

COVID-19
from
Causes to Cures

A Healthicine View

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DEDICATED TO EARL C. KELLEY

“We have not succeeded in answering all our problems—indeed we sometimes feel we have not completely answered any of them. The answers we have found have only served to raise a whole set of new questions. In some ways we feel that we are as confused as ever, but we think we are confused on a higher level and about more important things.”
The Workshop Way of Learning - Earl C. Kelley

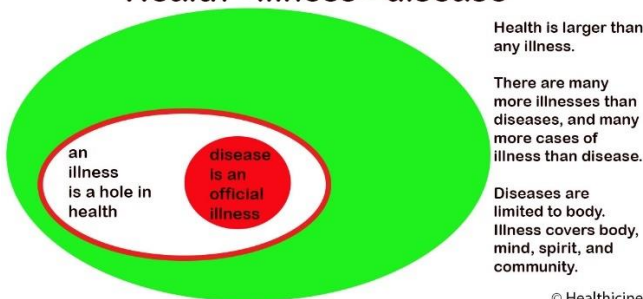
INTRODUCTION

This book is about COVID-19 and cures. Unfortunately, the disease COVID-19 is poorly defined, poorly understood, and not defined at all for curing. Cured is not defined for most diseases. COVID-19 is no exception. The concept of disease is defined so poorly that most diseases, including COVID-19, can be considered incurable even as thousands of patients are cured. We will begin with an exploration of the theory of cure as it relates to the disease COVID-19.

COVID-19 and *coronavirus disease* are the names of the disease caused by the coronavirus, which is named SARS-CoV-2 or *severe acute respiratory syndrome coronavirus 2*. (WHO, 2020). In this text I try to use the term SARS-CoV-2 for the virus, and COVID-19 for the disease, respecting the WHO definitions. However, there are now at least two recognized diseases caused by SARS-CoV-2 at present, the second being COVID-19 Pneumonia (Du R-H, 2020). There are other illnesses caused by SARS-CoV-2, but today's concepts of *disease* are not sufficiently defined to include them.

Then we'll look at the basics of health, illness, and disease. COVID-19 is a disease, a class of illness defined to be diagnosed by a medical professional. We often think of health as the opposite of disease, of disease as the opposite of health, an inaccurate and incomplete view. Health is whole. Illness is a hole in health. Disease is an illness that fits the prevailing medical paradigm, as represented in this diagram.

Health - illness - disease



As we can see, disease is a small subset of illnesses – this is true with COVID-19 as well. An illness element is a single instance of ill, with a single cause. COVID-19 can consist of many illness elements.

Healthicine, the arts and sciences of health and healthiness, is the study of health and healthiness, including the concepts of illness and disease. Healthicine is not *medicine* nor *alternative medicine*. It includes all aspects of health and healing, all of conventional medicine and also all so-called alternative, traditional, and other medical practices.

Health is whole. Health is wide and deep.

Health is slow and steady.

Health is honest and true.

If you are here looking for the cure, for a cure for COVID-19 I'm sorry. Cured is not defined for COVID-19, nor for any other coronavirus infection. The only exceptions are a few clinical studies where cured is defined within the parameters of the study – and differently for each study. There is no cure for the common cold – even though thousands of people get colds every year, and almost every one of them are cured within a few weeks. The same can be said of COVID-19. The statement *there is no cure for COVID-19* is not about the virus, not about the disease, it is about the current state of our medical theory and practice.

This book could as easily be about H1N1, or even the common cold. Much of the content would be the same. The concepts here are general, applicable to any disease.

I am not a doctor. It is unlikely that a doctor could have written this book. Doctors, both conventional non-conventional practitioners function in a disease/treatment paradigm. This book steps out of that narrow paradigm to explore healthiness and illness in general. It is a book about health, healthiness, illnesses, and cures.

Disease is not defined scientifically, by any medical authority or association. And neither is cure. For the purposes of this text, disease is defined simply as “*that which a doctor diagnoses*” which is

effectively the definition used by World Health Organization and other medical authorities.

This book is not a conspiracy theory. I have done my level best to stick to the facts as they are commonly understood. It is an exploration the concepts of exposure to a disease cause, SARS-CoV-2 being the main example, from the possibility of a no illness, or a minor illness below the level of a diagnosis, to a diagnosable condition, to injuries that might be caused by the illness, to inabilities requiring medical attention, to disabilities, and possibly death. There is little mystery in death. We all die.

This book is based on the concepts explored in the books *A Calculus of Curing* and *The Elements of Cure* and the published paper *A Theory of Cure*. (Kolenchuk T. , 2019)

Conspiracy Theories

Never attribute to malice that which is adequately explained by stupidity – Hanlon’s Razor

There are lots of conspiracy theories about COVID-19. I don’t have much faith in conspiracies – and conspiracy theories generally point to the past, away from cures.

However, I am very conscious of FUD.

Many years ago, I worked in computers, back when IBM was king. At that time, the mantra inside of IBM was FUD. FUD was IBM’s most effective sales tool. What is FUD?

FUD (Fear, Uncertainty, and Doubt)

FUD is the sewing of fear, uncertainty, doubt. It promotes sales by creating uncertainty and while dangling a solution – one that appears to avoid all of the fears, to provide certainty, to erase doubt. The COVID-19 pandemic is saturated with FUD.

Fear: Turn on your TV, your radio, your Google search panel, your Facebook, open a newspaper, talk to your neighbor. COVID-19 fear

is everywhere. Be suspicious. Challenge offenders. Be careful – you might be challenged for any indiscretion.

Uncertainty: Wear a mask to avoid infection. Don't wear a mask, it collects the virus and blocks breathing. Being infected does not provide immunity. A vaccine will provide immunity. Social distancing is essential, even if you are wearing a mask. The virus survives only a few hours, days, or maybe weeks, depending on the surface it touches. We need more testing. The tests are unreliable. Trust your doctor. Don't trust that doctor. Trust this doctor.

Doubt: Social distance. Don't trust your neighbor. Don't visit your relatives. Don't trust anyone. There is no approved medicine for COVID-19.

Let's explore some of the basic tools of FUD that commonly encountered in current medical discussions.

Correlation is not Causation

The mantra *correlation is not causation* is a tool to create FUD. FUD offers a single solution. Many competitors are dismissed with *correlation is not causation*. The truth of the mantra is not explored.

Causation requires correlation. Causation is a belief that an observed correlation indicates causation in a specific case. We prove causation by studying correlation. If there is no correlation – there is no causation. When we see correlation, we can choose to believe in causation, or to investigate further. We need evidence. *Correlation is not causation* claims are not evidence. They are dismissal of evidence.

Anecdotal Evidence

Often, when non-approved by the FDA medical techniques are discussed, the opposition or critic response with something like “*well, that's just anecdotal evidence*”. What does this phrase mean? First of all, it's an attempt to dismiss without discussion.

What is an anecdote? An anecdote is a single case. Every cure, for example, is a single case, an anecdote. Every single patient in a clinical study is a single case, an anecdote. If a clinical study actually

studied cures – most do not account for cures – the statistical results would be an accumulation of anecdotal evidence.

What is the opposite of anecdotal evidence? Statistical evidence.

Which is better, case studies or statistics? Neither. They are different. Sometimes, the anecdotal evidence, the case study provides better information than any statistical study. Sometimes, a statistical study provides better evidence than a case study. Neither is intrinsically better than the other.

Unfortunately, medical journals prefer statistical evidence. Some only accept statistical evidence for publication. Case studies used to be a fundamental component of medical journals – today they are generally ignored, filed into the *do not publish column*, or the trash.

There is No Evidence that..

Another FUD generator is the phrase *there is no evidence that*. In most, perhaps all cases where the phrase is used it really means “*there is no evidence (acceptable to me) that...*” Eg. It requires a constant rejection of any evidence provided. There’s an easy test. When someone says, “*there is no evidence that...*”, find some evidence. Present it to them. If the response is “*hmm.. maybe there is some evidence*”, good. If the response is “*that evidence is not valid*” – there is no evidence that the speaker is interested in evidence. Most of the time, *there is no evidence that*, actually means *there is no product approved by the FDA*.

A final Note

The COVID-19 situation is changing rapidly as I write this. It will continue to change after this is published. I will endeavor, as time passes, to keep this book up to date as the situation, and our perception changes. Perhaps someday, the material in this book will be old news. We should be so lucky.

To your health, tracy
 Founder: Healthcine

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CURE

Scientific definitions, in conventional medicine, are few. Historical medical dictionaries abound, describing signs, symptoms, diseases, and treatments in detail, while medical definitions of illness, disease, sickness, and disorder are few, poor, and poorly distinguished. The World Health Organization maintains an index of disease codes for statistical purposes but has no definition of disease that can be used to determine the inclusion or exclusion of any condition. Being injured by a cow has several disease codes in the ICD10 (International Classification of Disease Version 10). Gored by a bull does not have a code. (WHO, 2019)

The word cure does not appear in many medical dictionaries (Merriam-Webster, 2008) (Black's, 1992) (Oxford, 2008) (Oxford, 2015). This is not a recent occurrence. The London Medical Dictionary uses the word cure several times but does not provide a definition. (Parr, 1809) No medical reference provides a general definition of cure, much less an authoritative definition (Merck, 2011) (Harrison's, 2011) (Lange's, 2016) (Ferri Fred F. MD FACP, , 2019) (DSM-5, 2013). These references use the word *treatment* approximately ten times as often as *cure*. Usage of the word cure is inconsistent, perhaps because each of many individual authors has an independent understanding (or not) of cure. Cure rate, a measure of disease-free survival, is one of the most common usages of the word cure. Cure rate is never a measure of cured. Many, perhaps most references to cure consist of phrase *no cure for*, *cannot be cured*, *incurable* and, of course, *miracle cure*. Normal cures do not exist.

The USA's 21st Century Cures Act authorizes \$6.3 billion in funding, but does not contain nor reference any definition of cure. (US Congress, 2019)

Cured is defined medically for an infectious disease where the infectious agent can be disabled or eliminated by medicine or surgery. Cured is not defined medically, in a testable fashion, for any non-infectious disease. Treatments for non-infectious diseases are measured *scientifically* without reference to cure.

Historically, usage of the word cure is inconsistent. Cures are sometimes difficult, often trivial. Hippocrates, the father of medicine said: *“What cannot be cured by medicaments is cured by the knife, what the knife cannot cure is cured with the searing iron, and whatever this cannot cure must be considered incurable.”* (Hippocrates, 500 BC) At other times, he recognized that cures come from health, from addressing present causes, saying, *“Diseases which arise from repletion are cured by depletion; and those that arise from depletion are cured by repletion; and in general, diseases are cured by their contraries”* (Hippocrates, 500 BC) Little has changed today.

Traditional medical practices, like Hippocratic medicine, Ayurveda, Traditional Chinese Medicine (TCM), do not define and do not study cure scientifically. Useage of the word cure is often trivial, inconsistent, and non-medical, as *“purgatives can completely cure the problem of excess.”* (Ayurveda.com, 2019) Homeopathy uses the mantra *“like cures like”* (School of Homeopathy, 2019), often referring to a cure of symptoms, not illness nor disease.

The original 1899 version of Merck’s Manual of Materia Medica contained many references to the word cure, without a definition. Most, like *rest cure*, *milk cure*, and *grape cure* are simplistic nonsense. However, *“Iridectomy: the only cure”* (Merck, 1899) (for glaucoma) is still in use today, *“A therapeutic iridectomy is the surgical removal of a portion of the iris for the cure or prevention of an ocular disease.”* (D, HW, & JR., 1997)

By the 1950s, the 8th edition of Merck’s manual recommends treatments but very few cures. Cure is not defined and not used consistently. *“Some warts disappear spontaneously, but others persist for many years. Response to treatment varies from cure with the simplest measures to persistence despite intensive therapy.”* (Merck, 1950). Clearly – the cure does not come from the treatment, but this is missed when we focus on medicines. With infantile scurvy, *“In infantile scurvy 300 mg (of Vitamin C) daily given by mouth will usually result in a rapid cure.”* (Merck, 1950) The word cure is used for infantile scurvy, because as the child grows their diet changes and nature completes the cure. Medicine gets credit. For adult scurvy, the 1950 edition, through to the current editions of Merck, recommend

treatment with supplemental Vitamin C, which does not cure – and not one uses the word cure. The same error, offering treatment and ignoring the cure of scurvy, is made by Lange’s and Harrison’s recommendations. (Kolenchuk, 2017) The words cure and cured are often confused with treatments and treated, in historical and in current medical documents. In 1899 “*Mercury: temporarily cures in chronic inflammation of the cord and meninges. - Spinal Paralysis and Softening*” (MERCK, 1899), and “*children with uncomplicated rickets can be cured by giving vitamin D 40 µg (1600 IU) po once/day.*” (Merck, 2011) Neither treatment cures.

“*Epidemiology is more interested in prevention and control of diseases than secondary and tertiary curative approaches*” (Timmreck, 1998). Although epidemiology studies causes of disease extensively with statistics, dictionaries of epidemiology do not contain the word cure (Last, 2001) (Porta, 2008). Usage of cure is rare and without consistency, as in the above quote where the phrase “*secondary and tertiary curative approaches*” is presented without a definition. Epidemiologists study diseases statistically while ignoring cures. For non-infectious diseases, epidemiology studies past causes, but not present causes of disease. Epidemiology is about prevention, not cure. Past causes cannot be used to cure unless they are also present causes.

Survival Rate: “*The percentage of people in a study or treatment group who are still alive for a certain period of time after they were diagnosed with or started treatment for a disease, such as cancer*” (Cancer.gov, 2019) is often presented as “*cure rate*” without the definition. The phrase cure rate, often used for in cancer literature and publicity, is a statistical measure of survival of a specific cancer treatment. It does not claim, much less prove cured in any case. The phrase cure rate is beginning to appear for other treatments – even treatments like antibiotics and antifungals where cured can be tested and proven. Thus “*Terbinafine (antifungal medicine) 250 mg once/day for 12 wk (6 wk for fingernail) or itraconazole 200 mg bid 1 wk/mo for 3 mo is used and achieves a cure rate of 60 to 75%.*” (Merck, 2011) In this case, cure rate is a percentage of cured, and the percentage not cured by the specific treatment.

Cure rate is not calculated for any disease, illness, or medical condition without reference to a single approved treatment (or treatment in a clinical study). Cure rates vary by treatment. Cure rates are not calculated for any alternative medical treatment. Cures are single cases, anecdotal; cure rates are statistical, general, not cures.

Remission, reversal, and recovery are often used in place of cure, perhaps leveraging their vagueness. These are also not defined medically and make no cure claim. Due to the absence of a definition of cure, it is not possible to scientifically distinguish between these terms and cured. Reversal is not defined and probably cannot be defined scientifically. Life moves forward, not backwards. Remission, recovery, or reversal, are followed by recurrence or reemergence, which cannot be distinguished from a new case of an illness without a medical definition of cured. At present, no cure of any non-infectious diseases can be identified, cured being undefined. Cured, undefined, cannot be proven. If a patient is diagnosed a second time, after any recovery, the assumption is reemergence of the same disease. As a result, many doctors, especially many cancer doctors, refuse to use the word cure. (Prasad, 2014) (Kenneth Miller, 2013)

Although alternative medical practitioners have less fear of the word cure, they also suffer from the absence of a definition. Usage is inconsistent. Terms like healing, transformation, and curing, are often mixed and matched with little consistency. The word transformation is often used without a clear definition or target. Is the patient transformed, or the disease, or perhaps “*our relationship to the disease is transformed*”? (Nunn, 1994) Alternative practitioners often claim to use holistic methods and treatments, without a definition of holistic. Which cures are holistic? How can we tell? Authors Lawrence and Weisz wrote an entire book about holism, without creating a definition. “*What is holistic for one individual is frequently perceived as reductionist to another.*” (Christopher Lawrence, George Weisz) We shall see that it’s not hard to define holism in medical treatments – when we study healthicine.

There is no medical theory nor philosophy of cure. The few historical attempts to present one have had more to do with marketing, fundraising, and other non-medical, unscientific objectives, promoting a specific treatment, theory, or doctor. Thus: “*religion was a spiritual medicine and a means of cure*” (Evans, 1834) “*a system of curing all curable diseases*” (Priessnitz, 1842); “*a sure, painless, pleasant means of effecting such release(cure), is provided by my practice*” (Munroe, 1873); “*the first and most basic principle of nature cure is that all forms of disease have the same cause*”; (Lindlahr, 1913) “*enables the body to cure itself of virtually all diseases*” (Cavenaugh, 2008). Each present the author’s wide claims of cure. Although some are over 150 years old – none can be refuted by today’s medicine, having no theory of cure itself.

Many non-medical dictionaries define cure. Definitions are vague and vary widely. Weak definitions of *diagnosis* and *disease* increase our confusion. A patient bitten by a rabid animal, *can be prevented*. (Mayo Clinic, 2019) from developing rabies with a vaccine. The word cure is not used. Is this because the cure occurs before the disease can be diagnosed? Does a cure require a medical diagnosis?

We might want to believe that when a medical condition judged to be incurable is subsequently cured, the cure is documented for future cases. However, all such cases are ignored, often actively dismissed. There are many claims of cures of arthritis, back pain, depression, diabetes, even cancer. All are ignored. None can be validated without a definition of cured. None can be disproven either, a detail seldom noted.

Cured is not defined in any theory or practice of medicine. Even homeopathy, with its mantra “*like cures like*” has no definition of cure. Conventional medicine, itself having no theory of cure, cannot challenge homeopathy’s empty claims.

Incurable

There is also no scientific nor medical distinction between curable diseases, conditions, disorders, disabilities, and those not curable. *Incurable*, like *cure*, is not defined scientifically.

Incurable is also undefined in some medical dictionaries, sometimes defined using the word cure, even in dictionaries that do not define cure (Merriam-Webster, 2008) (Barron's, 2013). (Keating, 1890).

Conventional medicine generally defines incurable with respect to medical treatments, “*being such that a cure is impossible within the realm of known medical practice.*” (Barron's, 2013) As a result, “*there is no cure for the common cold.*” (WEBMD, 2018) Similar nonsense is commonplace and rarely challenged. The truth is obvious and trivial.

*The common cold is cured by health;
when we are healthier,
we get fewer colds and cure them faster.*

Although not officially documented, there exist several types of incurable diseases – several different types of incurable.

Non-infectious diseases like arthritis, COPD, epilepsy, gout, depression, diabetes, and hypertension and chronic migraines are considered to be chronic diseases. Chronic diseases are poorly defined and defined differently for different diseases. All are generally considered incurable. When a chronic disease is cured, the cure can only be ignored. Either the disease is still there, hidden, waiting to return, or that the diagnosis was wrong. It is not possible to prove a chronic disease cured. Doctors are sometimes permitted, without proof, to claim a cure. Claims are ignored. There is no need for proof, no discussion, much less scientific analysis. Science begins with definitions. Cured is not defined.

Diseases cured by natural healthiness are a different kind of incurable, thus: “*there is no cure for the common cold (influenza, measles).*”

It is ridiculous, but all nutritional diseases can be classified as incurable. Medical references define treatments for scurvy, beriberi, and hypervitaminosis A, without using the word cure. Occasionally, the word cure appears for a successful treatment, but rarely for an actual of cure. Thus, folate supplements are recommended to cure folate deficiency by less prestigious references (Griffith, 2012), while

more authoritative references call it a treatment, not a cure. In addition, in most cases, neither the treatments recommended, nor the cure claim cures. Merck's 19th edition states: "*Treatment with oral folate is usually successful,*" avoiding the word cure with *treatment* and with *successful*. Supplements might cure a deficiency condition, but not a deficiency disease, because the cure only lasts as long as the medicine. Medical references make no such distinction.

