algae may in the future be used as a preventive measure for COVID-19. The algae has been shown to be effective against hepatitis, Ebola and herpes as

well as a broad spectrum of coronaviruses, including MERS and SARS. The research team originally used the algae as a preventive for human immunodeficiency virus (HIV). Because COVID-19 typically enters through the nostrils and the mouth, the nasal spray makes it an excellent preventive, stopping COVID-19 from infecting the lungs. This algae also has an affinity for coronaviruses' surfaces, which means it does not affect healthy cells. Scientists are making the molecule known as Q-griffithsin by using an anti-viral protein that is abundant in the New Zealand red algae *Griffithsia* and *Nicotiana benthamiana*; a species that is part of the tobacco family. The nasal spray would be used for high risk people such as emergency medical service workers and health care workers. Because Q-griffithsin exhibits broad spectrum activity it may be useful in the future to treat future pandemics ^(1a) ^(1b).

Do Lockdowns Reduce Deaths?

A study found that deaths of all kinds sharply dropped after a lockdown, with the largest drop in traffic deaths. Suicide and homicide rates also dropped ^(1c).

How does a COVID-19 virus infection affect a person who becomes infected with COVID-19?

The infection begins at the body's respiratory region, resulting in a mild respiratory tract infection. In professional medical terms this is known as the 'severe acute respiratory syndrome'. This is rapidly followed by respiratory failure, shock and finally multiple organ failure ⁽²⁾ ⁽³⁾. These symptoms may be accompanied by diarrhea, headache, lymphopenia and fatigue, (*Rothan and Byrareddy, 2020*). In certain cases a high incidence of cardiovascular symptoms may accompany the infection (*Zheng et al., 2020*). Elderly people or those with medical problems such as

diabetes, chronic respiratory disease, cardiovascular disease and cancer are more likely to develop more severe forms of illness if they become infected with the COVID-19 virus (*WHO, 2020a*).

What does the Coronavirus Look Like?

The Coronavirus lives inside an RNA viruses (*composed of single stranded RNA*). This strand is reported to be one of the longest RNA viruses and acts as an RNA messenger. It is spherical in shape (*approx. 125nm diameter*). The exterior consists of club-shaped spike-proteins which stick out from its surface, resulting in a crown-like appearance of sphere (*Lu et al., 2020*)⁽⁴⁾.

Are Chinese Herbs Superior to Conventional Western Therapy?

A research study discovered that TCM herbs (Traditional Chinese Medicine) in combination with conventional western therapy exhibited a more significant effect compared to conventional western therapy for reducing the aggravation rate for non-serious patients. For the duration of fever, a study (*Wang et al., 2020c*) found that the group taking TCM medicine exhibited significant improvements in a reduction of their fever ($p = 0.035$) compared to the control group^(4a).

What are the most popular herbs being used in China today to treat COVID-19 patients?

At the very start of the pandemic, Traditional Chinese Medicinal herbs (TCMH) and their respective formulas and associated treatments were used in 91.50% of COVID-19 cases in China^(4b). Out of 179 single herbal formulas used for treating COVID-19 in China, the most frequently used herbs at the time were Glycyrrhizae Radix et Rhizome, Scutellariae Radix and Armeniaca Semen Amarum. The

main substances that were most active in the herbs were quercetin, β -sitosterol and stigmasterol. The study concluded that 10 new herbal formulas emerged from this group as being potentially useful for combating COVID-19. The medicinal properties of the herbs were as follows -

Antipyretic (47%)

Expectorant and cough-suppressing (22%)

Dampness-resolving (21%)

Later on in this book I specifically target herbs and their associated combinations that have been scientifically proven to exhibit a 90%+ or better success rate at treating COVID-19 patients. This is especially relevant information as effectiveness of the COVID-19 vaccine continues to erode due to the ever emerging variants of the COVID-19 virus (mutations).

What Percentage of People in China are receiving TCM based Treatments and How Effective are they?

The rate of TCM treatment for patients of COVID-19 in China was 87 %. The total effectiveness of treatment was 92 %. Only 5% of patients have shown worse symptoms (*Yang et al., 2020a*).

A more recent study published in February of 2021 titled: *Review on the potential action mechanisms of Chinese medicines in treating Coronavirus Disease*, that was conducted by Y.F. Huang and colleagues states that the total effective rate is now over 90 %..

Traditional Chinese Medicine treatments (TCM) have so far shown to be superior in preventing infected COVID-19 patients who have severe cases of COVID-19 and has reduced the number of patients admitted to an ICU. In the

Jin-Chang Hospital in China, with an efficacy rate of TCM treatment showing an effectiveness of almost 100% (99.2%). Clinical experience and scientific basis (*David Y.W. Lee et al. Sept 2020*).

When was the Gene Sequence of COVID-19 first de-coded?
It was on January 10 of 2020 that the Chinese Center for Disease Control and Prevention released the whole gene sequence of the COVID-19 virus to the World Health Organization (*China-CDC, 2020*). It was on January 29, 2020 that Chinese scientists reported the completion of the genome sequence of COVID-19 (*Lu et al., 2020*).