Cancers are a special case where cured is not defined. Many authorities refer to the disease as incurable – even while fundraisers ask for donations to support the *search for a cure*. Cancer research generally studies treatments, not cures. Cured is rarely defined in a cancer clinical study. Therefore: if a cure occurs, it is out of scope.

Physical diseases are often treated, even with surgeries, without a definition of or test for cured. A surgeon repairs a cleft lip, or a hernia, or performs a cataract surgery, without a definition of cured. We might judge these diseases incurable today, because even when they are cured, the cure is not recognized as such. Discussions of cure often focus on past causes – which of course cannot be addressed. The same is true of any physical disease or condition successfully *treated* by an osteopath, chiropractor, or physical therapist. *Cures* being undefined, cannot be attained.

Disability is often considered incurable. If curable, the condition is seldom defined as a disability. Thus cataracts are a disease, but no longer a disability because surgery is an effective *treatment*. When most disabilities are cured, they are classed as *miracle cures* or dismissed as misdiagnoses. Like disease, the definition of disability also suffers from weak or non-existent science. The WHO IDC classification makes little effort to distinguish between a disease and a disability. Diseases can be disabilities. Disabilities can be diseases.

Disabilities are most accurately defined by bureaucracies that issue parking permits and other compensation, not by medical science.

Curing COVID-19

To cure a case of COVID-19, we need a clear definition of the COVID-19 disease and a comprehensive definition of cure that covers all cases. Neither exists today, so COVID-19 is incurable.

COVID-19 is poorly defined as a disease caused by the SARS-CoV-2 virus. The main definitional problems are two: the uncertainty about cause and the poor definition of the disease. Prior and secondary diseases are often a part of the patient's condition. What is cured and when is it cured is a complexity, easily ignored.

The signs and symptoms of a minor COVID-19 infection are similar to many other diseases, especially to many different – considered less dangerous - types of influenza. Although the damage and its severity caused by the SARS-CoV-2 is still open to scientific debate. There are no standards for measuring the severity of a disease, and few standards for attributing consequences to SARS-CoV-2 with respect to other concurrent causes. Even deaths attributed to the virus are confusing, because most dead patients had several serious diseases before the viral infection.

The infection, by itself, is an illness that rarely requires medical attention. Only when it advances and causes more severe medical conditions, is intervention required.

Cured is not defined for any type or case of influenza. There are no tests of cured and no statistics of influenza cured. COVID-19 is no exception. Cured is not defined for most cases of COVID-19 – the exceptions being a few clinical studies that provide a test for cured within the parameters of the study. Different studies use different definitions, depending not on science, but on the needs of the study.

A Definition of Cure

Healthicine, the arts and sciences of health and healthiness (Kolenchuk, 2018), presents a simple, clear definition of cured:

An illness is cured when:

- the present cause has been successfully addressed,
- injuries caused by the illness have healed,
- the signs and symptoms of the illness have faded and gone,
- no more medicines are required.

The definition of cure applies to an illness, not to a disease.

What's the difference between an illness and a disease?

“A patient goes to the doctor with an illness and returns home with a disease.” - unknown

The University of Ottawa *Society, the Individual, and Medicine (SIM) curriculum* (Oxford, 2008) course notes provide an interesting, although only somewhat enlightening distinction between illness, disease, and sickness. Many medical authors cite this definition:

Illness (the person's subjective experience of their symptoms. What the patient brings to the doctor.)

Disease (Underlying pathology; biologically defined; the practitioner's perspective. The illness seen in terms of a biological theory of disorder.)

Sickness (Social and cultural conceptions of the condition: cultural beliefs and reactions, such as fear or stigma.)

Unfortunately, this sounds like the infamous six blind men and the elephant. Illness is the patient's perspective, disease the physician's perspective, and sickness the society's perspective. To complicate matters, they each talk to the other, mixing terminology, having not studied at the University of Ottawa. Society's view affects the patient and the medical treatment recommendations.

There is no medical understanding of the reality of illness, disease, disorder, or medical condition. Wellness, although often described as the absence of illnesses, is also not defined.

Conventional medicine is a practice, a set of practices, with many different views, devoid of theory. Perhaps we should not be surprised that cure is not defined. Do we cure the patient's perception of illness, the doctor's understanding of the disease, or the society's view of the sickness? All three? Any two? Any single one?

In healthicine, cured is defined for an illness, more specifically, for an element of illness: *an illness having a single cause*. This definition facilitates clear definition of cure – to address the cause.

Cure Variations

Without a definition of cured, it's easy to assume that cured is some magical state where all traces of illness are gone forever. There are no magic cures. Even a simple illness element might be partially cured, completely cured, temporarily cured or permanently cured. Let's take a look at some of these situations.

Complete Cure

We easily think of a cure as complete removal of all aspects of disease. At the same time, we recognize that life moves forward, not backwards, and that no cure can attain perfection. Some illnesses appear gradually, others appear rapidly when a threshold is crossed, when a straw breaks the camel's back. When is a cure necessary?

Partial Cure

An illness is cured when the cause is successfully addressed. What if the cause is 50% addressed? What if the cause is 80% addressed? What if it is 96% addressed? When the cause is seen as partially addressed – the cure is partial. In some cases, a partial cure might be the best we can do. In some cases, we might aim for a complete cure.

Sometimes, a partial cure is invisible, and it seems the patient still has the disease. A compound illness has multiple causes. Addressing one

or two can produce a partial cure, even though the patient might still have the disease.

In other cases, addressing a small percentage of the cause might have a huge impact, rendering the illness *apparently cured*. Cured is a judgement.

Temporarily Cured

If the cause of an illness is addressed temporarily, and the signs and symptoms disappear, the illness is temporarily cured. Sometimes, only a temporary cure is possible. Sometimes, a temporary cure is a necessary step towards a permanent cure. Like a partial cure, a temporary cure is a judgement. Sometimes we might judge not cured, in other cases: cured. However, without a concept of temporarily cured, we cannot understand many cures.

Healthicine, the arts and sciences of health and healthiness, is at present the only source of a definition of cure. Let's take a closer look at healthicine.

Healthicine

Healthicine is a study of health and healthiness. Many references defined illness as the opposite of health and health as an absence of illness. Healthicine provides a more accurate view.

Health is whole. An illness is a hole in healthiness. Health is general. An illness is a specific situation or case.

Health is often defined as wholeness and soundness. But what is wholeness? Living entities, even the simplest living cells, are extremely complex. When are they whole? When are they not?

Hierarchy of Healthiness

The hierarchy of healthiness provides an overview of healthiness and gives important insights into COVID-19. We begin our study of health with a basic, familiar hierarchy. The lowest levels of healthiness are the simplest of living entities – cells. Every individual cell has many different aspects of healthiness, whether it lives independently as a single cell or as part of a tree, a whale, a human, a city, a nation, or a planet.

Cells living in cooperation create higher level life entities. They create bodily tissues. Tissues living in cooperation, create limbs and bodily organs. Organs cooperating form organ systems. Our bodies consist of layers, of layers, of layers of systems, organs, tissues, and cells. We can represent this as a simple hierarchy.

| | |
|---------------|---|
| Body | organ systems, organs, tissues, and cells in cooperation and community |
| Organ Systems | communities of organs |
| Organs | communities of tissues |
| Tissues | communities of cells |
| Cells | genetic and chemical processes in synchrony, harmony, and cooperation create life |

Genetic elements and nutrients are at the bottom of the hierarchy are not alive. A virus, like SARS-CoV-2, exists on the boundary between genetic components and living cells.

A COVID-19 infection has the potential to affect many aspects of our healthiness. When we look at the hierarchy of health, we see potential effects in many areas. Of course, when the illness kills the patient, it affects every aspect of their healthiness. Adverse effects of COVID-19 have gone far beyond individual patients, seriously affecting social, government, business, economic, religious and other communities.

Competition and Cooperation

Every step up the hierarchy is a result of cooperation. Without cells cooperating – there are no tissues, without tissue cooperation, there are no organs, without organ cooperation, complex bodies cannot live, grow, and revolve. Cooperation also exists between species.

At the same time, every cell is an individual. Every cell in your body is looking out for number-one, itself. It's healthy to do so. Every bodily tissue is an individual tissue. Every organ is an individual organ. This individuality is more clear, or less important, depending on the entity's need for independence. When we have two kidneys, they share resources and cooperate. If one dies, or is removed, the other grows more independent and grows to pick up the load. At every level, a healthy balance of cooperation and competition is key to the success a life entity.

The above hierarchy is the physical layer. There is also a mental layer, and a spirit layer. Every cell has a body, a mind, and the spirits of life, or it dies.

The simplest cell has a mind, although not a brain. It learns from life experiences. Some learning dies with the individual. Other learning is linked to success (or failure) of the species. Successful cells reproduce and evolve forward. Unsuccessful cells die. The cells in our body, for example, have a long history of learning written into their structure. The same processes of learning, remembering, and acting on memories, occurs in tissues, organs, organ systems, and

our bodies. We often think of our brain as the only source of intelligence, a view Frank K Vertosick calls *brain chauvinism* (Vertosick, 2002). Learning, memory, and mental processes - mind – are distributed throughout our entire body and through our species and its evolution as well. Mind exists in every layer. Sometimes, our mind tells us when to stop. Sometimes – the smallest pebble stuck on our foot touches our cells, our nerve tissues, our foot, our leg. We might think our brain made the intelligent decision to remove it. A frog could do the same. A tree can detect an attack – and tell its neighbors as well. Our brain is one of the organs, a complex organ system. It is often noticed that our gut is very intelligent system, another powerful mind. Our immune system is also a powerful mind.

Spirits? Every bacterium has spirits of life, as does every cell, and every species. If not, it fades and dies. Spirits don't suddenly appear when we begin to believe in a god. They are a fundamental element of life. Every cell has spirits that drive it to eat, to rest, to grow, reproduce, adapt, and evolve. It has spirits of independence and spirits of cooperation. As life entities rise in sophistication and complexity, so do the spirits.

We can expand the hierarchy, with a hierarchy of mind and a hierarchy of spirits.

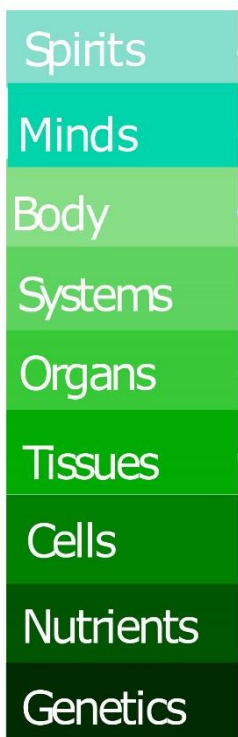
| | | |
|---------------|-------------------|----------------------|
| Body | Physical mind | Physical spirits |
| Organ Systems | Organ system mind | Organ system spirits |
| Organs | Organ mind | Organ spirits |
| Tissues | Tissue mind | Tissue spirits |
| Cells | Cellular mind | Cellular spirits |

Let's step back to the physical components for a moment. Cells are not aware of the tissues, not aware of the organs, not aware of the organ systems, or the body. And from the top down, the body is not conscious of the cells, tissues, organs and organ systems. The entire hierarchy functions without a need for conscious awareness. The entire hierarchy functions perfectly well without self-awareness. We might even notice that in many cases, self-awareness can have a

negative influence. We might only notice our big toe when it has a problem. At the same time, if we focus our attention on our big toe – we might imagine a problem and create one with our imagining.

The same layers exist in mind and spirits. Cells have spirits, but they are not aware that the tissues have different spirits, different feelings, different goals. Organs have different spirits, feelings, and goals. The hierarchy is a tower of complexity.

Healthiness is incredibly complex. We simplify it to tall structure – a useful misunderstanding.



Notice that we can identify many scientific and medical disciplines with individual elements in the diagram: the sciences of genetics, nutrition, cytology (cells), histology (tissues), anatomy (organs), system anatomy (systems), anatomy and physiology (body). There are, unfortunately, many studies of the brain, but few of mind. Spirits tend to be ignored entirely in our current studies of life, somehow seen as unscientific.

This hierarchy is quite a familiar and useful concept, although it mistakenly shows the hierarchy as rising past the body, to contain mind and spirit.

But there’s something missing. Can you see it? It’s often hard to see a missing element. What’s missing? What is at the top? Does the hierarchy end with spirits (or with the body)?

Every layer has a top. Every layer is a community of individuals in the lower layer. What’s at the top of the hierarchy?

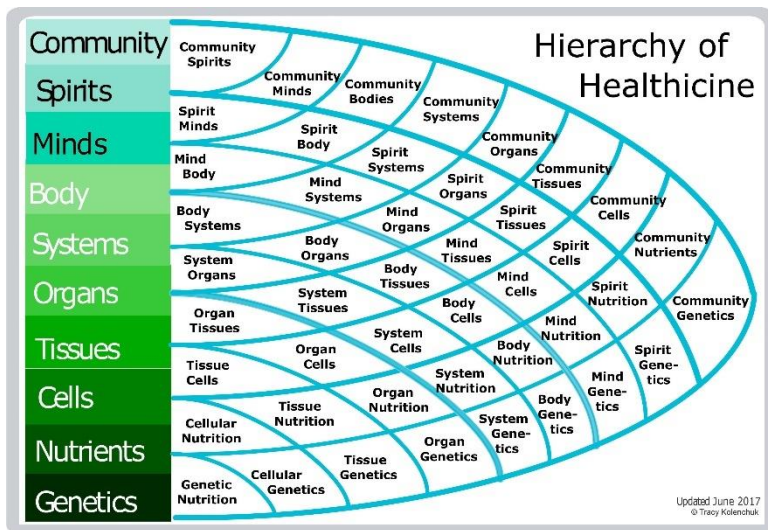
Community. Our healthiness does not end with body, mind, and spirit. It extends into our communities. Cats have families, dogs have

packs; humans have tribes. Humans take community to heights unparalleled by any other animal. We create communities of communities of communities. Individual humans live their lives in countless communities, which are continually changing, evolving, sometimes over thousands of years. We have social, business, religious, and government communities. We have work communities, play communities, security communities, and war communities. As each community grows it becomes a community of communities. Religions, for example, have many internal communities, sometimes working in conflict, sometimes in cooperation. The same is true of any large community.

Humans infected with the COVID-19 virus, or any other infectious agent, can have adverse effects, and signs and symptoms of illness, in every layer of the hierarchy, including community layers. I have just finished a 14-day quarantine in Canada, which followed a 19-day quarantine in Peru – and a three-day rescue flight home. These were consequences of the COVID-19 effects on my communities in Peru and Canada, and on many corporate and international communities.

When we look deeper into the hierarchy of healthicine, the hierarchy of healthinesses, it only takes a few minutes to recognize that every layer in the hierarchy has relationships with and effects on every other layer. When cells in the lungs are affected negatively by the virus, the respiratory system is affected. When the respiratory system is affected, body, mind, and spirits are affected – possibly to the point of death. Of course, everybody dies someday. When people grow ill and die, communities are affected.

The next page has a more comprehensive view of the hierarchy and the interrelationships of the layers. In this image, we can see and name the many relationships between layers in the hierarchy and identify more areas of healthiness that can be affected by the SARS-CoV-2 virus. We might also see opportunities to improve our reaction to the virus and viral infections in general.



The virus has no knowledge of the hierarchy, just as the cells, tissues, organs, etc. have no understanding of the whole. The virus attacks cells. When it attacks cells, it affects tissues, which affect organs, which affect organ systems, and so on, ultimately affecting our many communities. The effects can circle back to the bottom of the hierarchy. In nature, genetics change when individuals survive, or die. As a patient weakens, nutrition can be affected, which in turn affects cells. The immune system notices the virus and works to address the problems it causes, enlisting the circulatory system to access the site and the lymphatic system to clean up the damage.

Are we overwhelmed yet? Attempting to understand everything at once provides a useful framework but gives little direction. How can we find the path we need to deal with the SARS-CoV-2 virus?

COVID-19 is an illness, not a healthiness, a hole in a healthiness.

Theory: An illness is a Hole in Health

The hierarchy gives us a wide view, the holistic view. Health is whole. The healthiness of each individual is a whole, even when an individual is disabled, or sick, they are whole. Their health is whole.

What about disease? What about illness? It is important to understand that healthiness is not a thing we can see or touch. Healthiness is a concept. An illness or a disease is also a concept. We cannot see a disease, cannot touch it. No disease can arrive, attack, go away, or return. Sometimes, a cause can do so.

What is an illness? An illness is specific, a specific case in an individual. An illness is a hole in an individual's healthiness. Let's look at a non-living example:

A healthy roadway is complete and whole. A pothole is an illness, a hole in the road.¹ When not addressed, it grows into a larger and larger and might destroy the road. If we look closely, we might see a road full of small insignificant holes. We judge a pothole when it becomes dangerous or creates the potential to develop into a dangerous hole.

Health is whole. An illness is a hole in healthiness. A healthy road is whole. An illness is a hole in the road.

An Illness Element

What is an elementary illness, an element of illness? A single hole? What about a big hole, or a pair of holes that grow and become a big hole? How can we define an elementary illness?

An element of illness has a single present cause.

¹ Note: a rock or other obstacle on the roadway can also be seen as an illness in the functioning of the road. It might be an illness healed by traffic, by the natural functional processes of the roadway. A pothole, on the other hand, is less likely to be cured naturally.

The *present cause* of an illness is “*that which, when changed appropriately, results in a cure.*” The cure proves the cause. The present cause is the *cure cause* of an illness. The *cure-cause* of a pothole, is often the hole. Causes in the past cannot be *cure-causes*, unless they are also present, because past causes can’t be accessed to produce a cure.

A case of disease can be complex, having many causes and consequences, sometimes consisting of many interrelated diseases. An element of illness has a single cause and many consequences. When two (or more) causes are present, there exists more than one illness element, because two (or more) changes, one to address each cause, are necessary to provide a complete cure.

There are two types of illness elements, defined type of cause. The present cause of an illness can only be a noun or a verb; a thing or a process. The same applies to any elementary illness, from a pothole illness to any illness in a living entity, including humans.

A pothole might exist, with no present cause. An **attribute illness** can be seen as caused by a thing, the hole. We might view it as caused by the absence of a necessary thing, the lack of pavement in the hole. We cure attribute illnesses by changing the causal attribute. The past cause is not relevant to the cure. Maybe somebody came in the night and dug a hole. Perhaps the hole just appeared, without any apparent reason. The illness and present cause are one. When the cause, the hole, is successfully addressed – the illness disappears.

Attribute illnesses are defined by their causal attribute and cured by changing that attribute; cured by fixing the hole. Another hole might appear later. A new illness. How do we know it’s not a remission and reemergence? Because the first illness was cured when its present cause – the hole – was fixed. The hole did not *go away* and *return*.

Sometimes a hole doesn’t just exist by itself. Sometimes the hole is a result of a present active cause; a process; a verb. In our roadway example, maybe some trucks that are too heavy, are using the road, causing damage, creating potholes. This illness is different. Fixing the hole makes little difference. The cause is still be present. The

pothole, in this case, is a sign, a symptom of the illness. The illness might appear to be in remission. But it will reappear. This type of illness is a **causal illness**, caused by a process (or the absence of a necessary process). It is cured by a process change that addresses the process cause, in this case, a process that ensures heavy trucks take a different road. Of course, we also need to repair the hole. Roads are not alive. They cannot heal themselves.

If the curative process fails, and heavy trucks return – a new illness occurs. It's not a remission. How do we know? Addressing the cause cured the illness.

Many Cures

Our pothole example has many cure possibilities. The hole might be identified, diagnosed by a city worker, or reported by a citizen.

When we identify it as an attribute illness, we might send a work crew out with many different pavement-fix mixes to fill in the hole. Or we might decide to wait, and see if it grows, or wait until more holes develop before taking action. The crew might use many different techniques to fill the hole. If no work crew, on a road in an isolated area of the countryside, a local farmer might decide on a temporary fix, filling it with rocks or gravel, while waiting for the highway crew to arrive.

The identification of a causal illness often takes more time. The hole might be cured, and consistently re-appear. Gradually, an awareness arrives that there is a higher-level cause. An investigation is necessary to understand that cause. Maybe the road materials are faulty. Maybe the substrate is faulty. Maybe one user is abusing the road. Once the cause is identified, many cures are possible. We can change the usage, or change the road, or perhaps change the maintenance schedule.

I do not mean to say that lemon juice and wine are the only remedies for the scurvy ; this disease, like many others, may be cured by medicines of very different and opposite qualities to each other, and to that of lemons. James Lind, A Treatise on Scurvy, 1771

The same is true of any illness, and any cure, from any cause. Every illness, and every cause of illness, has many potential cures. We need to search for the best cure for the individual case. Today's medical systems prefer to search for the best cure for commercial sales.

Remission vs Cure

Remission occurs when we address the signs and symptoms, but not the present cause. An attribute illness cannot go into remission, it is cured, or not. Signs and symptoms might go into remission when a treatment addresses them, but not the present cause. If the illness appears to go into remission and reappears, it is probably a causal illness – and we need to find and address the process cause. When a causal illness is treated – by fixing the hole without addressing the process cause, the illness appears go into remission to and reappear later. The distinction between remission and cure is defined by the success or failure of the cure attempt.

Two Elementary Types of Illness

Attribute Illness Element: is caused by the presence, absence, deficiency, or excess of an attribute. Signs and symptoms of the illness can be far from and independent of the cause. The noise, loss of control, or damage to the car – caused by the pothole – often carries on down the road. When the attribute is successfully addressed, changed, transformed, the illness is cured. The signs and symptoms disappear.

In nature, most attributes are positive, facilitating healthiness, not illness. Life makes powerful use of attributes, converting many neutral attributes to healthy. Many attributes can be negative without causing illness. A healthy roadway has many positive attributes – shoulders, lanes, signs, etc. It also has many negative attributes – small holes, sharp curves, construction, traffic, noise. Only some are seen as causing illness. Positive, negative, and illness are judgements.

Causal Illness Element: is caused by the presence, absence, deficiency, or excess of a process which maintains the ongoing presence of the illness. In our example: the stream of heavy trucks. To cure this illness, we must change the process; redirect those

trucks. The process redirection must be maintained, or a new illness will occur. Causal illnesses are cured by a process that must be maintained.

We might judge the cause of the illness to be the ongoing presence of large trucks, which needs to be addressed, or the ongoing absence of a process that diverts those trucks to a different – hopefully stronger road. Either way, we must change the processes that use the road, or the illness will continue.

Note: Like attributes, most life processes are also positive, facilitating healthiness, not illness. The roadway is part of a healthy transportation process. Processes can only cause illness when they are negative. Most negative processes do not cause illness.

Attribute or Causal Illness Element?

There is a grey area, or gradation between attribute illnesses and causal illnesses. When we find an illness, how can we be certain whether it is an attribute illness or a causal illness? Only with a cure.

Once we cure the illness, the cure defines and proves the cause and the type of cause. In our first example, we might define a process to maintain the road, to fix all minor holes before they become large enough to be judged *an illness*. When we cure with a process – it was a causal illness. In this case – we cured a higher-level illness than the single pothole. In our second example, we might make the roadway stronger, perhaps using a new material, such that larger trucks can travel without damaging the road. In this case, we changed an attribute of the road to produce a cure. The illness cured was, therefore, an attribute illness.

The cure proves the cause. Once cured, there is no need to debate cause. The illness has been cured.

Injury Illness

In life forms, there is another basic type of illness. An injury is an attribute illness which can be cured by healing. Roads rarely heal, but

even the simplest living cell has some healing mechanisms. More complex entities have more sophisticated healing mechanisms.

Healing is often referred to as a type of cure. However, the processes and capabilities of healing are often misunderstood. We often hear of *healing the patient, healing one another, heal from trauma*. Many sources repeat *time heals all wounds*. Hippocrates, the father of medicine, used the word heal very infrequently and without much understanding, advising that “*Healing is a matter of time, but it is sometimes also a matter of opportunity,*” and often referring to medicine as the *art of healing*, as if the physician causes healing.

The art of medicine consists of amusing the patient while nature cures the disease - Voltaire



Medical cures come from the outside, from our own actions, from our communities, from our medical communities. Healing comes from within.

Most healing, like most curing, is trivial. As a result, most healing cures are ignored. We get a scratch or a bruise, it heals. We get a cold. It causes minor injuries of nose and mouth – and they heal. We forget them and the cure. Even a broken bone, when healed, might be forgotten except, an occasional twinge. Scars fade and we forget that we healed. We only question healing when it fails to cure.

Our current medical systems rarely attempt to aid healing, because such actions are slow. Medical time is expensive. It is necessary to improve healthiness to aid healing.

Healing is a Natural Transformation

Healing is an attribute cure that makes lasting changes to body, mind, spirits, or community attributes or processes. A healing attribute cure, like all attribute cures, is permanent and seldom perfect, although sometimes better than before.

No doctor, no medicine, can cause healing. We foster and promote healing by improving healthiness. When we are healthier, we heal faster and better. When less healthy, healing is slow and less effective.

Injury Illness Elements: Injuries are cured by healing, by a natural transformation. With injuries, the concept of an element of illness is sometimes less important. Sometimes it doesn't matter if we have one hole in our skin, or two or three. Healing is a single process. A distinction between independent injuries is only relevant in cases where individual attention is necessary to aid healing.

The cause of any illness's *present-cause* whether it be an attribute, a process, or an injury is in the past. A hole in the road has causes in the past. Addressing a past cause might prevent future illnesses but cannot cure a present illness. Injury illnesses have causes in the past. We cannot go back in time to cure the injury. Healing moves forward. Causal illnesses have causes in the past. They exist as long as they are maintained by the causal process in the present. Addressing only past causes of the faulty process does not change the present cause and cannot cure.

Root Causes

Maybe you've seen references to *root causes*, as if root causes provide the only true cures. There are no root causes in our highway example because there are no root causes. The concept of a single root cause is a distraction that diverts our attention from cures.

We want to find a single root cause so we can find a single cure. The concept of root cause simply fails.

Past-causes can be useful for prevention, but there are too many past-causes. Most causes are in the past. Every cause has a cause. Every cause of a cause has a cause. There is no end to the root. As we look farther and farther back into the past, the causes we find are weaker and weaker. Each past-cause suggests new preventative actions. Past-causes are hypothetical. We might guess many past-causes of the hole in the road – and create many chains of causes back in time. The same problem is present with COVID-19. We can look back into the past of any case and find many past-causes of our infection. But the pothole is present, just as a COVID-19 infection is present.

Addressing causes that exist solely in the past cannot cure any illness. Only addressing present-causes produces a cure.

Present Causes

Present-causes present other problems. Even our trivial highway illness contains many potential present-causes. Maybe heavy trucks are damaging the road, maybe the road is too thin, maybe road maintenance is poor. Maybe, it's an attribute illness, and we just need to fix the hole. Each present-cause has many past-causes. Some of those causes might also be present. Guessing present-causes is exactly that, guessing. Until we observe a cure.

We make guesses about present-causes by attempting a cure. When we make a correct guess, we produce a cure. Curing attribute illnesses is relatively straightforward. We fill the hole, and the illness is gone. If it was an attribute illness, time proves the cure. However, if it was a causal illness, the hole will reappear. It was never cured. The process cause was never addressed. Curing causal illnesses is more complex. We need to change the process and fix the hole. Then we wait. How long? Different causal processes take different amounts of time. We calculate the time to test based on the cause we addressed, to validate the cure.

SARS-CoV-2 infects a living being. Life and health are powerful forces, working to cure the illness – independent of the medicine. A COVID-19 infection is almost always an attribute illness. When we take actions to cure the infection, we don't know. Did the patient's health cure the infection? Or did the treatment cure the infection. There are dozens of medicines that marketers claim can cure the infection. More are being designed. Do any of them work? How well do they work? Do some work better than others? Do some work well independently, while others work well in cooperation? When an infection has been addressed, it rarely reoccurs. We often understand that a successful cure has occurred, even if we can't prove the cause of the illness, nor the cause of the cure.

Then it gets complicated. A small percentage of COVID-19 infections result in injuries requiring healing, and inabilities requiring medical attention. Each of these is an independent illness element, requiring an independent cure action.

There is no one-cure for COVID-19 because there is no one-cause. No root-cause. We need to simplify, but a root-cause is too simple.

Two Views of Illness

We can view any illness element from two perspectives, by cause or by cure.

Viewed by cause, there are two types of illness elements. A noun, an attribute, is the cause of an attribute illness. A verb, a process, is the cause of a causal illnesses.

When viewed by cure, there are three types of illness. Those cured by a transformation, those cured by healing, and those cured by a process. The following table maps the two views of illnesses and cures together.

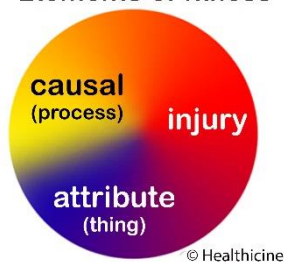
| Illness Type | Present Cause | Classified by Cure |
|---------------------|----------------------|---------------------------|
|---------------------|----------------------|---------------------------|

| | | |
|----------------------------|---|--------------------------------------|
| Attribute Illness Element | Presence, absence, deficiency, or excess of a thing | Cured by an attribute transformation |
| Injury (attribute) Illness | Presence ² of an injury. | Cured by healing transformation |
| Causal Illness Element | Presence, absence, deficiency or excess of process. | Cured by a process transformation |

Summary

There are three elementary types of illness: *attribute illnesses*, *causal illnesses* and *injury illnesses*, each defined by its present cause, the negative attribute, process, or injury. Each is cured by addressing the present cause, *transforming the attribute* – a one-time cure, *transforming the process* – an ongoing cure, or *healing (transforming) the injury* – a natural one-time cure.

Elements of Illness



There are gradations between attribute, causal, and injury illness elements. Each case is unclear until it is cured.

The cause of an illness element is the presence, absence, deficiency, or excess of a process, an attribute, or an injury of body, mind, spirit, or community.

Chronic Illness

Conventional medicine often claims or assumes that chronic illnesses are incurable, a failure to understand the nature of chronic

² In the interest of completeness, we might wonder if the absence of an injury can be judged the cause an illness. The answer is yes. But it's not cured by healing. These are cases cured by intentional injury – perhaps from the proverbial whack on the side of the head, or perhaps something more severe, like a surgery. The cure defines the cause.

causes. Illness elements might be temporary, permanent, chronic, repeating, or recurring. They might seem to appear and disappear without logic when we fail to understand the cause. An illness exists when the cause is present. It is chronic when the cause is chronic, repeating when the cause is repeating, temporary when the cause is temporary.

Attribute illnesses are naturally chronic. Attributes are nouns, typically existing until they are changed. When attributes are temporary, attribute illnesses disappear, cured, when the cause disappears. Causal illnesses are chronic when the causal process is chronic temporary when it is temporary. Injury illnesses are only chronic when the cause of the injury is also present, in which case a complex illness is present.

In most cases of a chronic illness, it is necessary to address the *chronic nature of the cause* and to heal the consequences.

Successfully transforming a causal attribute cures the chronic illness caused by that attribute. Successfully transforming a chronic process cures the chronic illness caused by the chronic process. Curing a chronic injury requires two cures – healing and addressing the chronic process or attribute cause.

COVID-19 is usually not a chronic illness. However, if a patient continues to carry the virus because their immune system does not develop antibodies, it might be seen as a chronic disease – even when the patient has no signs and symptoms of illness. In this case, it's an illness of the community – because it can infect others, although it is not an illness of the individual.

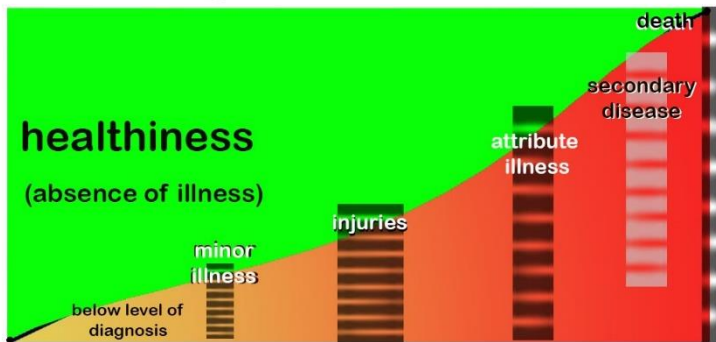
Damage caused by a COVID-19 infection can be chronic. It might result in COPD, or other chronic illnesses requiring separate cures.

Natural Progression of Illness

Any illness has a natural progression. When not cured, it creates injuries. When we fail to cure injuries, they can become disabilities – needing external assistance to cure, or permanent features –

attributes – which might cause further illnesses. This diagram shows the natural progression from *no illness to death*.

Natural Progression of COVID-19 Uncured



Each stage of illness is a hole in healthiness. At each stage, a cure and recovery of the lost healthiness might be possible. Cures can occur in any sequence. A secondary infection, for example, might be cured before or after injuries caused by the COVID-19 infection are completely healed. Each stage consists of one or more illness elements, and each element requires a unique cure action. There are no simple cures for complex illnesses, by definition.

Signs and Symptoms: Most illnesses start below the level of diagnosis, progressing until noticed by a patient or their community. Healthiness cures many illness elements before they are diagnosed. Most cases of the common cold, influenza, food poisoning, and many other illnesses, are never diagnosed. There is no need. Our health is very good at curing. Minor illness elements are so easy to cure that medical science seldom notices that a common cold, for example, has been cured. We easily forget our cures. How many colds did you have last year? How long did they take to cure?

While it is not cured, the illness might be at a low level, as an ailment or irritant, or it might progress to the stage where it can be diagnosed as a disease.

Secondary Illness: In some cases, the presence of an illness or of injuries caused by an illness causes another illness. The common cold or influenza can lead to pneumonia. Secondary illness elements require independent cures. An attribute illness element might be primary, secondary, or tertiary, depending on past causes of the attribute. The distinction is most important when the cause of the attribute is still present. A tooth broken by a punch is a primary illness. One damaged by scurvy is secondary or tertiary.

Injuries: As a disease cause and consequences grow, they can cause injuries. Many diseases cannot be diagnosed until an injury occurs. However, the injury is a separate illness element, with a separate cause – the underlying illness. Injuries require a healing cure. Healing begins as soon as the body detects the damage – often before the patient notices. We often perceive healing as an illness due to the signs and symptoms of inflammation. Of course, many injuries, like those due to accidents, have external non-illness causes, in which case the injury is the patient's primary illness.

Inabilities: Healing progresses smoothly but is rarely perfect. An inability is an injury that cannot be healed without assistance. Scurvy, for example, can cause damage to teeth that must be cured by a dental surgeon, or loss of teeth – attribute illnesses that cannot be healed. Sometimes, healing is faulty. Sometimes, healing results in another illness or another cause of illness. Some damage cannot be healed.

Disabilities: a disability is an illness element that we cannot cure, or that we believe cannot be cured. Sometimes disabilities are converted to curable illnesses by the presence of a cure.

Causes and Consequences

We should not limit our studies to infectious diseases. An illness might be caused by a deficiency or excess of virus or bacteria (an attribute), a deficiency or excess of nutrition (a process). The cause might be a deficiency or excess of any healthy or unhealthy attribute or process of cells, tissues, organs, organ systems, body, mind, spirits, or community. It might be due to an excess or a deficiency

of exercise or rest of body, mind, spirits, or community. Injuries can also occur to body, mind, spirits, or community.

A COVID-19 infection in an individual can cause illness in the individual. A COVID-19 infection in a community might cause overloading and damage – illness - to a medical community, in addition to the illness elements in individuals.

Negative and Positive Causes

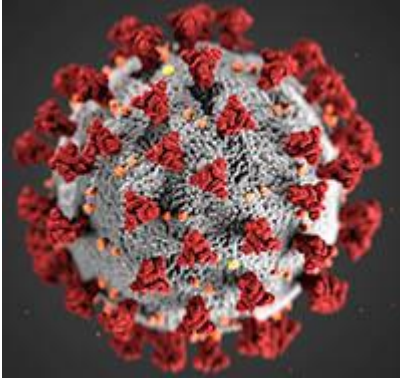
A negative process, attribute, even injury, that produces illness might be positive and healthy in different circumstances. Many, perhaps most causes of illness are healthy in different circumstances.

We judge a cause to be negative when we identify it as a cause of illness, and positive when we judge it to be a cause of healthiness or a cure. We prove a cause of illness by transforming it to produce a cure. Many causes of illness can be causes of healthiness in other circumstances.

Life, health, illness and cures are not black and white, not trivial.

SARS-CoV-2 vs COVID-19

Here's something interesting, often overlooked, about COVID-19.



The novel coronavirus, aka SARS-CoV-2, is dead.

The individual virus might look alive in the image, but medically, it exists on the boundary between alive and dead. Without a live cell as a host, it simply becomes *more dead*, no longer an active virus.

The novel coronavirus persists as a virus for only a few hours outside of the host - sometimes for a few days. Then it's dead-dead, no longer active.

Even when it's active, SARS-CovV-2 doesn't change. It doesn't grow, or shrink, or change. It has one goal – reproduction, which it accomplishes by through a pre-determined series of chemical reactions. It does not think, does not adapt, does not make any decisions. It has no community, no ability to cooperate with other virus entities. It is not alive. The virus does evolve as it reproduces. “RNA viruses have exceptionally high mutations rates because their replications enzymes are prone to errors when making new virus copies.” (Yella Hewings-Martin, 2020). However, there are several important details about viral replication errors and mutations. Firstly, most error result in failure to reproduce. Errors that are successful can change the virus to be more dangerous or less dangerous. Viruses that are less dangerous are generally more successful in reproduction. The patient lives, the virus remains hidden. In some cases – although this is poorly studied – a virus can be a healthy contribution to the patient. When we hear the word mutation, it's easy to think of some movie monster. However, very

healthy living, cooperating life species is a result of mutations. The bad ones? They failed and died out.

Why is this important? Because of the counter-fact. Every case of a novel coronavirus infection is unique, an individual case with unique levels of intensity and consequences for the infected person. The level of illness progresses through several stages, often producing several illness elements. The illness might be cured at any stage or get worse.

- **Contact:** Some people exposed to the virus don't show any signs and symptoms. The virus might contact our skin in many places without being able to penetrate. At this point, there is no illness, so there is no cure. The virus might even enter our body and be effectively addressed by our healthy immune systems.
- **Illness:** Some people have mild symptoms and recover quickly. The virus has infected the individual. The illness was cured by natural healthiness.
- **Disease:** Some have a diagnosed disease similar to common influenzas and recover within a week or two. Note: as diagnosis testing becomes more prevalent, or more powerful, more illnesses become diseases.
- **Injury:** Some people have injuries to lungs or other organs needing to be healed. In most cases, these injuries are cured naturally without the conscious attention of patient or doctor. Injuries might be judged as independent diseases, or as part of the same disease, but they require independent cures – so they are independent illness elements.
- **Inability:** Some patients are injured so severely that medical attention is required, either due to urgency or inability to heal. Some develop into disabilities which cannot be cured even with the best current medical care. Our medical systems view an inability as a sign or symptom of a disease.
- **Secondary Disease:** some patients contract a secondary disease like pneumonia as a result of the infection.

- **Death:** A small percentage of people die from the consequences of the chain of illnesses.