Does the COVID-19 Pandemic Increase my chance of becoming depressed?

COVID-19 Increases Susceptibility to Depression

A study published in JAMA Network Open (by Boston University Researchers) ^(4c) found that COVID-19 tripled the rate of depression in the United States; in all demographic groups. Those with financial worries were especially hard hit. The study looked at 1,441 respondents from Mar 31st to Apr 13 in 2020. This was when 96% of United States was under coronavirus-related lockdowns. Researchers found that 27.8% of adults reported depression during 2020, compared with just 8.5% before the COVID-19 pandemic. Before the pandemic began, 10.1% of women reported being depressed and 6.9% of men. During the pandemic 22.2% of women reported being depressed and 21.9% of men. Those most at risk were those living with a partner (37.7%) and those who never married (39.8%). People who were married were only 18.3% depressed compared to those who were widowed, divorced, or separated (31.5%). The authors also stated mental illness will grow over time, particularly among at-risk populations.

How is COVID-19 Transmitted?

The COVID-19 virus is spread via droplets that consist of the coronavirus when a person coughs, sneezes, or breathes in the surrounding region. These particles float in the air and adhere to surfaces which your hands then touch the eyes, nose, or mouth regions of the body. If the body is susceptible to the virus, then within 2 to 14 days, the immune system will take steps to respond via coughing, difficulty breathing, chills, fever and muscle pains. It can also include a loss of taste and smell. Because the virus is so small, it is very prone to airborne dispersion. The virus may be spreading through tiny aerosol particles which penetrate deep into the lungs. This in turn triggers severe respiratory infections. Because these tiny particles reach into the deepest regions of the body, they can also affect the internal organs.

As a person enters the asymptomatic phase of COVID-19, it becomes highly contagious with a 44 % transmission rate before symptoms begin appearing in a person ^(3a). Recent studies have also found COVID-19 may be spreading by feces ^(3b).

The 4 Symptomatic Stages of COVID-19 are ^(3c) -

1- Early stages. Symptoms include cold-dampness attacking the lung and spleen.

2 - Middle Stage. Symptoms include cold-dampness blocking the energy of the lung and spleen.

3 - Late stage. Symptoms include cold-dampness injuring the spleen and shutting down the lungs.

4 - Recovery stage. Symptoms include qi-deficiency of lung and spleen.

How soon will a vaccine be 100% effective?

At this time 18 vaccine projects are currently in full operation. In times past, even the fastest vaccination programs took a minimum of four years and that was when the pandemic(s) were not global in scope. Current estimates state it may take anywhere from 6 months to a full year to complete a full clinical evaluation of how effective new vaccines are. With the introduction of the mutation (variant) of the virus constantly resurfacing in other countries, this could cause a delay in the vaccine's clinical evaluation process.

How Effective are Herbs for Treatment of COVID-19?

Herbal remedies may seem harmless; however if they are misused, they may increase a person's risk for COVID-19. The latest data is starting to show that certain herbs are effective in treating and preventing COVID-19 for some people, and not for others. To date, there is not enough data regarding the use of herbal remedies for the novel coronavirus. Effectiveness of herbs may vary due to lifestyle, diet and other factors.

Why should I incorporate herbs into my COVID-19 defense strategy?

With the recent Opioid Epidemic in the United States, more and more people are starting to trust herbal medications for treating various ailments. While the new vaccines may not themselves be addictive, some prescription medication for treating COVID-19 may end up being addictive. Hence, herbs are the best route for recovery from COVID-19 as they become rarely addictive.

Which 2 countries have the highest death count from COVID-19?

According to John Hopkins, as of November 5th, 2020, the U.S. and Brazil are the leaders in the numbers of deaths from COVID-19.

What are the symptoms of COVID-19?

Persons exposed to COVID-19 and that come down with the infection can experience anywhere from mild symptoms to severe illness; depending upon various factors such as immune system strength, health status and age. Symptoms typically appear between 2 and 14 days after exposure. If you experience any of the following, you may have COVID-19 and are strongly urged to seek medical attention immediately -

- Muscle or body aches*
- Sudden loss of taste or smell*
- Headache*
- Fever or chills*
- Shortness of breath or difficulty breathing*
- Nausea or vomiting*
- Sudden unexpected Fatigue*
- Sore throat*
- Diarrhea*

How do I Avoid Prone Risk Areas?

Research is just starting to show that people who live in cities where people are closely packed together have shown the most increase in COVID-19 cases. New York City for example is one such case.

According to a Time Magazine Article titled-

Europe's Second Wave of COVID-19 is Being Driven by Two Countries, that was published on October 27th, 2020. -

the article states that as of Oct 23rd, 2020, the country of Belgium is the epicenter of the European Union's second COVID-19 wave; having the continent's highest per-capita number of cases (*besides Andorra*). Belgium also has the world's third highest number of COVID-19 deaths after Peru and San Marino. The Czech Republic also shows above numbers of COVID-19 cases.

Belgium and the Czech Republic have relatively high population densities. Basically Belgium is one big city and in Brussels the population density is particularly high. For example, for every kilometer of land in Belgium there exist on average 377 people. In the Czech Republic the number is approximately 137 people per square kilometer.