What are the numbers? Unfortunately, getting numbers is very complicated. Every number reported is suspect. Current medical tests for COVID-19 are problematical. Different tests measure different aspects of infection. All tests suffer from errors on both sides – false negatives and false positives. Because they are new, it's challenging to know which is better, which is the worst. At each stage, it is difficult to prove that the COVID-19 virus is present, much less responsible. There are tests for signs and symptoms of the virus, but there appears to be no test for the virus. Not only that, the virus can be present without any illness. When there are no signs and symptoms - is the patient infected? When there are few signs and symptoms, is it SARS-CoV-2, or perhaps another common flu virus - perhaps just a cold, another illness, or possibly both? In many cases, especially in minor cases, it's hardly worthwhile to test. The illness will pass. After the patient dies – there is little benefit in proving that COVID-19 was the cause. Patients can die from the damage caused by the disease even after the infection has passed. Tests are useful, numbers are useful, but not perfect.

The virus does not change. So, why are individual cases so different? It's the same virus, here in Canada, as it was in Wuhan. Even in Wuhan, different people were affected differently. Why?

There are two fundamental reasons for individual differences in specific cases: exposure to the virus and the healthinesses of the infected person.

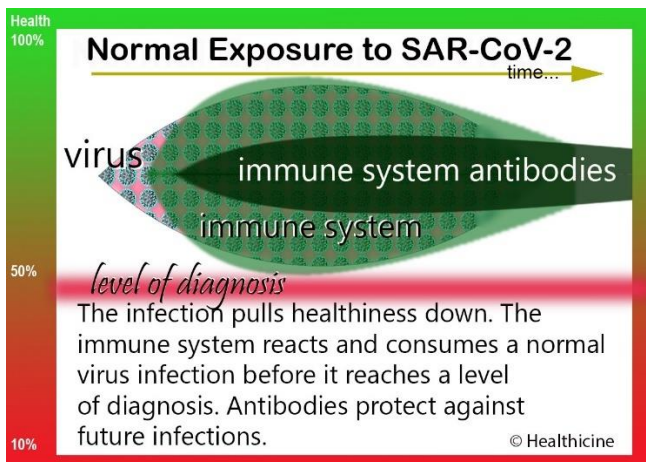
Let's look at them in turn.

Exposure

When we encounter any cause of disease, the exposure might range from very slight to severe.

Normal SARS-CoV-2 Exposure vs. Normal Healthiness

We begin our study with an element of illness, a simple or elementary COVID-19 disease case and then study its possible growth to a complex, non-elementary illness.

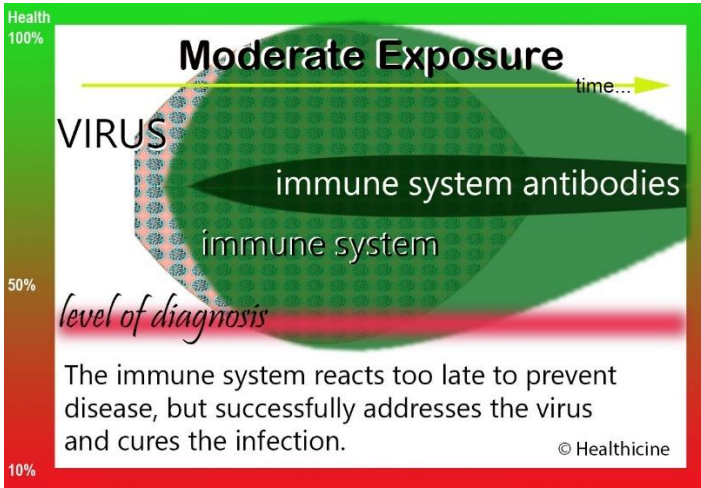


The prior image presents the natural course of most cases of COVID-19. When the initial exposure is low, a common level, health begins to drop. The healthy immune system identifies the pathogen and eliminates it before it reaches the level of diagnosis as a disease.

Usually, exposure to SARS-CoV-2 is mild. Many, perhaps most cases of exposure are so minor that the affected person does not seek a diagnosis. The patient’s natural healthiness cures the illness without conscious attention. A healthy immune system quickly learns to detect future exposures and address them before they become dangerous. The patient might be a SARS-CoV-2 carrier for some of this time. The main lasting consequences of exposure to SARS-CoV-2 is a natural immunity from future infections for some time afterwards.

COVID-19 Disease Level Exposure

The next diagram illustrates a severe case. A patient who is exposed to a large number of SARS-CoV-2 particles. The virus multiplies quickly to a level that of diagnosis as COVID-19.



In this diagram, the virus has a large head start and grows quickly to COVID-19 disease status. Usually, the immune system recovers and cures the disease. The natural healthiness of the patient cures the illness.

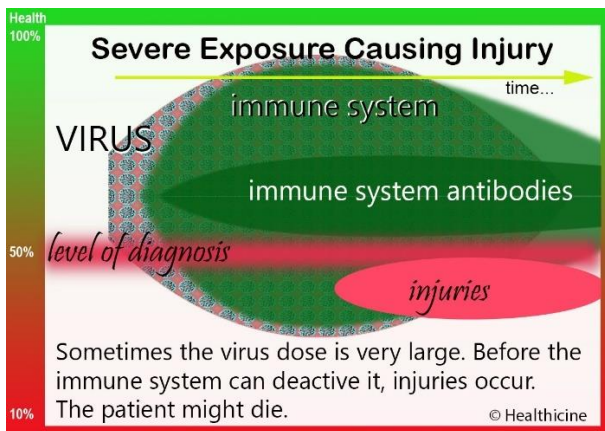
The defining line of diagnosis is intentionally fuzzy. There are no scientific protocols for diagnosing a SARS-CoV-2 infection as COVID-19 disease. There are no scientific protocols for diagnosing the common cold, even though it is well studied. A diagnosis is determined by the opinion of a medical professional on a case by case basis. Tests and technologies can give information to contribute to a diagnosis – but cannot create a diagnosis.

Many patients reach the level of diagnosis without a diagnosis. When a patient recovers quickly, there is little need to identify the virus cause as SARS-CoV-2, or not. Identification of cause is important for disease control in the community, but is less important to the patient, who has already been cured. Cures disappear illnesses.

Deadly Exposure to SARS-CoV-2

Maybe you’ve noticed the high number of hospital workers and care workers who have very severe cases of COVID-19? These workers are continually at risk of exposure. The amount of virus they encounter in any situation can be very large. When this happens, the virus invades rapidly - before even the healthiest immune system has time to react. In some cases, a non-medical person might have very high exposure. Other workers might experience a low exposure and develop immunity, such that higher exposures at a later date might not cause disease. Each case is individual.

When the exposure is severe, the virus multiplies to a dangerous level, such that it causes a secondary illness – injuries to the patient’s body. Even minor exposure to SARS-CoV-2 can cause minor injuries, but only a few create injuries that require medical attention.



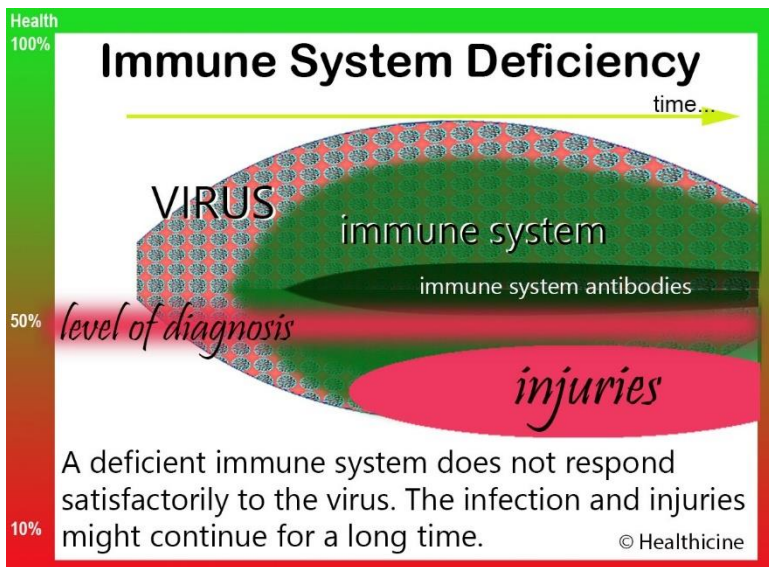
Injuries are separate illness elements which can be caused by the virus, or by the patient’s reaction to the virus. Once injuries occur, multiple cure processes are necessary. We need to address the infection and heal the injuries. Injuries, like the viral infection, are often cured naturally by health and healing. Healing injuries can begin while the infection illness is present and continue after it has been cured.

Immune System

Exposure provides only one dimension of the severity of a SARS-CoV-2 infection. Another is the response of the patient’s immune system, which might be deficient, healthy, or excessive. Mapping the immune system against exposure creates many possible situations. For simplicity, we only present two examples. Normal exposure coupled with a normal immune system response was already covered in the previous chapter.

Deficient Immune System

When the immune system is weak or less active, the illness can last longer, sometimes much longer. As a result, it is also more likely to lead to injuries from the virus.



A patient’s immune system might be deficient in different ways. Deficient immune systems result in a longer duration of illness, more danger, and more damage—deficiencies in antibody production results in decreased ability to protect from future attacks.

Overactive Immune System

Our immune systems are intelligent learning systems.

When the immune system becomes too active or misinformed, it can attack the patient – an autoimmune disease. There are many different types of autoimmune diseases. When a patient is affected by an autoimmune disease, the consequences of a SARS-CoV-2 infection can vary widely. When the immune system is already diseased, COVID-19 is a secondary disease, its prognosis linked to the autoimmune disease.

A COVID-19 infection can cause an autoimmune disease to become more active, more dangerous. The immune system might fail to react, or react too severely or inappropriately, damaging the patient. It might perform normally, curing the infection. Each case is a unique, individual set of illnesses.

Health and Healing

An important factor affecting the duration and intensity of the patient's reaction to any cause of an illness is their health. What is health?

In simplest terms, we understand how infections progress:

- when we are *very healthy*, the virus has few opportunities to multiply and few negative effects
- when we are *moderately healthy*, it has more opportunities to multiply and cause more substantial effects,
- when we are *unhealthy*, growth is substantial, and effects are stronger,
- when we are *very unhealthy*, the virus grows out of control, endangering the life of the patient.

And we understand injuries:

- when we are *very healthy*, we get fewer injuries, which are cured faster
- when we are *moderately healthy*, we get more injuries and healing is slow,
- when we are *unhealthy*, growth of injuries is severe and healing slower,
- when we are *very unhealthy*, injuries grow out of control and can endanger the life of the patient.

And we should also understand medical support, including senior care:

- when our medical care systems are *very healthy*, they quickly attend to damage and work to repair injuries and facilitate healing
- when they are *moderately healthy*, injuries grow more severe and are less likely to be healed or repaired,
- when our medical systems are overloaded, or *unhealthy*, many patients do not receive adequate care,

- when our medical systems become *very unhealthy*, illness consequences, like the inability to breathe naturally, can lead to death.

When a patient dies from the disease, was the death caused by their poor healthiness, or the poor healthiness of their communities of medical support, or perhaps, a combination? Was death caused by the virus, or by a prior disease, or a secondary disease? When we study disease and healthiness, we easily find multiple causes. Physicians regularly need to reference multiple causes when cause of death is identified. When we seek to blame, we easily and incorrectly focus on a single cause.

Healthy Patient Dies?

Maybe you've heard the news: *the perfectly healthy person who was strongly affected by the virus* – maybe they survived a horrible struggle, perhaps they died. How does this happen?

First of all, we don't study health, so we barely understand health. There are many health factors, deficiencies we don't track, which lead to severe consequences. The statement "*a perfectly healthy person*" generally means a person not previously diagnosed with a disease. We have no techniques to measure someone's healthiness.

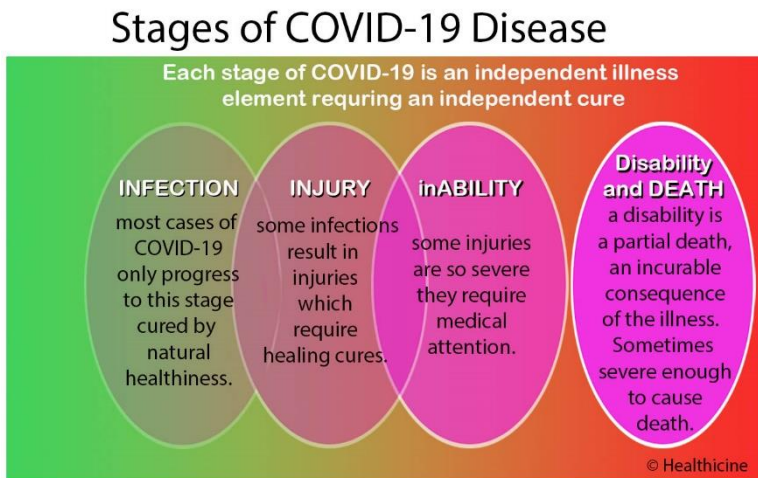
It is possible that in some cases, some people considered to be healthy, are very susceptible to the virus. But that's not why we hear the news.

When many people die from common diseases, the media rarely comments. Large numbers of deaths are common, not newsworthy. But when something exceptional happens – it's a news story. The rarer the story, the bigger the news. The better the anecdote.

As we watch the news, it's easy to believe exceptions are the rule.

Stages of COVID-19 and Their Cures

A case of COVID-19 has the potential for three curable stages before death occurs, as represented in this diagram. Each might be cured independently of the others.



Most patients only reach the *infection* stage. Some patients reach the *injuries* stage, with injuries ranging from minor to severe. It appears that less than 5% of cases of infections cause *inability injuries*, which cannot be cured without assistance. A few cause *incurable disabilities* and fewer still result in *death*.

There is overlap between each of the stages. Several stages can be present at once. The diagnosis of COVID-19 covers all stages, even to death, as a single disease. We need to distinguish illness elements to cure them. Each stage might have multiple illness elements. We are beginning to see reports that SARS-CoV-2 can also infect the blood. Does this mean some patients suffer one infection, and others two? The presence of each illness element is a judgement. A cure is also a judgement. Each element of the illness might be cured, partially cured, might persist for some time, or progress to the next stage.

Cures occur at each element as its *present cause* is addressed. A higher-level-cure exists when multiple elements, multiple stages, have been cured.

Infection Cause

The *present-cause* of the infection stage is the SARS-CoV-2 virus. When the virus is present and active in the body, the patient is infected. There might be many causes in the past, perhaps insufficient personal care and attention, to accidental exposure, or helping someone with the infection. However, there is little to be gained by addressing these causes once the infection is present.

When the cause has been eliminated or disabled, an infection is cured. It makes no difference that the virus was removed by healthiness or medical treatment. A cure is a cure. Most COVID-19 infections are cured within a few weeks by natural healthiness.

In patients with a deficient immune system, the infection might persist. Some patients might carry the virus at a low level after an apparent cure of signs and symptoms. This is a common situation with many viruses. These cases are often considered cured unless the virus's continued presence causes illness. Many viruses are healthy; many are neutral – a poorly studied aspect of life, health, and viruses.

The patient might be cured. The patient might re-infected after the cure. Such distinctions require a definition of cure and a belief in cured, which does not exist for COVID-19 infections today.

Injury Cause

An infection might cause multiple injuries. The injury is the present cause of signs and symptoms of the injury illness. The infection is the past cause. Injuries can result, not just from the infections, but also from our response to them.

Healing cures injuries. Healing begins as soon as the body detects injuries. It can be slow and often must continue for some time after the infection stage has been cured, making it difficult to determine

when healing has completed. Healed (injury cured) is a judgement. In some cases, there might be several injuries needing to be healed.

Inability

When an injury cannot be healed naturally, the patient has an inability, defined as *an injury that can be only cured with medical treatment (or other external intervention)*. Cures of inabilities might be trivial, or complex and can entail risks. We might judge an injury as incurable – a disability, as can be cured with assistance – an inability, as can be healed naturally, or as minor, requiring no action. Cures by intervention often cause other injuries and need healing to complete the cure.

The present cause of an inability is the injury. Inability to breathe is a common consequence of severe COVID-19 disease. We must treat it promptly, or the patient will die. When a patient goes to the hospital and is put on a respirator – because they are unable to breathe – they have an inability that requires medical attention. The goal is to provide time for the patient's healing systems to recover, to heal the injury. At the disease level, which covers all stages, it's a treatment. At the illness element level, it's a cure.

Inabilities and disabilities often exist concurrently with an infection and other injuries. Some might persist long after the infection, and other healable injuries, are cured. An inability might become a permanent attribute or disability of the patient if there is no effective intervention.

Disability

When we believe an injury or inability cannot be cured, we judge a disability. Death is the final disability.

Concurrent Diseases

A concurrent disease is a recognized disease that is present at the same time as the COVID-19 infection. Concurrent diseases can exist before the COVID-19 infection, or arrive during the COVID-19 infection, or be a result of the COVID-19 infection.

Secondary Illness

A secondary illness element is a concurrent illness that occurs when one illness element causes another. A COVID-19 infection uncured leads to secondary illness elements – injuries, inabilities, and disabilities.

Pre COVID-19 Concurrent

Sometimes diseases are present before the COVID-19 infection. This situation is common in sites like nursing homes, where many people already have multiple disease conditions. Most deaths attributed to COVID-19 are cases where the patient already had one or more severe medical conditions before the COVID-19 infection.

A patient who has bronchitis, asthma, or diabetes, or heart disease is more susceptible to a severe case of COVID-19, due to deficiencies in healthiness. When a patient already has two or more concurrent diseases – COVID-19 can be deadly. In Italy's highly publicized situation, over 48% of deaths were patients with 3 or more concurrent diseases before COVID-19, an additional 25% had two or more concurrent diseases before COVID-19, and another 25 percent had at least one concurrent disease before they acquired COVID-19. (Bloomberg, 2020)

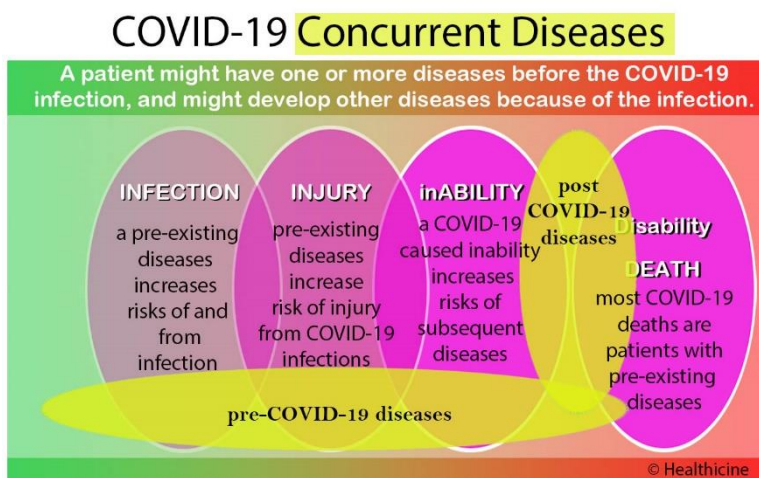
In these cases, we might judge the cause of death to be our failure to cure the first, second, or third disease. Current medical systems designate many diseases as incurable – and as a result, make no attempts to cure or even to study cures and cured. Until we can define cured for all diseases, we cannot learn to cure them.

Causes of death might be attributed to the virus, to the injuries or disabilities caused by the virus, or to other concurrent diseases. Physicians are encouraged to identify multiple causes of death and work to understand sequences to improve future treatments.

Post COVID-19 Concurrent

COVID-19 pneumonia is a lung disease caused by COVID-19³, which caused lung injuries, breathing inabilities, leading to an accumulation of fluid in the lungs. In many, perhaps most cases of COVID-19 pneumonia, the pneumonia-disease consists of two illnesses – the infection and the fluid accumulation inability to breath – and requires two cures.