The Time Magazine article goes on to state that COVID-19 is spread by students returning home from school on the weekends; exposing the infection to their parents. According to Jan Pačes, virologist from the Czech Academy of Sciences, cases of COVID-19 soared shortly after schools reopened on Sept. 1, 2020; with the majority of new cases occurring in young people and eventually reaching higher ages. Jan Pačes goes on to state that an estimated 30% of new COVID-19 infections came from people associating in their homes.

Do Face Masks Really Work? What does the CDC say? The CDC states that associating with a person diagnosed with COVID-19 for longer than 15 minutes may cause one to contract COVID-19 whether a face mask is worn or not. The CDC goes on to state that masks "may" help some people infected with COVID-19 from spreading the virus, and add "there is less information" if masks can effectively protect a person coming into contact with someone who has COVID-

19. In Belgium and Spain authorities have made mask wearing mandatory, however their infection numbers have still risen.

In May 2020 the CDC released a meta-analysis study involving 14 controlled, extended trials that studied the effects of mask usage. The study discovered that no reduction took place in the rate of laboratory-confirmed cases of influenza, which is a respiratory illness similar to COVID-19.

Who is most at risk for contracting COVID-19?

On average 1 in 5 people diagnosed with COVID-19 will require some type of intensive care. Recent studies have found that person's diagnosed with hypertension and diabetes are more at risk for death from COVID-19 ⁽⁵⁾.

COVID-19 Risk Group

Coronavirus can be a killer. Or to others, no big deal. It puts some in intensive care, or with others, comes and goes on others without leaving a mark, more rumor than reality. As of October 1st, 2020 1 million people have died globally from COVID-19.

QUICK FACTS

COVID-19 affects more people over the age of 60 and those diagnosed with chronic conditions such as diabetes, obesity, lung disease, hypertension and heart disease.

The average age for people who die from COVID 19 in northern Italy is 81 and in England there has been virtually no major deaths of COVID-19 for people under the of 45.

Obesity Increases One's Chance Of Contracting COVID-19

Jennifer Lighter, hospital epidemiologist at NYU Langone, stated in her research report that obesity is the number 1 factor among people below age 60 who contract COVID-19 and that patients diagnosed with COVID-19 that have a body mass index of between 30 and 34 were twice as more likely to contract COVID-19 compared to patients with a BMI under 30. Also patients with a BMI index of 35+ were three times more likely to die from COVID-19.

Numerous research papers have tried to see if different strains of the virus are more lethal. One strain, which is popular in Europe and the United States has a genetic mutation that affects the spike protein. This structure lets the virus bind to receptor cells in humans. European scientists stated in a study that variations exist on two places in the human genome which can cause respiratory failure in COVID-19 patients in Italy and Spain. Patients with Type A blood showed a 50% higher risk of needing ventilator assistance, due to these people being more susceptible to inflammation. Type O people however showed a partial protective effect. People with Type A's are more susceptible to blood clots and may be more at risk for severe COVID-19 cases.

Summary

If you are over 60, or overweight, take extra measures to protect yourself. And if you are not in this category, taking measures to keep your immune system strong such as though exercise, specific herbs, along with wearing a face mask and the through washing of hands will greatly reduce your chances of contracting COVID-19. These are all common sense precautions that anyone who wants to avoid the COVID-19 infection should take.

Why should I buy this book?

As the vaccine's effectiveness continues to be eroded by the ever-emerging variants (mutated forms of COVID-19) specific herbs and plants scientifically proven to help defeat COVID-19 may be the best defense strategy to help cope with COVID-19. Once the pandemic is over, the information in this book will be invaluable to help one stay healthy during future pandemics, which are inevitable. Take this book to a reputable herbalist and show him or her the herbal formulas if you don't feel comfortable mixing these herbs yourself or lack access to any of them.

Another key reason to keep this book for future reference, is if in the event that civilization collapses and the infrastructure necessary to make vaccines no longer exists, plants and herbs will still be readily available.

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Chapter 2. Vitamin D, Coffee, Honey and Nigella sativa.

Before I share the herbs that help treat COVID-19, I would first like to point out that one of the most popular western beverages has shown potential to help protect one against the COVID-19 virus.

Coffee may help prevent COVID-19

Parthenolide and Caffeic acid phenethyl ester (CAPE) are both found in coffee. These have been discovered to significantly decrease the levels of proinflammatory cytokines and lung infection in mice infected with SARS. Parthenolide and caffeic acid phenylethyl ether (CAPE) are both NF- κ B inhibitors. The study showed that treatment with drugs that inhibit NF- κ B activation can lead to reductions in inflammation and lung pathology in SARS-CoV-infected cultured cells as well as mice. It has also been shown to significantly increase the survival of mice after they were infected with SARS-CoV ⁽¹⁾.

What are NF- κ B inhibitors?

The human immune system is a complex organism. NF- κ B is a regulation of inflammatory responses and is responsible for returning balance to various pro-inflammatory genes that make up immune cells. This in turn regulates the activation and better functioning of the body's inflammatory T cells.

In a research paper published in October 2020 titled: *Caffeine and caffeine-containing pharmaceuticals as promising inhibitors for 3-chymotrypsin-like protease of SARS-CoV-2* that was conducted by Amin O. Elzupir and colleagues, it states that linagliptin and caffeine are recommended for COVID-19 treatment after in vitro, in vivo

and clinical trial validation. The paper also stated that the seven drugs: linagliptin, caffeine, theophylline, dyphylline, pentoxifylline, bromotheophylline and istradefylline show potential for treating COVID-19 due to their binding affinity to 3CLpro of His41 and Cys145.

Summary

The activation of NF- κ B signaling pathway exhibits a major contribution to reducing inflammation caused by SARS-CoV infections. Also NF- κ B inhibitors exist as promising antivirals in helping treat infections caused by SARS-CoV activity as well as other pathogenic human coronaviruses. Substances that directly target host cells components may be helping reduce SARS-CoV-2 infection. The natural products β -sitosterol, betulinic acid, cholesterol, hopane and glycyrrhizin may reduce SARS-CoV-2 by the direction action of the inhibition of the attachment of the virus (*which is lipid-dependent*) to host cells.

A study by Chowdhary et al. (2003) discovered anticancer and antiretroviral activities of Betulinic acid, which is a pentacyclic triterpenoid extracted from the bark of the white *Betula alba* var. *pubescens* tree (*Thurnher et al., 2003*)⁽²⁾.

Nigella sativa and honey reduce complications caused by COVID-19

Later in this book, I devote an entire chapter to *Nigella sativa*, however here I would like to point out a recent study published in 2021 titled: *Efficacy of honey and Nigella sativa against COVID-19: HNS-COVID-PK Trial*, that was funded by the Smile Welfare Organization and conducted by Shaikh Zayed and colleagues at the Medical Complex and Services Institute of Medical Sciences (NIH Clinical Trial Register number: NCT04347382), the stated that a multicenter-

randomized-controlled-trial involving 313 patients that were diagnosed with COVID-19 that received a Nigella sativa and Honey combination for up to 2 weeks (some of the patients were placebo) exhibited a reduction in their symptoms as well as a reduction in 30-day mortality. The researchers also found that the Nigella sativa and Honey combination reduced symptoms in COVID-19 patients after 7 days (in moderate and severe cases) and found that the Nigella sativa and Honey combination cleared the virus after approximately 4 days in moderate and severe cases. After 6 days 63.6% of the patients were returning to normal activities in moderate cases and 28% in severe cases. Overall a reduction in 30-day mortality among severe patients was shown when they took the Nigella sativa and Honey combination. No adverse side effects were reported by any of the patients. The researchers of the study concluded that a combination of Nigella sativa and Honey is safe to use alone or in combination with other treatments in order to reduce or eliminate the effects of COVID-19.

Currently an ongoing clinical trial titled: *Prospects of honey in fighting against COVID-19: pharmacological insights and therapeutic promises* is being conducted by Khandkar Shaharina Hossain and colleagues with hopes to establish a relationship with honey for the treatment of COVID-19 due to the fact that honey may be beneficial for COVID-19 patients by boosting the body's immune system by exhibiting antiviral activities.

Why Honey may help Increase the Strength of Body's Immune System

Honey is a natural antiviral and bee propolis is rich in bioactive compounds that exhibit powerful natural anti-inflammatory, antimicrobial, bactericidal, immunomodulatory and antioxidant activities. A study reviewed these for use as adjuvant treatments for people

infected with severe acute respiratory syndrome-coronavirus-2 (SARS-CoV-2). Computer molecular simulations state that flavonoids in honey and propolis (caffeic acid phenyl ester, naringin, rutin, luteolin and artemillin C) may help reduce cytokine storms and viral replication. Also propolis ethanolic extract, and propolis liposomes have exhibited similar activity to the potent antiviral drug remdesivir. Rutin has been shown to help reduce the SARS-CoV-2 virus (in vitro) and along with naringin, inhibit SARS-CoV-2 infection (in Vero E6 cells). The review also states that hospitalized COVID-19 patients that received green Brazilian propolis or a combination of honey and *Nigella sativa* exhibited early recovery from their symptoms as well as an earlier discharge from the hospital and less mortality than COVID-19 patients that received standard care and that propolis extracts delivered by nanocarriers exhibit better antiviral effects against SARS-CoV-2 than ethanolic extracts ^(2a).

Stevia Extract

Stevia is used as an alternative to sugar to sweeten foods and drinks. A study found that extracts of Stevia exhibited showed virostatic and virucidal activity against 229E ⁽³⁾.

Vitamin D and Omega 3's
Vitamin D, as well as Omega 3's have shown great promise in treating as well as acting as a natural preventative against contracting COVID-19. A research study concluded that a healthy intake of vitamin D helped strengthen the immune system by reducing the risk for the body to generate a cytokine storm in response to a COVID-19 infection. The study concluded that improving vitamin D status in the general population, especially in patients hospitalized with COVID-19, may be of benefit in reducing

the severity of deaths from people diagnosed with COVID-19⁽⁴⁾.