This image illustrates the sequence of COVID-19 illnesses as it relates to pre and post concurrent diseases.



Death Cured

Can death be cured? Perhaps technically no, although sometimes people come back from the dead. A patient’s heart might stop and be restarted. Curing death depends on whether we define death as final, or perhaps as final *unless aggressive actions are taken*.

³ pneumonia might also be caused by another virus, bacteria, or fungus that infects the patient at the same time as the COVID-19 disease, perhaps as a consequence of damage caused by COVID-19, perhaps independently.

Severity of Each Stage

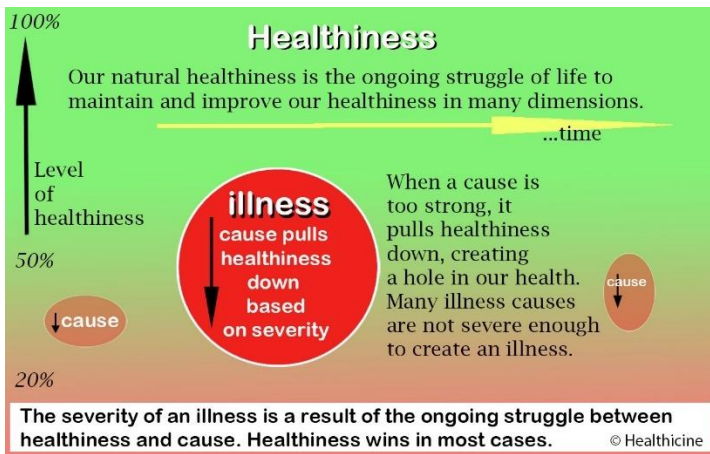
Each stage of COVID-19 might be minor, moderate, or severe enough to cause the next. The severity of each stage depends on its past and present causes versus the healthiness of the patient.⁴

The severity of the *infection stage* depends on the level of exposure to SARS-CoV-2 versus many healthinesses of the patient.

The severity of the *injuries stage* depends on the severity of the infection versus the healthinesses of the patient.

The severity of *inability stage* depends on the severity of the injuries versus the healing abilities of the patient, which includes the healthiness of their medical and other support communities. The likelihood of death depends on the severity of disabilities versus the corresponding healthinesses of the patient.

This diagram is a general view that can be applied to each stage:



Over time, we suffer many illnesses. Our healthiness cure them. Eventually, we all die.

⁴ Some aspects of severity might be a result of attributes that cannot be changed, like genetics.

The severity of any illness element is a result of healthiness pulling us away from illness vs the negative causes pulling down to illness.

Illness exists when a cause is of sufficient strength to produce a hole in health. A disease or medical condition exists when the hole is large enough to be recognized – diagnosed - by a medical professional.

When healthiness is strong and durable, there are fewer illnesses, their duration is shorter and severity less. A stronger cause produces more illness. When the illness lasts longer, more aspects of healthiness are affected, and health drops.

Healthinesses and causes change over time. A virus multiplies or fades away, our diet changes, exercise, and rest patterns of body, mind, spirits and communities change.

We can work to reduce the effects of illness by reducing exposure to cause and by improving healthiness. We can reduce the impact of each stage of illness by improving many healthinesses of body, mind, spirit, and community. We can eliminate each secondary stage by curing each prior stage in time.

COVID-19: The Big Picture

COVID-19, like any disease, might consist of a simple infection or many illnesses elements. Many of the illnesses that result from COVID-19 are considered part of the disease COVID-19. Some are simply not recognized in today’s body-oriented medical systems. Below is a tabular representation of the possible consequences of any illness element.

| <i>COVID-19</i> | <i>Infection</i> | <i>Injury</i> | <i>inAbility</i> | <i>Disability</i> | <i>Death</i> |
|------------------|------------------|---------------|------------------|-------------------|--------------|
| Body | B/Inf | B/Inj | B/inA | B/disA | B/D |
| Mind | M/Inf | M/Inj | M/inA | M/disA | M/D |
| Spirits | S/Inf | S/Inj | S/inA | S/disA | S/D |
| Community | C/Inf | C/Inj | C/inA | C/disA | C/D |

Conventional medicine studies the body and diseases of the body, only the first row. There are diseases classed as *mental*, but they are treated – not cured – with medicines for the body, the brain, not cures for the *mind*. In healthicine, and in curing, we determine the area of illness by identifying the cause, which is proven by the cure.

B/Inf – COVID-19 infections are recognized as a disease by the WHO.

B/Inj – COVID-19 Bodily injuries are considered part of the COVID-19 disease and treated as part of the disease. However, the injuries are not necessarily cured when the virus has been eliminated. Injuries require a secondary cure, healing, which is generally ignored.

B/inA – physical inability treatments are the largest part of medical treatments, although not necessary in most cases of COVID-19. It's easy for medical practitioners to acquire a distorted view of illness because most medical actions and successes are in this single area.

B/disA – COVID-19 physical dIsabilities are also recognized and treated as part of the COVID-19 disease. Some disabilities – which are not cured or cannot be cured – might be classed as a different disease. A surviving patient might have COVID-19 caused lung-disease, or COVID-19 heart disease after recovery from the COVID-19 infection and injuries.

Diseases of the mind are rarely considered part of COVID-19 today, although there is some discussion of illnesses of stress (mental), anxiety, and depression caused by COVID-19. A patient might acquire an infection of psychological stress about COVID-19 – which is currently not recognized as a disease. This stress, anxiety, or depression might progress to cause injuries to the mind of the patient. Mental injuries – as opposed to brain injuries – are not currently studied by conventional medicine. If the psychological injury caused by COVID-19 is not healed, the patient might develop a mental inability, which can only be cured with external intervention – perhaps a psychologist, priest, or grandmother. If incurable, this becomes a disability and the patient might not be able to perform certain natural functions without significant stress. Can death result

from the mental aspect of a COVID-19 illness? Today, it seems COVID-19 can be blamed for deaths in the most extreme circumstances, but I doubt any doctor would document COVID-19 as a cause of death of the patient's mind. Conventional medicine's attention is entirely on the body. Brain dead is *not quite dead*, mind dead is not recognized at all.

A mental illness, like any illness, can be a result of a present mental process, or a present mental attribute or a present mental injury. A mental illness might be caused by absorption of incorrect facts about COVID-19 (attributes) that lead to faulty decisions or actions, causing signs and symptoms of illness. It might also be caused by a disrupted process such that when X happens, the person responds badly. The cure in either case is to address the present cause. But conventional medicine barely recognizes the mental aspect of the illness, much less taking the time to cure.

Spirits, and therefore diseases of spirits, simply do not exist in conventional medicine. Medical doctors are well aware that sometimes a patient simply *gives up the spirit* and dies. Once dead, there is little to analyze. Lesser illnesses of spirits are generally attributed to diseases like depression or mania and treated with drugs for the body, mind and spirits being untouchable by medicines. Even if the patient is cured after a physical treatment – cured cannot be documented. Cured is not defined for any mind or spirit illness.

What is a spirit infection? A spirit injury - that which can be healed? A spirit inability, which can be cured but requires external attention? A spirit disability – which cannot be cured? These illnesses are not recognized, much less studied by today's medicine. There are no spirit treatments and no ability to recognize when cures occur.

Diseases of the community barely exist in conventional medicine. When they do exist, they are not classed as diseases of the community. Instead individuals visit their psychologist, therapist, or jailer. Group therapy does exist, but there are no recognized community diseases to be treated, much less cured. Codependency is sometimes recognized as a disease of the individual, sometimes

treated with couple counselling, but it has no disease code in the World Health Organization's ICD11.

Ailments of the community, however, are commonplace. We commonly speak of our ailing government, ailing businesses, ailing religions, and often talk of needing a cure. But, with our current failure to study cures of the body, we can hardly extend our understanding to communities.

When is a community suffering from an infection? When is it suffering from a COVID-19 infection? Is this happening to our communities today? Yes, of course it is. What are the symptoms? Communities are not simple – signs and symptoms of a COVID-19 infection extend far beyond the symptoms of an illness in a single individual person. Communities are individuals – but their boundaries are much less distinct. Today, we see many communities – most notably, businesses – that have been severely injured by COVID-19 community infections. I suspect some communities have already died as a result.

As we study illness, the concepts of cause, consequences and cures in detail, we can see many aspects of COVID-19 in a new light.

Healthiness

Medicine is about disease, not about healthiness. No medical practice needs to define health. Conventional medicine's only authoritative definition of health was published by the World Health Organization (WHO) in 1949.

Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity.

It's a definition often criticized, never updated nor expanded since 1949. The main problem with the WHO definition of health is that it cannot be used to measure health. Instead, WHO measures disease, disability and death. When no disease is found, *health* is assumed to be present.

*"If you can't measure it, you can't improve it."
- Peter Drucker*

To measure something, we need to define it and the dimensions to be measured. Who can clearly define health today? No one.

Ill, like health, is a general term. We might speak about the ills of society or the fact that a person is ill. However, we can only measure a specific illness – a specific case. Every case of a disease is unique. Each can be recognized, measured in many dimensions, studied.

An illness is a specific instance of being ill. An illness, or a disease, is a concept, not an actual thing. We cannot see it, we might know and measure the cause, but we cannot touch the illness nor the disease. We judge an illness to be present when a cause results in negative signs and symptoms. We cannot measure the disease. An illness is a hole in health. We cannot measure the hole, it's not there. We measure illness by measuring signs and symptoms.

A healthiness

A *healthiness* is a specific instance of health, of being healthy. Like illness, a healthiness is not a thing. However, a healthiness is

something we can observe and measure, as we observe and measure signs and symptoms of a case of disease.

To measure any specific aspect of health, we need to define the healthiness to be measured. Each healthiness is an individual instance of health that we can change. If we cannot change it, it's a reality, not a healthiness.

Vitamin C Healthiness

Vitamin C is not a measure of healthiness. Vitamin C status is not a measure of healthiness, even though it might be an indicator of illness. Vitamin C consumption over time is a measure of healthiness. When a person consumes a healthy amount of Vitamin C - per day, per week, per month, in their diet, they maintain their *Vitamin C Health*. Consumption can be healthy or unhealthy. When someone stops consuming Vitamin C, they will get an illness of Vitamin C deficiency, leading to the disease called scurvy. If someone consumes less than their individual daily requirement of Vitamin C, their healthiness is low. Consuming too much Vitamin C is difficult because our body can adjust to tolerate very high doses.

Every *healthiness*, every potential measure of health, has a possibility for being deficient (sometimes zero) and a possibility for being excessive. We rarely, if ever, know the optimal amount. There are many interrelated variables because each healthiness affects many others.

Healthinesses are not limited to nutrition. We might suffer too little or too much sleep, too little or too much exercise of body, mind, spirits, and communities. The number of potential measures of healthiness is unlimited. But we can measure each one, and more importantly, we can change them.

A healthiness can be a measure of healthy activities or life processes of diet, body, mind, spirit, community, or environment over time. Each might be deficient or excessive.

When we look at the hierarchy of healthicine, we can identify many different types of healthiness in every area.

COVID-19 Related Healthinesses

Which healthinesses affect our response to COVID-19? Can we find many and measure each one? We can summarize individual measurements, creating more general healthiness measures. Let's look at a few potential measures of healthiness.

Immune System Healthiness

We've already looked at immune system healthiness. When the immune system is healthy, it matches its response to the level of the virus encountered, cleans up the damage, consumes the virus, and arms itself against future exposure.

We need a healthy immune system to fight infectious diseases. The immune response needs to be strong enough, but not too strong – healthy. An immune system that is too sensitive, or too strong, might attack our cells – an autoimmune disease.

When we are young, our immune system is strong and intelligent, but not yet learned. It has little knowledge of what infectious agents need to be recognized and fought – and that is good. Disease agents evolve. As our body encounters infections, the immune system learns to be efficient and effective. A healthy immune system is also able to forget. As viruses and bacteria evolve, what was dangerous last decade or last generation, might no longer be dangerous. Germs that are perceived threatening in one situation might be advantageous in another.

As we grow older, our immune systems weaken. But by that time, they are smarter. They have learned to be more effective.

Statistically, age is a predictor of immune system strength, however the relationship is not direct. One person who is very young might have an unhealthy immune system, while an elderly relative might have a very healthy immune system. Individual immune system healthiness, which includes learning, what is learned, and strength can vary widely in any statistical group. Each measure of healthiness, like each case of illness and disease, is individual.

Today, we only measure immune systems from a disease perspective. When an immune system is deficient, we might notice that minor infections take advantage, grow stronger and last longer. We also measure overactive immune systems – those causing autoimmune diseases.

Because we cannot measure the immune system healthiness, we have no techniques to improve immune system healthiness. We can't tell if any action we have taken had a positive or negative result. We have some techniques to increase or decrease immune system activity, but activity is only indirectly related to healthiness. We know how to decrease immune system healthiness, because we sometimes need to suppress it. We can also work to train the immune system to fight specific infections with vaccines. But our general understanding of immune system healthiness is very weak.

Healing Healthiness

When the patient's healing healthiness is high, they heal injuries more effectively and efficiently. Inabilities and disabilities are less likely to appear. Healing healthiness can be deficient, or excessive. Healing is a complex process, sometimes consisting of destruction and removal of damage, followed by regrowth. Both may occur at the same time. Sometimes healing is too active, unhealthy. *“the healing process might be overactive and form excess scar tissue such as hypertrophic scars and keloids.”* (Grubbs, 2018) Healthy healing is needed for the body, mind, spirits, and also communities.

Community Healthiness

It's easy to forget community healthiness. When our community healthiness is high, the community is alert to illness and attends to it promptly and effectively. Community healthiness covers local communities of family and friends, to medical communities providing specific care, to governmental communities responding to epidemics. COVID-19 has had strong effects on our community healthiness. Some positive and some negative. It's hard to see water when you are a fish. It's hard for us to see reality when discussions of the disease surround us. I suspect it will be some time before we have a clear understanding of the effects of COVID-19 on our

community healthiness, and the impact of our community healthiness on COVID-19.

Debate, discussion, news, even fake news, are essential aspects of community healthiness.

Medicine

Can we find a medical cure for COVID-19? As we have seen, a case of COVID-19 can consist of many illness elements: one infection illness, zero or more injury illness elements, and zero or more disability illness elements. Most patients with severe cases of COVID-19 have one or more severe prior diseases, and many have resulting conditions, which, like bacterial pneumonia, also need to be cured. Each of these diseases can consist of several illness elements. Each illness element has a distinct cause and requires a distinct cure, a cure element.

No single medicine can cure all cases of COVID-19. No single medicine can cure each of the illness effects of a COVID-19 infection. It is necessary to cure the infection, hopefully before it causes injuries. Curing the infection has two parts, removing the virus and developing antibodies for future protection. Injuries must be healed – hopefully in a timely manner, such that they do not become disabilities. Inabilities, if curable, need assistance from community. Subsequent diseases, if they occur, must be cured independently.

Most illness elements are cured by natural healthiness. COVID-19 infections are best cured by the patient's healthy immune system. Injuries are cured by natural healing processes, sometimes aided by medical assistance. COVID-19 inabilities are cured by healthy community support, which might be medical or not.

Disabilities, in this text, are defined as injuries that cannot be cured. However, even disabilities can be cared for.

Currently, conventional medicine believes most diseases incurable and as a result focuses on care, ignoring cures. Medicine has a lot of

problems with cure. The most fundamental issue is that most cases of cured cannot be recognized. The focus on disease is part of the problem. A disease is a complex set of related illnesses, generally requiring multiple cures. Cured is not defined for most diseases.

However, the focus on disease means that cured is not defined for illness elements, illness elements being not defined. In addition, cured is currently not defined for any illness or disease cured by health, due to medical chauvinism.

Medical Silos

Medicine, today, consists of a number of silos which function independently, often in opposition. The problems are wide and deep. It's easy to think of conventional medicine as the main silo, the one supported by research and governments, as the one that produces the most cures. Some argue that it is the only legitimate *medicine*, and that all others are bunk. This prejudice only increases the silo effect, increases our ignorance.

When we attempt to count *cure statistics*, we might see the truth, or miss it completely – there are no cures. Most diseases are never cured. When a disease is cured, the cure is not documented. Cure statistics are only gathered in short term clinical studies of a specific treatment for an infectious disease. Cured is not defined for any non-infectious disease. (Kolenchuk T. , 2020)

It makes no difference if a non-infectious medical condition or disease is treated by conventional medicine, by an osteopath, a chiropractor, a homeopath, a Traditional Chinese Medicine practitioner, an Ayurveda practitioner, or a naturopath, or a grandmother, there are no cures.

Current debates between various medical silos, consists largely of debates about which medical practice *does not cure* better. Most of modern medicine is about treatments, scientific or not, that make no attempts to cure.

Cures of infectious diseases, when accomplished by medicines that kill the infectious agent, are often presented as the model of medical

research. They are the exception, not the rule. Most medical research does not contain a definition of cured. As a result, cure is out of scope. Most cures encountered in medical research are simply ignored. The classic example is exhibited in two studies of a homeopathic medical treatment for warts, vs a placebo. (Kolenchuk T. , 2019) In the first study in 1996, researchers documented the number of cures in the treatment arm and in the placebo arm of the study, while analyzing only the non-curative results. When some of the same researchers replicated the study, two short years later in 1998, the word cure disappeared. Cures don't count, so cures were not counted.

As homeopathy claims *like cures like* and conventional medicine claims *homeopathy is bunk*, there is no scientific technique to determine the truth. Conventional medicine researchers occasionally study a specific homeopathic treatment to prove that it *does not cure better than conventional medicine (or a placebo) does not cure*. Research into homeopathic cures vs medical cures hardly exists, because cured is rarely defined. Cures can only be tested on a few infectious diseases. Most cases of disease are not infectious. As we define cure, we might see that in most cases neither produces cures.

To find cures in modern medicine, we need to change modern medicine. We need to define cured independent of any medical practice. A cure is a cure, it should make no difference whether the cure comes from conventional medical treatment, a homeopath, osteopath, chiropractor, a Traditional Chinese Medicine practitioner, an Ayurvedic practitioner, a grandmother – or by natural healthiness. A cure is a cure.

Standard of ~~Care~~ CURE

Medical colleges create, implement, recommend, and enforce *Standards of Care*.

However, there are no published *Standards of Cure*, even for the few diseases that can be cured by medicine. Why not?

Standard of Care is a bureaucratic system designed to justify specific actions, or inactions. Often, for example, when a patient is treated

with the standard of care, medical insurance pays for the treatment – regardless of the consequences. But, when a patient is cured by a treatment that is not part of the standard of care, the cure is not covered by medical insurance. There are cases where physicians are taken to task for using a treatment that goes against the standard of care – even after it cured.

Standards of Cure might be compared to the Hippocratic Oath. When most people think of the Hippocratic Oath, they think of “*do no harm*”. But *do no harm* is not part of the oath. The Hippocratic Oath says little about the patient – more about promises to the profession and to fellow doctors. Three of the first four paragraphs are about the profession, making no mention of the patient. It also promises to “*remain... free of all intentional injustice, of all mischief and in particular of sexual relations with both female and male persons, be they free or slaves.*” Actions that have negative consequences for the profession are forbidden.

Standard of Care is a promise to follow and uphold the recommendations of medical associations – which in most cases cannot possibly produce a cure. It is not a promise to find the best cure for the patient and in many cases, it forbids such actions.

Healthicines, Medicines, Curicines?