What is a cytokine storm?

A cytokine storm is an "*overreaction*" to an infection in the body. This causes the immune system to overproduce cytokines and excess immune system cells in order to fight infection. It as if the body's immune system shifts into overdrive, which is why only small amounts work very well in substances that produce cytokine storms. Excessive cytokine storms can cause damage to the lungs and are suspected to play a role in some cases of severe COVID-19 (*Mehta, Lancet 2020*). To put this in plain english, the body's immune system becomes over reactive and puts out above average levels of energy in order to fight the COVID-19 virus. Cytokine storms have come to be the second leading cause of death in COVID-19 patients⁽⁵⁾. Recent studies confirm that injuries of multiple organs in the body caused by the COVID-19 virus may be related to Cytokine Storms which lead to an accumulation of oxidative stress-free radicals in the body⁽⁶⁾

Further Reading

COVID-19: consider cytokine storm syndromes and immunosuppression. Puja Mehta.

Simple facts about Vitamin D

Vitamin D is a vitamin which is lipid-soluble. It is essential for strong bones. It is produced in the skin via sunlight or from foods such as Cod Liver Oil and some types of fish. Lately some food manufacturers have started adding vitamin D to food such as orange juice (fortified).

Vitamin D plays an important role in Immune System Functioning

Vitamin D has been shown to regulate the adaptive and innate immune response of the immune system (*Rosen et al., 2016*) and demonstrate the ability to destroy bad viruses, including the HCV genotype infection ⁽⁷⁾. It has also exhibited antiviral activity as elucidated by Grant et al. (*2020*). Another study discovered that Vitamin D showed effectiveness in reducing the hazards associated with viral pandemics ⁽⁸⁾.

Studies suggest people with low levels of vitamin D are more likely to test positive for COVID-19, as well as have more severe symptoms. A Singapore study involving older men and women who had contracted COVID-19 found that those who took Vitamin D along with magnesium and vitamin B12, that within only one day of COVID-19 hospitalization, they were much less likely to require oxygen therapy and / or intensive care compared to the group that did not take the Vitamin D/magnesium/vitamin B12 combo. Magnesium has been shown to enhance the immune system by boosting the body's T-and helper cells (*Liang et al., 2012*) as well as help ward off viral infections ⁽⁵¹⁾ (*Chaigne-Delalande et al., 2013*).

Vitamin D Meta Data Analysis Study Involving COVID-19

A research study titled: *Effects of Vitamin D on COVID-19 Infection and Prognosis: A Systematic Review*. that was published in 2021 by Hiwot Yisak and colleagues, looked at a total of 1,005,042 COVID-19 patients from 20 European countries and their associated studies. Nine of the studies (77.8%) showed that the prognosis, infection and mortality rate of COVID-19 patients was associated with vitamin D status. The majority of the published studies reviewed concluded that a COVID-19 patients vitamin D status (blood levels) can be used to determine the seriousness of COVID-

19, risk of being infected with COVID-19, and death from COVID-19. Hence, maintaining appropriate levels of Vitamin D is recommended to cope with the pandemic.

Vitamin D Synergizes with Vaccines
A 2019 study showed that taking vitamin D and then getting an influenza vaccine enhanced the levels of TGF- β in the plasma (*an immune system booster*) (Goncalves-Mendes et al., 2019). In another study by Patel et al., (2019), it was shown that taking both Vitamin D and A increased immunity, when taken with influenza vaccine in pediatric patients.

Vitamin D Reduces Admissions to ICU

In a randomized pilot study that looked at the effects of calcifediol treatment and mortality with patients hospitalized for COVID-19, found that the giving the patients high doses of calcifediol or 25-hydroxyvitamin D (25[OH]D), (the main metabolite of vitamin D) reduced significantly the need for ICU care in patients hospitalized with COVID-19 ⁽⁹⁾.

Geographical Latitude and COVID-19 Cases

A fourfold association was discovered among people diagnosed with COVID-19, latitude and vitamin D deficiency. The sole cause of this is because D is made in the body with the help of sunshine. Hence many European countries receive little sunlight through the year due to their geographical latitude ⁽¹⁰⁾.

In another study looking at 20 European countries a significant correlation was found between vitamin D levels and COVID-19 cases ⁽¹¹⁾.

Sunlight Kills Bad Bacteria

Studies have shown that the ultra-violet and infra-red radiation present in sunlight act as natural virucidal elements, which kill bad viruses and bacteria (*Lytle and Sagripanti, 2005; Martin et al., 2009*).

Engineered Good Bacteria to help defeat COVID-19 Ivermectin

Ivermectin is a substance that comes from a certain bacteria. However it has some lethal effects. These ill-effects can be removed by chemically re-designing the compound. Ivermectin has been shown to impede various parasitic infections, including certain cancers. A recent study discovered Ivermectin was effective in destroying COVID-19 incidence in cell cultures (*Caly et al., 2020*).