When we think of fighting disease, we often think of a medicine, hopefully, something strong, like a prescription medicine – a patent medicine. Medical treatments are often restricted to prescription use in severe, diagnosable illnesses, those causing injuries or likely to cause injuries. Patients with minor illnesses are sent home with the equivalent of “*take two aspirins and call me in the morning.*” Why? Medical treatments can be dangerous by design. Standards of care often force a physician to choose between no action and a dangerous action. Thus, we see most COVID-19 patients sent home. Medical treatments for infectious diseases are poisons to kill the infecting agent which can have negative effects on many aspects of the patient’s healthiness. Most medicines make no attempt to cure.

Hippocrates spoke twice about cures:

What cannot be cured by medicaments is cured by the knife, what the knife cannot cure is cured with the searing iron, and whatever this cannot cure must be considered incurable. -- Hippocrates

And,

Diseases which arise from repletion are cured by depletion; and those that arise from depletion are cured by repletion; and in general, diseases are cured by their contraries --- Hippocrates

There are few references to healing in the writings of Hippocrates. He misunderstood the third cure:

Healing is a matter of time, but it is sometimes also a matter of opportunity -- Hippocrates

Healing comes from inside the patient, not from the doctor, nor from the passage of time. Healing is not a matter of opportunity; it is a matter of healthiness.

That quibble aside, we can map his two curative techniques directly to the two basic types of illnesses. In the first, attribute illnesses are cured by a transformation, which might be caused by a surgery, or a

medicine that forces a change, like penicillin to kill a bacterial infection.

The second quote refers to causal illnesses. However, these cannot be cured by addressing the consequences of the cause - as suggested by Hippocrates. We cannot cure diseases caused by repletion, like obesity, with depletion: starvation or fasting. The only cure is to transform the patient's eating process to avoid repletion. We cannot cure diseases caused by depletion, like starvation, with a single meal – a cure requires sufficient food every day. Scurvy cannot be cured with Vitamin C. It is only cured with a dietary change that provides sufficient Vitamin C for healthiness, Hippocrates' causal cures were half cures. When a causal illness exists, a curative process change must be maintained to maintain the cure. Obesity, malnutrition, and scurvy occur when the causal process, or when absence or failure of life healthy processes occurs. The illness does not *go away*, it is *cured* when the causal process is successfully transformed.

Our failure to understand causal illnesses and causal cures has led to much confusion in medical circles. A confusion that persists today.

We can view this from another angle.

There are two ways to cure. We might cure an illness by actions that improve healthiness or by actions that decrease healthiness.

When we cure by improving healthiness, we shouldn't call it a *treatment*, even though it is a cure. Providing a healthy diet, quitting smoking, meditation are not treatments. But they can be cures. Many cures that result from increases healthiness are accomplishments of the patient, not by any medical doctor. Medical advice could be a guide, but today, conventional medicine fails to study health. Health is slow and steady, honest, and true. When we improve healthiness, we increase our ability to fight illness.

Sometimes, we can cure by decreasing healthiness – hoping that to later recovers that lost health. Surgeries can cure, and the patient heals. Antibiotics sometimes cure by killing harmful and helpful bacteria – and recovery of healthiness can be difficult. Most medicines function by decreasing healthiness. Medicines are fast but

dangerous. We often think of medicine as tricking a disease, but we can't trick health. Unfortunately, few of today's medicines cure any diseases – most are designed to treat symptoms, not to cure. Homeopathic medicines openly claim to cure symptoms, and conventional medicine turns a blind eye, attacking homeopathic drugs instead. When we use a *drug* to treat, but not cure, a *curable condition* – we are tricking ourselves. Analgesics, for example, are designed to reduce pain, without any attempt to cure. None of the 10 best-selling medicines in 2011 made any claim to cure any disease. (Kolenchuk T. , 2016) The pattern continues today, growing worse – not better. As more and more diseases are classified *incurable*, and without a medical or scientific definition of *cured* we focus on medical treatments, but not cures.

Many illnesses can only be cured with health. Many illnesses, like scurvy, are a direct result of unhealthy actions or processes – and can only be cured with healthy actions or processes. Some illnesses might be cured by actions that improve healthiness in some ways and decrease it in other ways. Health is about balance and harmony, not about perfection. Every illness has many possible cures. Some illnesses might be best cured by methods that reduce healthiness. Some might be cured by one method that improves healthiness, or by a different technique that decreases healthiness. Sometimes we need to move fast with a risky treatment or cure, before an injury or illness results in more severe consequences.

Usually, improving healthiness is best – more effective, safer, less costly, but slower. Most illnesses are cured by improving healthiness, without medicines, especially if we catch them early.

Whether we choose to cure by improving healthiness, or by decreasing healthiness, we need to be aware that our actions are summative.

When we cure by improving healthiness, we can take several actions at once. Some illnesses are fast and dangerous, but many are, like health, slow and steady. When we look closely, we will find that illness, like health, can be honest and true – when we are ready to

face the truth. Actions that increase healthiness work together – we improve our successes by using multiple actions at the same time.

When we cure by decreasing healthiness, we must avoid taking several actions at once. Actions that decrease healthiness sum their forces against healthiness. Use of more than one at a time increases risk and danger.

Doctors are conscious of the fact that medical actions decrease healthiness, that taking several actions at once increases risk. Unfortunately, this logic is often extended to actions that improve healthiness, when a patient consults a medical authority. Sometimes – there are specific risks of mixing healthy actions and drugs, like drinking grapefruit juice while taking statin drugs, which do not cure any disease. In most cases, actions to improve healthiness support the patient and counter medical actions decreases in healthiness.

Let's look at our pothole example from the perspective of improving or decreasing the healthiness of the road, with an attribute cure or a causal cure.

Attribute Pothole Cure

We can cure a pothole with an attribute cure, by changing the hole such that it no longer wrecks cars that go too fast.

1. Improve healthiness: fill in the pothole with healthy replacement pavement. We may need to block the road for some time, while the surgery occurs. The cure might not be perfect, but it will be very good.
2. Decrease healthiness: we might break down the edges of the hole and use that pavement to fill the hole. The hole will be larger, but the shock to cars will be less severe and the hole might almost disappear.

Note: that's a paved road. A different road might require completely different cure actions. A gravel road, with holes creating a washboard effect, requires different actions to improve healthiness. The actions above have reversed effects on healthiness.

1. Filling the holes with new material does not solve the problem, it raises the road higher, possibly making it less useful, less stable. Use of stronger materials creates large stones that can damage cars.
2. Scraping the road with a grader rips the road material down where it has bunched up and fills in the holes. They disappear.

In both cases, we can easily see the long-term consequences. When we cure with health, the cure lasts, and the road might even be better than it was before the hole developed. When we cure by decreasing healthiness, the road is less useful, even though the pothole illness is gone. The road will not last as long and new potholes are likely to form.

Causal Pothole Cure

When we view the pothole as a failure of some process, we need repair the hole and repair the process, to cure the higher-level illness by addressing the higher-level cause.

1. Improve healthiness: repair the hole and redirect the heavy traffic to a stronger road. The road will function as good as before, or better.
2. Decrease healthiness: fix the pothole and lower the speed limit on the road, new potholes will be less likely to appear. But the roadway will be less functional than before due to the decreased healthiness.

Healthicines

Cures by improving healthiness should be called healthicines, not medicines. Most medicines do not cure, they function by decreasing healthiness. The following tables illustrate some important dimensions of healthicines, cures and medicines.

| Healthicines | CURES | Medicines |
|---|---|--|
| Improve healthiness | Cure Illness | Fight Illness |
| Prevent, treat, and cure illnesses by <i>improving healthiness, healing, wholeness, balance, and harmony.</i> | <i>Transforms the present-cause of an illness to a non-cause.</i> | Prevent, treat, and cure diseases by <i>fighting disease causes, signs and symptoms.</i> |
| <i>Healthicines are actions</i> that improve the patient’s current state of health. | <i>A cure is a transformation of the present-cause of an illness.</i> | <i>Medicines are products,</i> designed to treat signs and symptoms of disease. |
| <i>A natural part of life and living.</i> Slow and steady. Honest and true. | The need for a cure might be <i>urgent or not urgent, important or not so much.</i> | Medicines are <i>fast acting,</i> often <i>dangerous and unpredictable.</i> |
| General, not specific. Based on nature, acting in cooperation. Cannot be patented. Freely available. | The consequences of a successful changes. Not a thing. | Surgically precise. A specific action or thing. Often patented to limit access. |

Because medicines and medical treatments and devices can be patented and copyrighted, commercial medicine communities naturally drift to unnatural treatments that fail to cure. They are more profitable. Companies design and market products having stronger and stronger effects on signs and symptoms to seek approval and promote sales. This situation can cause community illnesses like the opioid epidemic. (CDC) or blockage of access to medicines in order to deter competition.

There are no *stronger cures*. A cure is a cure. Faster cures are dangerous when speed is not important, sometimes necessary when the patient’s condition is critical. Healing takes time. Cured being undefined, no practice of medicine has an economic incentive to search for more effective cures. Conventional medicine has no concept of a healthier cure.

We can also take a more direct look at healthicines, cures and medicines from the perspective of curing.

| Healthicine | CURE | Medicine |
|--|---|--|
| Healthy Cure Actions | Elementary Cures | Medical Cures |
| <i>Cures illness</i> by improving healing, healthiness, wholeness, balance, and harmony. | A <i>cure</i> transforms the present-cause of an illness element. | <i>Cures disease</i> by fighting infectious agents or by surgical intervention. |
| The <i>cause</i> of all illness as an <i>absence of healthiness</i> . | A <i>cure-cause</i> is the cause which, when addressed, results in a cure. | Only defines <i>infectious causes of physical diseases</i> . |
| <i>Most healthy actions</i> don’t cure. They improve health when no illness is present. | <i>Most cures</i> are not medically recognized. Cured is not defined. | Few <i>medicines and few medical treatments</i> are designed to cure any disease. Fewer claim to cure. |
| Includes cures of illnesses of <i>body, mind, spirit, and community</i> . | Cures are important for <i>plants, animals, and even non-living systems</i> . | Only recognizes cures of an individual person’s <i>physical body</i> . |

Each of the three types of cures, the transformation of an attribute, healing and transformation or process, can be seen through the lenses of healthcines, cures, and medicines.

| Healthicine | CURE | Medicine |
|--|---|---|
| <i>A healthy transformation can be the addition, change, or removal of an attribute of body, mind, spirit, community or environment, that is causing illness by its presence, its excessive or deficient nature, or its absence.</i> | | |
| Three Types of Cures: Transformation, Healing, and Causal | | |
| A transformational cure occurs when a <i>healthiness</i> or an <i>unhealthiness</i> is <i>transformed</i> to a healthier state. | A transformation cure is a <i>change to an attribute</i> that was causing illness. | Transformational medical cures are <i>anti-parasitic medicines</i> or surgeries that transform an infectious cause to disabled or dead. |
| <i>A causal cure occurs when a life process of body, mind, spirit, or community is changed by adding, removing, increasing or decreasing a life process or activity.</i> | | |
| A healthy causal cure is a <i>change to the patient's life processes</i> which are causing illness. | Causal cures are <i>actions that must be maintained to maintain the cure.</i> | Conventional medicine <i>does not recognize any causal cures</i> today. |
| <i>A healing cure is a transformation that occurs naturally due to the naturally progressive nature of life, healing, immune systems, and communities.</i> | | |
| Healthicines <i>support healing cures</i> by improving healthiness. | Healing cures are <i>natural transformations of body, mind, spirit, or community.</i> | Some medicines and medical devices facilitate healing by <i>decreasing healthiness, forcing rest to facilitate healing.</i> |
| Healthy actions to facilitate healing include positive and negative actions. Fasting can be an important cure element. | Healing consists of breakdown of negative aspects of health and building up positive aspects of health. | Conventional medicine rarely recognizes negative actions as treatments. Fasting is misunderstood. |

Prevention

Prevention is better than cure - Desiderius Erasmus

Erasmus made that quote in the 1600s, at a time when most cures were either *miracles*, or deadly. Erasmus also often spoke of physicians who killed patients while trying to cure them and quoted Cicero, *the cure was worse than the disease* -- although that was a political cure, for a community – not individual patient.

Most cures of the 1600s were simply ignored. The same is true today. The common cold, influenza, and measles are easily cured by health. Healing cures most injuries. We seek cures and lament their absence, while failing to study their presence.

Prevention is better than medical cures – because medical cures are dangerous, because most medical treatments don't cure.

Is prevention better than cure? *“One may think that “prevention is better than cure” is a quote from the goddess Hygiene, yet the vintage is recent and the wisdom is more limited than it appears.”* (Imre Loeffler)

Prevention is not better than cure. Prevention is *different* from cure.

There are many different stories of how to prevent elephants, from an elephant prevention stick, to throwing salt over your shoulder, to putting marshmallows on your lawn. When these preventatives are challenged, their supporters respond *“Do you see any elephants?”*

Prevention is statistical. We take action to prevent diseases. But, when a case of disease is averted, we have no proof – there is no disease. We rely on statistics to demonstrate that, in theory, our actions prevented disease cases that would otherwise have occurred.

Cures are real, not statistical. Every cure is a single case of illness, a unique story with an individual patient, a cause, a history, and a success. However, it is not possible to collect statistical data about cures today, cured being undefined.

Diminishing Returns from Preventatives

*For want of a nail, the shoe was lost;
For want of the shoe, the horse was lost;
For want of the horse, the rider was lost;
For want of the rider, the battle was lost;
For want of the battle, the kingdom was lost;
And all for the want of a horseshoe nail.*

Preventative actions are affected by the law of diminishing returns. The more we invest in a preventative, the less return we see. Often, preventatives don't add up. Preventatives are hypothetical. We might want to believe that the kingdom was lost due to the absence of a single nail. In reality, the concept is simplistic and nonsensical. Adding a single nail, in the above ditty, does not recover the kingdom; adding a single nail before the battle is not going to change the battle outcome, nor does adding a single horseshoe, rider, or horse. Working to ensure that every horse has a solidly attached shoe is a full-time job. Horses live and grow, their hoofs grow, they grow old and die. The status of a single nail, on a single horse, on a single rider, in a single battle, has little if anything to do with the loss of a kingdom. The story is useful. It reminds us to be diligent, because our actions can have unforeseen consequences. But it is simply a useful fiction. It never happened.

“when the risk of an adverse event can be reduced in several different ways, the impact of each intervention can generally be shown mathematically to be reduced by the previous ones.” (Mold, 2010)

The authors got that half-right, only evaluating medical preventative actions. There are two types of preventatives.

Preventatives are like cures. Many cures are preventatives, preventing secondary diseases before they occur. Many preventatives can be cures, but only when an illness is present. Like cures, preventatives sum with respect to how their actions increase or decrease healthiness. There is little mystery.

When actions prevent illness by *reducing healthiness*, the net sum is negative. Every action to reduce healthiness creates more risk, more

potential to cause other illnesses. Unhealthy actions are summative in their unhealthiness. Thus: “*the impact of each intervention can be ...reduced by the previous one,*” is a misunderstanding of problems that arise from summation of negative preventatives.

When our actions prevent illness by *improving healthiness*, each action adds value. Healthicines are summative in their improvement of healthiness, and do not suffer nearly as much from the law of diminishing returns.

Preventative actions can be Healthy or Unhealthy

Healthy
food, exercise,
and rest of body,
mind, spirits, and
community.

Healthy preventatives
are additive. Each preventative
action that improves healthiness
improves overall prevention of diseases.

Unhealthy preventatives like strait jackets,
handcuffs, masks, gloves, and painkillers
work by preventing healthy actions
in situations where they might
cause or increase illness.

Unhealthy actions are
additive in their
creation of
unhealthiness.

© Healthicine

There is, of course, a gradation between healthy actions and unhealthy actions which can vary by patient and case. Too much of anything can be unhealthy. Too little restraint can also be unhealthy. These concepts are poorly studied by any medical practice, perhaps because healthiness is not studied. Sometimes, the same action can produce a healthy effect in one situation, and an unhealthy effect in another. A patient with weak leg muscles might be advised to exercise, while another, with a broken leg, could cause more damage with exercise.

Because we rarely study diminishing returns of negative preventative actions, it's easy to misunderstand additive unhealthiness. It's easy to become attached to a preventative action and ignore costs, which businesses might see as opportunities.

“In conclusion, there is a limited evidence base to support the use of masks and/or respirators in healthcare or community settings.” (Faisal

bin-Reza, 2011) All preventative actions are complex. We are advised that face masks, when used for COVID-19, are an effective preventative of disease transmission when the person wearing the mask is infected with the virus. But, when the mask wearer is not infected, a face mask can collect the virus, and also prompt us to touch our face more often, enhancing transmission of the disease. Wearing a mask can be a healthy preventative for the community, when the mask wearing individual is infected. It is always an unhealthy preventative for the individual. When all members of a community wear a mask, is it more or less healthy? When there is danger of infectious illness? When there is little or no danger of infectious illness? These questions are not trivial, and the answers can change depending on the situation. Politicians like simple answers. Cures are not simple, neither is prevention.

With COVID-19, cured is not defined, even as thousands of cases are cured by health. Fear and misunderstanding easily leaves us grasping for preventatives, even those that reduce healthiness, even some can cause more illnesses than they prevent. How can we measure the cost of world-wide quarantine actions vs the benefits of illnesses that do not occur? We cannot. Are more illnesses caused by the quarantine, or prevented? We simply don't know. Maybe we will never know.

A Cure is the Best Preventative

At each stage of any illness, a cure is the best tool to prevent the next stage of disease.

We apply the same summative logic to both preventatives cures. Healthy transformations sum to produce better transformational cures. Healthy actions taken to improve healing sum to facilitate better healing resulting in better healing cures. Healthy process changes sum to produce better causal cures. Although unhealthy transformations, unhealthy actions to promote healing, and unhealthy process changes can produce individual cures – they need to be isolated, or carefully monitored with regards to creation of more unhealthiness and even new illnesses.

When a patient is infected by SARS-CoV-2, a quick cure prevents injuries, inabilities, disabilities, and death. When the illness progresses, and causes injuries, quick and efficient healing might still prevent inabilities, disabilities, and death. When the patient is unable to fight the disease, medical intervention can prevent the inability from progressing to a disability – by curing it. Of course, we cannot prevent eventual death, but sometimes we learn to cure a disability, as we have learned to cure cleft lip and cataracts.

When COVID-19 is the secondary illness cures become more important. Most COVID-19 deaths are cases where the SARS-CoV-2 infection is secondary or tertiary, not the primary illness. The best way to prevent a combination of diabetes and COVID-19, is to cure diabetes. The best way to cure a combination of hypertension and COVID-19 is to cure the hypertension. But today, as many patients claim to be cured of diabetes, and many doctors claim to cure diabetes, all claims are ignored. The medical authorities advise “*There’s no cure*” and “*we’re getting closer to a cure*” (Diabetes UK, 2020) “*We know that we can find a cure*” and the mission statement: “*To prevent and cure diabetes*” (American Diabetes Association, 2020), is stated without any definition of cured. There is little discussion a cure for hypertension, as if no cures exist, even while

published research announces *Not All Hypertension is a Lifelong Disease* (Shumin Yang, 2020) – even as the authors avoid using the word cure, although perhaps without conscious intent.

Cured is not defined and cannot be tested. How can we know we are getting closer to a state of cured, when cured is not defined. We simply cannot. Who can see the cure when one occurs? No one.

As a result, conventional medicine and the commerce of medicine drifts away from cures and towards preventatives. There is little need to prove a preventative action prevents any specific elephants.