Studies confirm COVID-19 Patients have Low Levels of Vitamin D

Adults admitted to Inha University Hospital in South Korea discovered extreme vitamin D deficiency in 24% of their COVID-19 patients, compared to 7.3% in the control group ⁽¹²⁾.

Also a 2020 study by Mendy and colleagues discovered that COVID-19 patients were more likely to be deficient in vitamin D compared to people without COVID-19 ⁽¹³⁾.

In Israel a study found low vitamin D levels were associated with a higher likelihood of contracting COVID-19 ⁽¹⁴⁾.

Another study looking at COVID-19 in patients who were suffering from Parkinson's disease in Lombardy, Italy discovered their patients were less likely to have received vitamin D supplementation compared to patients who were uninfected ⁽¹⁵⁾.

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Effects of Vitamin D on COVID-19 Infection and Prognosis: A Systematic Review. Hiwot Yisak et al. 2021.

Coconut Oil

Researchers highlighted preliminary research on the anti-viral effects of lauric acid, which is found in coconut oil and its metabolite, monolaurin. They stated that a clinical trial involved participants consuming 3 tablespoons of virgin coconut oil daily along with 800 mg of monolaurin in patients suffering from COVID-19 helped improve their recovery ^(15a).

Omega 3's Help Fight COVID-19

Omega-3s are also called in the scientific literature “n-3s”. They exist in flaxseed, flaxseed oil and fish. High levels of DHA in the body are found in the body's brain, retina (eye) and sperm cells. These are all regions that store high amounts of membrane electrical energy. A recent research study concluded that Omega-3 fatty acids, with special emphasis on docosahexaenoic acid (DHA) and eicosapentaenoic acid (EPA) exhibit anti-inflammatory effects that may reduce some COVID-19 patients' need for intensive care. The study further states that Omega-3 fatty acids supplementation in order to help fight COVID-19 cannot be fully recommended until controlled and randomized trials are carried out ⁽¹⁶⁾.

COVID-19 Herbal Sachets

Besides sunlight being able to kill bad viruses, herbal sachets may also help. The government of Heilongjiang in China has suggested a herbal sachet to be carried on one's person in order to help ward off the COVID-19 virus. The scented sachet designed to repel the influenza virus as well

as other viruses is composed of *Cinnamomum camphora*, Realgar, *Angelica dahurica*, *Artemisia argyi* and *Pogostemon cablin*, *Eupatorium fortunei*. The report also states that herbs decocted to fumigate the body include - *Acorus tatarinowii*, *Valerianajatanansi* Jones, *Perilla frutescens*, *Artemisia argyi* and *Mentha haplocalyx*. Overall the herbs in the sachet are designed to strengthen the body's resistance to viruses and remove dampness ⁽¹⁷⁾.

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Chapter 3. Exploring DCA, EPA and Omega 3's for the Prevention of COVID-19.

While on the topic of prevention of COVID-19, I would like to point out a study involving Lactoferrin. I first came across Lactoferrin in my anti-aging research years ago. Lactoferrin is a naturally occurring glycoprotein that is non-toxic, found in dairy and is easily obtained as a nutritional supplement. In a recent study titled: *Lactoferrin as potential preventative and adjunct treatment for COVID-19* that was conducted by Raymond Chang and colleagues and published in September 2020, the authors stated that Lactoferrin exhibited antiviral efficacy (in vitro) against a wide variety of viruses, including SARS-CoV, which is a coronavirus closely related to SARS-CoV-2. The authors concluded that Lactoferrin exhibits unique anti-inflammatory effects that may be relevant to severe COVID-19 cases.

Fish Oil Contains DHA and EPA

DHA and EPA are present in fish because they become synthesized by the microalgae and not directly by the fish themselves. Hence as a fish consumes phytoplankton that has consumed microalgae, the fish build-up omega-3s in their bodily tissues.

A 2019 study conducted by Gerling and colleagues showed that young men given fish oil (3g EPA + 2g DHA/day) for 3 months exhibited increases levels of DHA and EPA in their muscles as well as in their mitochondrial membranes ⁽¹⁾. According to the USDA National Nutrient Database (*Release 28. Nutrients: 20:5 n-3 (EPA)*), EPA can be found in abundance in Menhaden Fish oil, Herring, Salmon

and

Sardines.

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How Much DHA and EPA does my body require?

The recommended daily allowance for DHA and EPA is 1 gram per day; preferably from oily fish. Supplements can also be used ⁽²⁾. This may not seem like a large amount, but it is the ability for these acids to be easily absorbed into the body that gives them their effectiveness.

Where can I find Docosahexaenoic and Eicosapentaenoic acids?

Fish are one source, however choose fish that are low in mercury. Examples include herring, salmon, sardines, and trout. DHA and EPA can also be obtained from krill oil and fish oil ⁽³⁾.

How DHA is made in the body from ALA

When you eat foods that are abundant in ALA (alpha-linolenic acid) your body converts the ALA into EPA, which is then converted to DHA. This conversion takes place in your liver with a conversion rate of approximately 15% ⁽⁴⁾. ALA is found in abundance in Flaxseed Oil (linseed), Canola oils and Soybeans with moderate amounts in Walnut and Chia Seeds ^{(5) (6)}.