Preventing COVID-19

This table illustrates how healthicines, cures, and medicines sum in their preventative actions.

| | | |
|---|--|--|
| <i>Preventatives are statistical. They can only be tracked at the community level, statistically. It is not possible to prove that any preventative action prevented any case of illness or disease.</i> | | |
| Healthicine | CURE | Medicine |
| Healthy Preventatives | Curative Preventatives | Medical Preventatives |
| Healthicines are healthy actions that prevent illness by <i>improving healthiness.</i> | Cures prevent secondary illnesses <i>by addressing their causes before illness occurs.</i> | Medicines often prevent illness and complications <i>by disabling some aspects of healthiness.</i> |
| Healthicine preventatives are healthy in nature, non-medical. | Curative preventatives can be healthicines or medicines. | Medicines prevent <i>diseases by surgical type interventions.</i> |
| Healthy preventatives sum to improve many healthinesses and decrease risks. | Cures sum to improve healthiness when the cure action is healthy. | Medicines sum unhealthiness and increase risk. |

No medicines cure – because medicines are things. Cures come from actions (or intentional inactions), not from things. Antibiotics do not cure by themselves; the action of taking them can sometimes produce a cure. Healthy actions can cure. Sometimes dangerous actions cure.

Medicines to Fight COVID-19

Bureaucratic organizations, like the FDA, approve medical treatments. Extensive clinical testing is first required to minimize the danger of the treatment. Secondary testing generally aims at reducing signs and symptoms of disease, rarely curing. There is financial incentive to fund studies of treatments that provide a product monopoly. FDA approval costs a lot of money and today its primary use is a barrier against competitors. Businesses that want exclusive or monopoly rights to a treatment seek FDA approval. Organizations that are not profit motivated have little financial incentive to seek FDA approval. The results of academic studies, for example, seldom lead to approved products unless they are picked up by corporate interests, regardless of scientific merit. Financial effectiveness has far more approval value than science.

Techniques to improve healthiness are not approved to fight any disease. There is no need and no demand. A healthicine product might receive GRAS (Generally Regarded as Safe) status, but there is no higher rating. Healthiness is not defined, and thus cannot be measured, so improving healthiness is not scored.

The FDA will not approve many treatments that are effective to treat COVID-19. Why? Because no-one will apply for approval. The FDA only approves specific products based on an application for approval. Treatments that cures in the early stages of COVID-19, must compete against natural healthiness. There is no money in improving healthiness.

Treatments and Cures for COVID-19

Although the media seems to be constantly reporting potential cures, there are few researchers searching for cures for COVID-19. Most are searching for treatments – cured being undefined. A search of ClinicalTrials.gov for COVID-19 currently showed 1133 (today, 1915) studies. A search for COVID-19 and *CURE*, showed only 33 (today 46) trials, less than three percent. A number of those contain the word ‘cure’ because they are studies of *cured* patients,

studying cases where the virus infection has been cured (poorly defined). Some include statements like “*Currently, no specific drugs or vaccines are available to **cure** the patients with COVID-19 pneumonia*” and then propose testing a treatment for *COVID-19 pneumonia* – without a definition of cure.

Clinical Trials

Clinical trials are generally used to identify medicines to treat diseases. The gold standard of a double-blind, placebo-controlled clinical trial is only necessary because medicines generally decrease healthiness. Medicines are isolated to avoid accumulations of unhealthiness.

Healthicines, treatments that improve healthiness are summative for healthiness. The use of clinical trial methods is only necessary when the healthy treatment functions by decreasing some aspects of healthiness.

Curing COVID-19

A mild case of COVID-19 consists of a single illness element, an infection, is easily cured by natural healthiness, often before it is diagnosed. A severe case of COVID-19 consists of several illness elements, some of which might be best cured with medical intervention, others with healthiness.

Most cases of COVID-19 are cured by health, not by medicines. Doctors routinely advise patients to go home to heal until there is a significant danger, rarely giving patients advice about healthy cures – they are not recognized medically. Modern medicine does not study healthiness.

How to Cure COVID-19?

I am not a doctor. I cannot tell you how to cure COVID-19. However, if you ask your doctor, or perhaps the best doctor in the city, or your country, or the world. None can tell you how to cure COVID-19. If you cure your COVID-19, or your doctor cures your COVID-19, there is no proof. There are many tests for COVID-19. There is no test for COVID-19 cured. It is currently not possible to cure COVID-19 and prove it cured, much less prove that any actions were responsible for the cure.

We can take many actions, healthical⁵ and medical, that move towards a COVID-19 cure by addressing present causes. Healthy actions can be advantageous before the disease appears, before it can be diagnosed. Many will prevent COVID-19 or cure it before it advances to any next stage.

⁵ Is it strange that healthical is not a word? But it is a domain name for sale, only \$3,355, a Florida LLC, and a few Facebook and YouTube pages.

Healthicines vs Medicines

There is a fundamental difference between healthicines and medicines. Many actions can be healthicines when we are healthy and act as medicines when we are sick. What's the difference?

An illness is cured when no more medicines are needed. – The Healthicine Creed

We don't stop needing the causal cure, after the illness is cured. But we stop needing medicines.

In this chapter, I examine several actions that might be taken to fight a COVID-19 illness or disease, from a healthicine perspective. I am not a doctor.

This is not medical advice, it is my healthicine opinion. My goal is not to be comprehensive – attempting to do so might only achieve a book ban. Rather, I wish to illustrate several important aspects of COVID-19 illness element cures.

Water

Let food be thy medicine. What about water?

Dehydration is a complex condition with many possible causes and consequences. It is also a condition common in many senior care homes around the world. In Italy: *“the first attention we must do is to make the elderly drink a lot, about two liters a day which corresponds to eight large glasses...because in age the thirst stimulus is lost and it is therefore important to administer liquids... in order to avoid diseases associated with dehydration.”* (Sgadari) Worldwide: *“Even though dehydration is a big problem among nursing home residents, a universally agreed method to diagnose dehydration among nursing home residents is missing.”* (Simone J. C. Paulis, 2020)

Availability

Water can be easily purchased without a medical prescription. In many cases, it can be acquired for free.

Healthicine:

Water is a healthicine. Normally, when we are young and healthy, we consume enough water to maintain our health, and can easily sense, without conscious awareness, the need for water. However, it is easy, even for someone in good health, to become dehydrated and not notice it. Medical experts recommend 8 glasses of water a day, although without solid evidence, it's probably good advice. We need to be more active in meeting our need for water when we are sick with COVID-19 or any other illness. For the health of it.

Medicine

When a person is dehydrated, water becomes a powerful medicine working to increase healthiness. *“One of the main effects of viral infections is dehydration, which the body combats by increasing its temperature, often causing fever; this means that you lose more water through skin evaporation and even breathing.”* Dr. Blanca Lizaola-Mayo, SOS Hydration, markets a medical product designed to treat dehydration caused by exercise, which appears to be *not clinically tested* for viral infections, nor for dehydration due to the effects of aging. Water is not approved as a treatment for COVID-19 by the FDA. In FDA-speak *“There is no evidence that water can be used to diagnose, treat, or cure any disease.”*

Cure

Does water cure any disease? Does water cure any element of COVID-19? Dehydration is a prior condition for many COVID-19 patients. It is also a condition that COVID-19 can exacerbate. Cured is not defined for dehydration. But yes, water can cure it. When the dehydration is caused by another illness, two cures are necessary. A complete cure entails a cure for the cause and another for the present dehydration consequences - water.

Causal Cure: When a person is chronically dehydrated because they are not drinking enough water – drinking water is a causal cure. Like all causal cures – the cure action must be maintained, or the illness will re-appear.

Attribute Cure: When a person is temporarily dehydrated because specific circumstances – which might include a COVID-19 infection, additional water transforms them to *not dehydrated*, an attribute cure. The cure, consumption of *more water than normally required*, must be maintained as long as the condition causing the dehydration persists.

Healing Cure: dehydration causes slowing of healing and might even lead to inabilities or disabilities due to failures of healing. Proper hydration provided by drinking sufficient water facilitates healing cure processes.

Drug

Water is not a drug approved by the FDA or any other medical authority. There is officially *no evidence* that any water product can be used to diagnose, prevent, treat, or cure any disease.

| Action | Healthicine | Medicine | Cure | FDA |
|--------|-------------|-----------|------|--------------------|
| Water | Yes | Treatment | Yes | <i>no evidence</i> |

Vitamin C

Vitamin C healthiness has an obvious effect on COVID-19. Infections cause injuries. Injuries require healing. Healing requires Vitamin C.

It is useful to look back to Linus Pauling’s attempts to promote Vitamin C as a cure for the common cold. In 1970, Pauling published *Vitamin C and the Common Cold* (Pauling, 1970), in 1981, a revised edition was published with the title *The Common Cold and the Flu* (Pauling, 1981). Pauling’s claims of a cure were disputed and ignored. Looking back, it’s not hard to see why. Linus Pauling and his medical colleagues had no definition of cure nor cured. His critics had no definition of cured either. Without a definition of *common cold cured* – no cure can be proven nor disproven.

We can look at the common cold, using the illness element model, and see it in a new light. The common cold and flu are infectious

diseases. A healthy immune system cures them. Does Vitamin C make the immune system healthier? Who knows?

But we do know that Vitamin C aids healing. As soon as the body detects damage from the infection, it begins to heal. Without sufficient Vitamin C, the injuries heal poorly. With more Vitamin C, they can heal faster and better. Pauling presents several research studies showing that Vitamin C reduces the duration of a cold by 35%. It is an essential part of a healing cure. But today, modern medicine still claims, “*there is no cure for the common cold*” and in similar nonsense, fails to report cures for cases of COVID-19, even as thousands are cured.

Availability

Vitamin C is available naturally in many foods. Concentrated Vitamin C, used to promote healing, can be easily purchased without a medical prescription in many forms.

Healthicine

When a patient’s Vitamin C healthiness is low, healing healthiness is deficient.

Medicine

Vitamin C can be a medicine depending on the situation. According to the US/FDA, there is no evidence Vitamin C can be used to diagnose, treat, or cure *COVID-19*. However, many medical references recommend Vitamin C as a treatment for scurvy and Vitamin C injections of severe wounds, burns or trauma (Healthline, 2020) despite the absence of FDA approval.

Cure

Causal Cure: when the diet is deficient in Vitamin C, the cure is a dietary change that provides sufficient Vitamin C. This is a causal cure that must be maintained as long as the patient lives. If the cure is not maintained, the patient will get a new case of Vitamin C deficiency.

Transformational Cure: a severe case of Vitamin C deficiency has caused damage that can be diagnosed as scurvy. By the time the

disease has progressed to this stage, a dietary change might not be sufficient to cure all of the illness elements. Supplemental Vitamin C in large amounts aids healing, providing a transformation of the injury consequences.

Healing Cure: Vitamin C deficiency is essential to healing. Vitamin C in a healthy diet can aid healing – if the need is more substantial, supplemental Vitamin C is necessary. Patients who suffer injuries from COVID-19 need to heal efficiently and effectively.

Drug

Vitamin C is not a drug approved by the FDA or any other medical authority. There is officially *no evidence* that any Vitamin C product can be used to diagnose, prevent, treat, or cure any disease.

| Action | Healthicine | Medicine | Cure | FDA |
|-----------|-------------|-----------|------|--------------------|
| Vitamin C | Yes | Treatment | Yes | <i>no evidence</i> |

Vitamin D

There is evidence that lower vitamin D status is associated with acute respiratory tract infections. (Susan A Lanham-New, 2020). It is clear that many patients who die from COVID-19 are Vitamin D deficient. Most people’s diets are insufficient to meet daily needs for Vitamin D. Elderly people in care homes are less likely to get sunlight necessary to produce Vitamin D. Maintaining healthy levels of Vitamin D is essential to minimize effects of SARS-CoV-2 and many other infections. *“Recent meta-analyses of randomised controlled trials (RCTs) concluded that the use of vitamin D supplements was associated with lower total mortality in elderly, mostly vitamin D-deficient participants”* IBID.

Availability

Vitamin D supplements can be purchased in pharmacies, grocery stores, and health food stores.

Healthicine

Vitamin D is a healthicine, essential to good overall healthiness. People who live in northern areas are almost universally deficient in Vitamin D in winter months. Many people who live near the equator are also deficient due to life circumstances.

Medicine

Vitamin D can be a medicine, prescribed when a patient is diagnosed with Vitamin D deficiency. However, even though many people are deficient, prescriptions of Vitamin D supplementation are rare.

Cure

Causal Cure: There are only two cures for Vitamin D deficiency, sufficient sunshine or supplements. They can be combined if necessary. It is next to impossible to consume enough natural foods to maintain a healthy Vitamin D status. Vitamin D deficiency is a causal illness – the cure must be maintained, or the illness will occur again.

Transformational Cure: Vitamin D help the body cure the infections by facilitating removal of the infectious agent, the bacteria or virus.

Healing Cure: Vitamin D facilitates healing. This has been well studied and documented. (Reza Razzaghi, 2017) (Zarowitz, 2008) Because Vitamin D is required for healing, Vitamin D deficiency causes deficiencies in healing cures. It is interesting, perhaps dismaying to see a study report *Vitamin D and SARS-CoV-2 virus/COVID-19 disease* with 21 authors, does not mention the healing requirements of COVID-19 disease, nor the healing aspects of Vitamin D. How can this happen? It happens when we don't study cure.

| Action | Healthicine | Medicine | Cure | FDA |
|-----------|-------------|-----------|------|--------------------|
| Vitamin D | Yes | Treatment | Yes | <i>no evidence</i> |

Molecular Hydrogen - Medicine

Many molecular hydrogen products are being studied for treatment of COVID-19 infections that have caused a lot of injuries. Molecular hydrogen is promoted to help end the infectious stage, and it has been demonstrated to aid healing of injuries that can be caused by COVID-19. (Atsuyoshi Iida, 2016)

Availability

Many molecular hydrogen products can be purchased without a medical prescription. Concentrated molecular hydrogen is not available in foods.

Healthicine

Molecular hydrogen is not available in any natural food or natural product. Studies of molecular hydrogen are medical. However, molecular hydrogen products appear to function by improving healthiness. There is evidence that molecular hydrogen improves healthiness when an infectious disease is present, but there does not appear to be evidence that it improves healthiness when no disease is present.

Medicine

Molecular hydrogen products can be medicines. However, only one has ever been approved by the FDA – probably because their components are readily available as non-medical products. There is little incentive for any company to work for approval of molecular hydrogen. It is sometimes recommended and used by non-conventional medical practitioners. When it works, nobody cares; it's not a pharmaceutical product and the patient is no longer ill.

Cure

Causal cure: No. Molecular hydrogen is a medical product used in specific situations. An absence of molecular hydrogen products does not produce any illness.

Transformational Cure: The transformational aspects of molecular hydrogen are poorly studied. Hydrogen peroxide appears to break down injured or damaged tissue an important aspect of healing.

Healing Cure: It is not clear that molecular hydrogen promotes healing directly. The primary action is the destruction of damaged tissue to facilitate healing.

| Action | Healthicine | Medicine | Cure | FDA |
|--------------------|-------------|----------|--|------------------------|
| Molecular Hydrogen | maybe | Yes | Causal Transform Heal | <i>little evidence</i> |

Astaxanthin

Several sources suggest the use of astaxanthin to boost the immune system and prevent or minimize damage caused by the body’s reaction to a SARS-CoV-2 infection. (Santanu Dasgupta's Lab, 2020) Clinicaltrials.GOV and the World Health Organization clinical trials show zero studies of astaxanthin related to COVID-19. Astaxanthin has been documented as a preventative for the injury, disability and death stages of COVID-10, by helping alleviate or avoid a cytokine storm. I have not seen evidence that it facilitates cures of the infection stage.

Because it has not been tested against COVID-19 in clinical studies, and there appears to be little interest in clinical studies, it is not likely to be prescribed by a physician. However, there is considerable scientific evidence that astaxanthin supplementation produces healthy changes in healthy and ill patients. PUBMED lists 111 articles about the benefits of astaxanthin for many conditions. (PUBMED, n.d.). Most studies are in the area of anti-aging products. (Sergio Davinelli, 2018)

Availability

Astaxanthin is a supplement that can purchased at health food stores. It is available in many products.

Healthicine

There is no evidence that our bodies need Astaxanthin. However, astaxanthin is a healthy substance available in many foods. It occurs in trout, microalgae, yeast, shrimp, and other sea creatures.

Medicine

Concentrated astaxanthin is a medicine. It is well studied with respect to its effects on signs and symptoms of skin aging. No astaxanthin product has been approved by the FDA as a product, so in FDA speak, “*there is no evidence that...*”

Cure

Causal Cure: astaxanthin supplementation is not a causal cure, not a cure that needs to be continued to prevent a new case of illness. However, when a patient has an illness like COVID-19, it appears that astaxanthin protects against severe injuries.

Transformational cure: Transformational aspects of astaxanthin appear to be poorly studied except in dermatology, where it has been demonstrated as a powerful medicine.

Healing: astaxanthin promotion of healing skin has been well documented scientifically. It is likely that it promotes healing of injuries caused by COVID-19 infections.

| Action | Healthicine | Medicine | Cure | FDA |
|-------------|-------------|----------|--|--------------------|
| Astaxanthin | Yes | Yes | Causal Transform Heal | <i>no evidence</i> |

Hydroxychloroquine

President Trump has stated support for use of hydroxychloroquine; however, the details are quite unclear. Trump’s statements are generally direct and straightforward, without much analysis. Unfortunately, the use of hydroxychloroquine appears to have become a political, not a scientific issue. Doctors who promote its use are actively discouraged, and those who dismiss its use are

promoted. As a result, it can be challenging to get accurate information. Cures are not studied; they simply disappear.

Hydroxychloroquine appears to present a case study of the failures of the current medical paradigm. Individual cases are ignored. No one investigates claims of success. Statistical and meta studies ignore case details to produce contrary results, without explanations of action. *Every cure is an anecdote. No statistic is a cure.*

Can anyone find the facts? I am not a doctor. I do not claim to provide a definitive analysis. I only provide my healthicine opinion.

Availability

Hydroxychloroquine is not available without a medical prescription. According to some reports, doctors are actively discouraged from prescribing it, to the extent that some report being forced to make up a diagnosis that fits the prescription. President Trump claims to be taking it – but his doctor’s diagnosis has not been made public.

Healthicine

Hydroxychloroquine is not a healthicine. It is not available in any natural product. It is not necessary for any bodily functions. There is no evidence that it improves healthiness in people with no disease.

Medicine

Hydroxychloroquine is an approved medicine, available in many medical products. However, it is not presently an approved treatment for any stage of COVID-19 disease.

Cure

Causal Cure: No. Hydroxychloroquine is not a necessary part of healthiness.

Transformational cure: It appears that hydroxychloroquine works at the infection stage, stopping multiplication of the virus.

Healing: No. There is no evidence that hydroxychloroquine aids healing.

| Action | Healthicine | Medicine | Cure | FDA |
|---------------------|-------------|------------------------------------|---|--------------------|
| Hydroxy-chloroquine | No | Yes, but not approved for COVID-19 | Causal Transform Heal | <i>no evidence</i> |

Counting COVID-19 Cured

A case of COVID-19 might consist of one, two, three or more curable conditions:

1. The coronavirus infection
2. Injuries, caused by the infection, which can be healed. There might be injuries to body, mind, spirit, and community.
3. Inabilities caused by the infection. Injuries that cannot be healed naturally, but can be cured with external assistance, by community.
4. Disabilities, injuries which cannot be cured.
5. Secondary diseases like pneumonia – which might be classified as independent diseases, but are often counted as COVID-19 if the patient dies.
6. Prior Diseases, many COVID-19 patients have prior diseases needing to be cured.

When does a COVID-19 cure exist? It's complicated. Let's taking a look at it in detail.

COVID-19 Infection Cured

A COVID-19 infection is cured when the virus has been eliminated. It might have been eliminated naturally, by the patient's immune system, or by a medical treatment that destroys the virus. We can test for the infection and we can test for no longer infected (cured).