EPA and DHA in Fish

The highest levels of EPA and DHA are found in 3 ounces of Salmon, Atlantic (wild, cooked), followed by Sardines in tomato sauce, followed by 3 ounces of cooked rainbow Trout ^{(7) (8)}.

Where do I Obtain Omega-3s?

Certain brands of yogurt, juices, eggs, milk and soy are fortified with DHA and other omega-3s ⁽⁹⁾.

Since the year 2002 food manufacturers begun adding DHA and arachidonic acid to most infant formulas in the United States. Beef is low in omega-3s. However, beef from grass-fed cows contains higher levels of omega-3s.

Omega-3s can also be obtained from cod liver oil, fish oil, krill oil and vegetarian products that contain algal oil. A standard fish oil has approximately 1,000 mg of fish oil, which is made up of 180 mg EPA and 120 mg DHA. However doses can vary widely ⁽¹⁰⁾.

Cod liver oil supplements also contain vitamin D and vitamin A in addition to LC omega-3s. Krill oil has omega-3s primarily in the form of phospholipids. Research also suggests these are more bioavailable by the body than the standard omega-3s found in fish oil ⁽¹¹⁾.

Vegetarian Sources of Omega 3's

Algal oil provides approximately 100 to 300 mg of DHA, with some brands containing EPA. The supplement forms also include omega-3s in the triglyceride form (12).

According to a research study, the bioavailability of DHA from algal oil was found to be equivalent to that of cooked salmon ⁽¹³⁾.

What types of Fish are abundant in Omega 3's?

The omega-3 contents in fish have a wide variation. Cold-water fatty fish, such as tuna, herring, salmon, mackerel and sardines contain an abundance of omega-3s ⁽¹⁴⁾. Farmed fish contain higher amounts of DHA and EPA compared to wild-caught fish, depending upon what the farmed fish have been fed ⁽¹⁵⁾ ⁽¹⁶⁾. For example, farm-raised Atlantic salmon from Scotland showed a decrease in their DHA and EPA levels between 2006 and 2015. This decline was due to a change in the marine ingredients that were present in the fish feed ⁽¹⁷⁾.

Signs of Low Omega 3's in the body

If a person lacks healthy levels of essential fatty acids (omega-3s or omega-6s) their skin will be more rough, scaly and one may be more prone to dermatitis ⁽¹⁸⁾.

Closing Summary

Populations living in regions where fish are plentiful will fare better during the COVID-19 pandemic. As a matter of fact, according to research done by John Hopkins, countries with the lowest COVID-19 deaths (as of November 2020) Papua New Guinea, Iceland, New Zealand and Vietnam are regions where the majority of the population resides along the coast. However in undeveloped countries the mercury in fish may present a problem ⁽¹⁹⁾. Tuna consumption should be limited (a maximum of 6oz per week) due to mercury.

Also high levels of methyl mercury have been found in Kingfish, Swordfish, Mackerel, Shark and Tilefish ⁽²⁰⁾. High levels of methyl mercury have also been found in Pacific oysters and some trout ⁽²¹⁾. However fish raised in fish farms in water that is free of mercury may experience a boom in demand in the future.

Why the Demand for Acerola juice will soar in the coming years

From my research I have discovered that the juice highest in both EPA and DHA is Acerola juice. Acerola juice happens to be one of the foods highest in Vitamin C.

Foods highest in Vitamin C

According to the USDA National Nutrient Database the top 3 foods abundant in Vitamin C are Acerola juice, raw, followed by Acerola, (west indian cherry), and Rose Hips, wild (Northern Plains Indians) with Oranges ranking 4th ⁽²²⁾.

DHA Levels in Drinks

According to the USDA National Nutrient Database, drinks most abundant in DHA are Acerola juice, daiquiri and 100 proof gin, rum, vodka and whiskey) ⁽²³⁾.

According to the USDA National Nutrient Database Liquids that contain the highest levels of EPA are found in - Acerola juice, Beer, daiquiri and 100 proof gin, rum, vodka and whiskey ⁽²⁴⁾.

In short summary, besides a possible increase / shortage of Acerola juice, we may also witness an increase in beer, daiquiri and 100 proof gin, rum, vodka and whiskey consumption as the pandemic continues to sweep the globe.

Vitamin C helps people Diagnosed with COVID-19

An in-depth meta-analysis study looking at vitamin C in treating and preventing the common cold was carried out by Hemila and Chalker (2013). The study concluded that vitamin C mega dosing reduced the frequency of the common cold throughout the community. An above average intake of Vitamin C may help people who are critically ill with COVID-19. A review of several studies found a daily dose of 1,000 to 6,000 mg of vitamin C taken either by mouth or intravenously shortened the time on ventilation by about 25% (Hemila *J Intens Care* 2020).

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Chapter 4. How Edhedra is being used for the Prevention and Treatment of COVID-19.

Before moving onto Ephedra Herbs I would like to first bring to light a herb used in India called Ashwagandha. Ashwagandha contains an abundance of Withanone (*Ran Gao et al. Sept 2014*) which is why it has been scientifically proven to kill cancer cells ⁽¹⁾. In a research study titled: *Withanone from Withania somnifera Attenuates SARS-CoV-2 RBD and Host ACE2 Interactions to Rescue Spike Protein Induced Pathologies in Humanized Zebrafish Model* that was conducted by Acharya Balkrishna and colleagues and published in March 2021 found that withanone and withaferin A, which are phytochemicals in *Withania somnifera* exhibit substances that inhibit the entry of viruses into cells. An extract of Withanone from *W. somnifera* was tested for its ability to reduce the infection of SARS-CoV-2 into cells in humanized zebrafish. The study found that Withanone prepared from *W. somnifera* leaves stopped human-like pathological responses induced in humanized zebrafish by SARS-CoV-2 recombinant spike (S) protein. The study concluded that withanone acts as a very potent inhibitor of SARS-CoV-2 coronavirus entry into host cells.

Ephedra for Treatment and Prevention of COVID-19

Ephedra used alone is very dangerous, which is why it has been banned in some countries. To date, Ephedra is currently banned for sale in the United States of America. The best way to use ephedra is to combine it in small amounts with the appropriate herbs. This is because ephedra assists the healing properties of herbs, acting as a

kind of healing synergist. This means it can greatly enhance the healing effects of specific herbal formulas. Let's look at the scientific evidence to see why this is so.

Two recent reviews on Traditional Chinese Herbal Medicine illustrate how TCM may be of use in helping defeat COVID-19. In the first review, the authors state a herbal formula that was used in the H1N1 outbreak that may be useful for preventing COVID-19 (*Luo et al., 2020*). The second review states guidelines for the treatment of COVID-19; using various stages (*Ang et al., 2020a*). The most cited herb was Ephedra. Ephedra is used for treating asthma, cough, cold and for losing weight.

Ephedra methyl. Ephedrine contains pseudoephedrine D and L-ephedrine which exhibits anti-influenza virus activity. This occurs due to its ability to inhibit the pathways responsible for viral replication and by modulating inflammatory reactions and adjusting host Toll-like receptors (*TLRs; Zhang et al., 2019*) and inducing gene protein (RIG-I) (via retinoic acid) (*Wei et al., 2019*).

Ephedrine has been shown to inhibit the infection of canine renal cells caused by the H1N1 influenza virus via a concentration-dependent manner (*Hyuga et al., 2016*). The tannic acid of Ephedra sinensis extract has been shown to inhibit acidification of lysosomes and endosomes in a dose-dependent manner. In turn this was shown to inhibit the growth of the influenza A infection in canine renal cells (*Mantani et al., 1999*).

Ephedra contains the alkaloid ephedrine, whose serious side effects affect the cardiovascular and nervous system, resulting in some deaths (*FDA, 2008; EFSA, 2013; EMA, 2015b*). Hence, if it must be used, it must be done so with great care and preferably under a doctor's supervision.

The Amygdalus Communis Vas Formula

A study examining the herbs Ephedra and Amygdalus researched if they had high potential for treating COVID-19 ^(1a). The study found that combining Amygdalus with Ephedra exhibited a high confidence scale making it potentially useful for treating all stages of COVID-19. The study goes on to state that 44 potential targets and 26 active ingredients may reduce COVID-19 infections. The main ingredients in Amygdalus were found to be quercetin, luteolin, kaempferol which target Interleukin 6 (IL-6) and NF-kB. The study concluded that combining Amygdalus with Ephedra may have therapeutic effects against COVID-19. The method of action was by affecting pathological processes such as immune responses, inflammatory responses, cell apoptosis, hypoxia damage as well as other pathological processes via multiple components.

Ephedra Helps Lower Cytokine Storms. The Mxing Ganshi decoction

The Mxing Ganshi decoction is made of Ephedra sinica Stapf (ephedra), Glycyrrhiza uralensis Fisch. (licorice root), Semen Armeniacae Amarum (almonds) and Gypsum (gypsum). The active ingredients are - quercetin, kaempferol, delphinidin, herbacetin and resivit. The Quercetin and kaempferol may inhibit coagulation pathways triggered by IL-6. It may also help reduce cytokine storms ⁽²⁾.

Ephedra for Inhibiting Influenza and Pneumonia

Yinhuapinggan granule (YHPG) is a medicine granule containing Ephedra ⁽³⁾. It is based upon Ma-Huang-Tang (Ephedra Decoction) as well as from the clinical experiences of Professor Wan Haitong. This formula was shown to inhibit the growth of the influenza virus (in vitro).

Thank you for your interest in choosing a book outlining the clear facts about COVID-19 and the best herbs and methods currently used to fight the virus. Use the unique information in this text as a supplement for your COVID-19 arsenal. By having the right knowledge and information close at hand, you can have peace of mind you have some of the best information available to help you and your family defeat COVID-19 as well as being prepared ahead of time for when the next global pandemic unexpectedly strikes. Look for this edition at your local bookstore or online.



May you Enjoy a long and healthy life!!!!

Scot Rauvers

Author