There are a few problems. We don't usually test people for the infection unless it is considered serious. If it's not serious, there is little need. It might be another flu, H1N1, or other minor infection. If it was easily cured by natural healthiness and no medical action is needed.

When an infection is naturally cured, it's usually not serious. No test is required. Minor infections are not normally counted. Their cures are not counted at all.

Injuries

Injuries caused by the COVID-19 infection are cured when...?

Most injuries caused by COVID-19 are cured by healing before they can be diagnosed. Injuries are not typically documented unless they require medical attention. Conventional medicine recognizes healing as a cure, but there is no test for cured for any injury. Cures are consistently ignored.

Inabilities

An inability is an injury that cannot be healed naturally, that requires medical attention. Medical actions are often severe and avoided unless the patient's condition is already dangerous. A patient might need to be provided with oxygen, or even totally immobilized and intubated for a period of time as healing systems recover.

However, these actions and their consequences are documented as *treatments*, not *cures*, and the patient who survives is *recovered*, not *cured*. Cure is often a forbidden word in medical practice.

Disabilities

Disabilities – in conventional medicine, are poorly defined. In healthicine, COVID-19 disabilities are defined as injuries which cannot be cured. For example, a COVID-19 infection might cause some lung damage that is minor, which is cured by natural healing processes. It might also cause some serious damage, an inability that can only be cured with medical assistance. And it might cause some damage that cannot be cured, a disability. This disability might be diagnosed as a medical condition or disease seen to be incurable, like COPD. Is this COVID-19-COPD, or a secondary disease? At this point, the distinctions are not clear. In any case, disabilities are not cured, by definition.

Secondary Diseases

If a COVID-19 patient gets pneumonia, an entire new set of infection, injuries, inabilities, disabilities, and even tertiary diseases – like COPD, might occur as a result. COVID-19 pneumonia might

require one cure, two cures, or more cures. Our medical systems are not structured to distinguish clearly between a primary disease and a secondary, especially when the same organs are affected. The patient's overall condition is treated, not the individual disease. Present-cause is not clearly articulated, much less studied. Is curing the pneumonia independent of curing COVID-19, or a part of curing the COVID-19 – whose infection might already be cured. Little attention is paid to these issues. Cured is not defined and rarely documented.

It's complicated. A patient who gets pneumonia due to damage caused by COVID-19, might still have a COVID-19 infection, or the infection might already be cured. Once their pneumonia is cured, the COVID-19 might have been cured, or not.

Cause of the Cure

Counting cured is really hard.

The less damage caused by COVID-19, the more difficult is to prove the cause of the infection to be SARS-CoV-2. As a result, the lower the severity, the more difficult it is to prove COVID-19 was cured. It can't be cured if it wasn't there.

At the other end of the scale, the higher the damage caused by the virus, the more likely that another disease exists and needs to be cured. Also, by that time there is a potential that the COVID-19 infection was already cured by natural healthiness, such that the patient is only suffering from the consequences of infection – a separate illness.

COVID-19 Medical Cure

Medically, COVID-19 is not defined to be cured. This should be no surprise.

According to the WHO's page on the naming of COVID-19, "*Diseases are named to enable discussion on disease prevention, spread, transmissibility, severity and treatment.*" (WHO, 2020) Note: The word cure is not used. COVID-19 is defined to be counted

statistically. We can easily look up the statistics for COVID-19, worldwide and find statistics for the world, for countries, for provinces and states, often for cities, and see counts for: Confirmed, Recovered, and Deaths.

The word CURED is not used. Italy, is currently an exception, instead of recovered, tracking: ATTUALMENTE POSITIVI 105418, DECEDUTI 21645, GUARITI 38092 (Health Ministry, Italy, 2020) or in English: Currently Positive, Deceased and Healed (a form of cure: Guarito in Italian). When this data is integrated into world statistics, *healed* is replaced with *recovered*. France, on the other hand, reports (in French) confirmed cases, cumulative death, hospitalizations, home returns, in intensive care, death in hospital – with no reference to cure.

When worldwide statistics are accumulated, they become Confirmed, Recovered, and Deaths.

There are no statistics for cured. There are no statistics for COVID-19 infections, only for confirmed infections. Once a case is confirmed, there are only two options, recovered and dead. Cured doesn't count and is not counted.

Some medical researchers are looking for medical cures. What are they looking for? Infection cures. However, most COVID-19 cures come from health. When a viral infection is cured by a medicine, it can be difficult to prove the medicine caused the cure. Healthiness is a powerful adversary.

Most medical researchers are looking for treatments, not cures. This actually makes sense. If a medical treatment can delay the progression of the overall disease, then the patient's health has time to produce a cure.

Disease Cures

Diseases in general, are not defined to be cured. Cured is not defined for the common cold or influenza. Cured is not defined for any non-infectious disease, from arthritis, bloat, cancer, depression, diabetes, epilepsy, fibromyalgia, gout, heart disease, hypertension, obesity,

even to well understood diseases like scurvy. Cured is not defined for any chronic disease, not defined for any mental disorder. There are no statistics of cured for any disease.

Diseases are defined for tracking of *diagnoses* and *deaths*. If a COVID-19 patient does not die, and they can no longer be diagnosed, they are *recovered*. There is no test for cured for most diseases, and no test for cured for COVID-19. Researchers track *cure rate* for cancer treatments (but not for cancers).

Conclusion:

Health is the best medicine, the best preventative, and the best cure. The best ways to prevent COVID-19 are to improve healthiness, before the infection occurs.

The COVID-19 pandemic has forced some understanding of our failure to care for the elderly, living in nursery homes. This is good. But I have little faith it will lead to many positive changes. We don't study health. A vaccine, the current, widely touted solution to COVID-19, will do nothing to address those issues. Instead, it will allow them to fade from our view.

The best way to cure minor COVID-19 infections is to improve the healthiness of the patient. The best way to support healing of injuries – that can be healed naturally – is to improve healthiness.

When the patient is unable to recover by themselves, medical attention is necessary. At present, the medical system and medical practitioners avoid the word cure, even in situations where medical attention is necessary to cure.

COVID-19 is complicated, often minor, sometimes a moderate illness, occasionally dangerous, rarely deadly. It affects different patients in different ways.

Effects occur at the cellular level, the tissue level, in the organs, the organ system, the body, the mind, the spirits, and the communities of the patient. Each patient, each case is unique. When a patient is exposed to the virus a second time after the first infection is cured, consequences can vary, some patients fighting off infection easily, others succumbing to a second infection. Effects differ depending on exposure, the healthiness and strength of the patient's immune systems, healing systems, their mind, their spirits, even their communities.

Perhaps the most powerful effects of COVID-19 are its effects on our communities. All life arises from communities. Our communities define us. Diseases appear to attack individuals, but no

disease is aware of the individual patient, much less aware of our communities.

COVID-19 is nothing special. There are many other diseases. There have similar profiles and effects. As we study the theories of cause and cure, we can see many similarities pointing to the single solution.

Health is the best cure.

To your health, tracy

Founder: Healthicine

ABOUT THE AUTHOR

Tracy Kolenchuk is a retired computer geek, a student of systems. He is also a former Candidate Master of chess, a photographer, a traveler, a student of Spanish, and many other things.

Tracy is the creator and founder of Healthicine, the Arts and Sciences of Health and Healthiness, and author of two books about healthicine. As he worked to update the book Introduction to Healthicine, he encountered a serious blockage. Cure. Cure is not defined medically. As a result, he spent 4 years researching the word cure and published two books about cure, and a research paper A Theory of Cure.

This book is based on the concepts of healthicine and cure, which continue to evolve.

Bibliography

- American Diabetes Association. (2020, 04 28). *About Us*. Retrieved from American Diabetes Association: <https://www.diabetes.org/about-us>
- Atsuyoshi Iida, N. N. (2016). The Clinical Application of Hydrogen as a Medical Treatment. *OKAYAMA UNIVERSITY SCIENTIFIC ACHIEVEMENT REPOSITORY*.
- Ayurveda.com. (2019, 10 11). *Ayurveda.com search for cure*. Retrieved from Ayurveda.com: <https://www.ayurveda.com/Default.aspx?SiteSearchID=4763&ID=/search-results>
- Barron's. (2013). *Barron's Dictionary of Medical Terms, Sixth Edition*. (R. S. M.D., Ed.) Barron's Educational Series.
- Black's. (1992). *Black's Medical Dictionary, 37th Edition*. (H. M. (Editor), Ed.) A&C Black.
- Bloomberg. (2020, 03 18). *99% of Those Who Died From Virus Had Other Illness, Italy Says*. Retrieved from Bloomberg.com: <https://www.bloomberg.com/news/articles/2020-03-18/99-of-those-who-died-from-virus-had-other-illness-italy-says>
- Cancer.gov. (2019, 08 29). *NCI Dictionary of Cancer Terms*. Retrieved from Cancer.gov: <https://www.cancer.gov/publications/dictionaries/cancer-terms/def/survival-rate>
- Cavanaugh, M. (2008). *The One Minute Cure*.
- CDC. (n.d.). *Understanding the Epidemic*. Retrieved from Centers for Disease Control and Prevention: <https://www.cdc.gov/drugoverdose/epidemic/index.html>
- Christopher Lawrence, George Weisz. (n.d.). *Greater than the Parts: Holism in Biomedicine, 1920-1950*. Oxford University Press.

- Complementary and Alternative Medicine Products and their Regulation by the Food and Drug Administration.* (2006, 12 01). Retrieved from US Food and Drug Administration: <https://www.fda.gov/regulatory-information/search-fda-guidance-documents/complementary-and-alternative-medicine-products-and-their-regulation-food-and-drug-administration>
- D, C., HW, H., & JR., G. (1997). *Dictionary of Visual Science. 4th ed.* Boston: Butterworth-Heinemann.
- Diabetes UK. (2020, 04 28). *Is there a cure for Diabetes.* Retrieved from Diabetes UK: <https://www.diabetes.org.uk/diabetes-the-basics/is-there-a-cure>
- DSM-5. (2013). *Diagnostic and Statistical Manual of Mental Disorders.* American Psychiatric Assoc Pub.
- Du R-H, L. L.-R.-Q. (2020, 05 01). Predictors of Mortality for Patients with COVID-19 Pneumonia Caused by SARS-CoV-2. *European Respiratory Journal.* Retrieved from ERS Publications: <https://erj.ersjournals.com/content/erj/early/2020/04/01/13993003.00524-2020.full.pdf>
- Evans, W. F. (1834). *The Divine Law of Cure.*
- Faisal bin-Reza, V. L. (2011). The use of masks and respirators to prevent transmission of influenza: a systematic review of the scientific evidence. *Influenza and Other Respiratory Viruses.*
- Ferri Fred F. MD FACP, . (2019). *Ferri's Clinical Advisor.* Elsevier.
- Griffith, W. (2012). *Complete Guide to Illness Injury and Surgery.*
- Grubbs, H. M. (2018). *Wound Physiology.* StatPearls Publishing.
- Harrison's. (2011). *Harrison's Principles of Internal Medicine.* McGraw-Hill.
- Health Ministry, Italy. (2020, 04 28). *NUOVO CORNAVIRUS: La situazione in Italia: 28 aprile 2020, ore 18.00.* Retrieved from

Minsitero Della Salute -:
http://www.salute.gov.it/portale/nuovocoronavirus/detta_glioContenutiNuovoCoronavirus.jsp?lingua=italiano&id=5351&area=nuovoCoronavirus&menu=vuoto

Healthline. (2020). *Vitamin C Injection: Benefits and Risks*. Retrieved from Healthline.com:
<https://www.healthline.com/health/vitamin-c-injection#benefits>

Hippocrates. (500 BC). *Aphorisms*. Translated by Francis Adams.

Imre Loeffler. (n.d.). Prevention is better than cure. *BMJ - British Medical Journal*. Retrieved from BMJ 2004; 328 doi:
<https://doi.org/10.1136/bmj.328.7431.115-a> (Published 09 January 2004)

Keating, J. M. (1890). *Saunders's Pocket Medical Lexicon*. W.B. Saunders.

Kenneth Miller, M. J. (2013). Use of the Word “Cure” in Oncology. *Journal of Oncology Practice*.

Kolenchuk. (2018). *A Definition and Exploration of Cure*. Retrieved from
https://www.academia.edu/42411970/A_Definition_and_Exploration_of_Cure_-_Update_March

Kolenchuk, T. (2016). *The Medicines Myth*. Retrieved from
<http://healthicine.org/wordpress/medicines-myth/>

Kolenchuk, T. (2017). *Healthicine.org*. Retrieved from Healthicine:
<http://healthicine.org/wordpress/why-cant-we-cure-scurvy/>

Kolenchuk, T. (2019). A Theory of Cure. Retrieved from
https://www.academia.edu/41109111/A_Theory_of_Cure_-_Paper

Kolenchuk, T. (2019, 04 8). *Clinical Studies can't cure Warts*. Retrieved from Healthicine.org:

<http://healthicine.org/wordpress/clinical-studies-cant-cure-warts-or-cancer-either/>

- Kolenchuk, T. (2020, March 17). *What Happens after Conventional Medicine Cure?* Retrieved from Healthicine.org: <http://healthicine.org/wordpress/what-happens-after-conventional-medicine-cure-ignorance-and-denial/>
- Lange's. (2016). *Lange's Current Medical Diagnosis and Treatment*. Lange.
- Last, J. (2001). *A Dictionary of Epidemiology, Fourth Edition*. Oxford University Press, International Epidemiological Association Inc.
- Lindlahr, H. (1913). *Nature Cure:Philosophy & Practice, Based on the Unity of Disease*.
- Mayo Clinic. (2019). *Rabies Diagnosis and Treatment*. Retrieved from Mayo Clinic: <https://www.mayoclinic.org/diseases-conditions/rabies/diagnosis-treatment/drc-20351826>
- Merck. (1899). *Merck Manual of THE MATERIA MEDICA*. MERCK.
- MERCK. (1899). *MERCK'S 1899 MANUAL OF THE MATERIA MEDICA*. MERCK.
- Merck. (1950). *The Merck Manual, 8th Edition*. MERCK.
- Merck. (2011). *Merck Manual of Diagnosis and Treatment*. Merck.
- Merriam-Webster. (2008). *Webster's New World Medical Dictionary, Third Edition*. Merriam-Webster.
- Mold, J. W. (2010). The Law of Diminishing Returns in Clinical Medicine: How Much Risk Reduction is Enough? *The Journal of the American Board of Family Medicine*.
- Munroe, W. (1873). *Munroe's Philosophy of Cure*.
- NIH. (2020, 05 01). *National Centre for Complementary and Integrative Health*. Retrieved from US Department of Health and

- Human Services:
<https://www.nccih.nih.gov/health/complementary-alternative-or-integrative-health-whats-in-a-name>
- Nunn, G. &. (1994). *Paradox and Healing: Medicine, Mythology and Transformation*. Paradox Publishers.
- Oxford. (2008). *A Dictionary of Nursing*. Oxford.
- Oxford. (2015). *The Oxford Concise Medical Dictionary, Ninth Edition*.
- Parr, B. M. (1809). *London Medical Dictionary*. London.
- Pauling. (1981). *The Common Cold and the Flu*.
- Pauling, L. (1970). *Vitamin C and the Common Cold*.
- Pauling, L. (1981). *The Common Cold and the Flu*.
- Porta, M. (2008). *A Dictionary of Epidemiology, Fifth Edition*. Oxford Univeristy Press.
- Prasad, V. (2014). Use of the Word "Cure" in the Oncology Literature. *American Journal of Hospice and Palliative Medicine*.
- Priessnitz, V. (1842). *The Cold Water Cure*.
- PUBMED. (n.d.). *Search for astaxanthin*. Retrieved from National Library of Medicine: https://pubmed.ncbi.nlm.nih.gov/?linkname=pubmed_pubmed&from_uid=29690549
- Reza Razzaghi, H. P.-H. (2017). The Effects of Vitamin D Supplementation on Wound Healing and Metabolic Status in Patients With Diabetic Foot Ulcer: A Randomized, Double-Blind, Placebo-Controlled Trial. *Journal of Diabetes and its Complications*.
- Santanu Dasgupta's Lab. (2020, 04 16). COVID-19: Potential of microalgae derrived natural astaxanthin as adjunctive supplement. doi:10.31219/osf.io/yahd4

- School of Homeopathy. (2019). *Like Cures Like*. Retrieved from School of Homeopathy: <https://www.homeopathyschool.com/why-study-with-us/what-is-homeopathy/like-cures-like/>
- Sergio Davinelli, *. M. (2018). Astaxanthin in Skin Health, Repair, and Disease: A Comprehensive Review. *Nutrients*.
- Sgadari, P. A. (n.d.). *Gli anziani in estate (The Elderly in the Summer)*. Retrieved from Medicina e Informazione Web Tv: <https://www.youtube.com/watch?v=UXI1B7pOXdE>
- Shumin Yang, J. H. (2020). Not All Hypertension Is a Lifelong Disease A Teachable Moment. *JAMA Internal Medicine*. Retrieved from <https://jamanetwork.com/journals/jamainternalmedicine/article-abstract/2762879>
- Simone J. C. Paulis, I. H. (2020). Diagnosing dehydration in the nursing home: international consensus based on a modified Delphi study. *European Geriatric Medicine*. Retrieved from <https://link.springer.com/article/10.1007/s41999-020-00304-3>
- Susan A Lanham-New, a. m. (2020). Vitamin D and SARS-CoV-2 virus/COVID-19 disease. *BMJ Nutrition , Prevention, and Health*.
- Timmreck, T. C. (1998). *An Introduction to Epidemiology*. Jones and Bartlett Publishers.
- Traditional, complementary and integrative medicine*. (2020, 04 28). Retrieved from World Health Organization: <https://www.who.int/traditional-complementary-integrative-medicine/about/en/>
- US Congress. (2019, 11 25). *21st Century Cures Act*. Retrieved from Food and Drug Administration: <https://www.fda.gov/regulatory-information/selected-amendments-fdc-act/21st-century-cures-act>

- Vertosick, F. J. (2002). *The Genius Within*.
- WEBMD. (2018). *Is there a cure for the common cold?* Retrieved from <https://www.webmd.com/cold-and-flu/qa/is-there-a-cure-for-the-common-cold>
- WHO. (2019, 11 25). *WHO - ICD10 Online*. Retrieved from World Health Organization: <https://www.who.int/classifications/icd/icdonlineversions/en/>
- WHO. (2020, 05 01). *Naming the coronavirus disease (COVID-19) and the virus that causes it*. Retrieved from WHO.INT: [https://www.who.int/emergencies/diseases/novel-coronavirus-2019/technical-guidance/naming-the-coronavirus-disease-\(covid-2019\)-and-the-virus-that-causes-it](https://www.who.int/emergencies/diseases/novel-coronavirus-2019/technical-guidance/naming-the-coronavirus-disease-(covid-2019)-and-the-virus-that-causes-it)
- WHO. (2020, 05 20). *Why do the virus and the disease have different names?* Retrieved from World Health Organization: [https://www.who.int/emergencies/diseases/novel-coronavirus-2019/technical-guidance/naming-the-coronavirus-disease-\(covid-2019\)-and-the-virus-that-causes-it](https://www.who.int/emergencies/diseases/novel-coronavirus-2019/technical-guidance/naming-the-coronavirus-disease-(covid-2019)-and-the-virus-that-causes-it)
- Yella Hewings-Martin, P. (2020). *Is there more than one strain of the new coronavirus?* Retrieved from Medical News Today: <https://www.medicalnewstoday.com/articles/is-there-more-than-one-strain-of-the-new-coronavirus>
- Zarowitz, B. J. (2008). The Value of Vitamin D3 over Vitamin D2 in Older Persons. *Geriatric Nursing*.