

# BIOLOGICAL THREATS AND GARLIC AS A NATURAL REMEDY FOR WHAT AILS MODERN CIVILIZATION

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Every day we read or hear about some biological threat, whether it be from a potentially deadly strain of the flu virus; a prevalent pathogenic bacterium in foods like *Campylobacter* in uncooked chicken meat; or a seemingly safe FDA-approved drug that has been found to be unsafe like aspirin that induces bleeding gastric ulcers and brain hemorrhages; or pollutants in the air or water like the endemic fungus that causes Valley Fever or chlorine that decontaminates our tap water but increases the risk for colon cancer; or toxic heavy metals like mercury or lead in our dental fillings and roadways; or parasitic germs like *H. pylori*, *Candida albicans*, or *Streptococcus* that are commonly harbored in our own digestive tract.

Then there is aging itself with all of the chronic diseases it brings with it – circulatory problems, insidious decline in vision from cataracts, glaucoma, and macular degeneration as well as fatty liver, excessive sugar levels, and numerous malignancies.

Not to mention excitotoxins like MSG, toxic sugars like fructose, hydrogenated (trans) fats in baked goods, carcinogens like nitrosamines, acrylamide or dioxin, or a newly described threat – advanced glycation end products produced from heat-processed foods we eat.

There are endless studies of each and every one of these and many other health threats, but no study that assesses these risks as a whole. Modern medicine addresses

each and every one of these health threats individually and capitalizes on all of them by developing costly medicines and narrowly designed treatments that can be found in the voluminous International Classification of Diseases (ICD-volume 10) published by the World Health Organization and in the *Merck Manual*.

Waiting for each and every one of these threats to occur and then attempting to treat them as they are detected appears to be folly. But that is precisely how modern medicine addresses prevalent health threats and runs up the bill.

## Mounting a Defense Against All Biological Threats

Mounting a defense against all of them would pose a considerable challenge as well. How many medicines would one have to take to fend off all of them? And in this era of germ resistance, we cannot habitually take antibiotics to ward off infectious diseases before they occur without inducing treatment-resistant forms of these germs over time.

Is there anything available that counters all these threats?

If an antidote *does* exist for all these health threats, it must be safe, widely available, not require a doctor's prescription, economical, and user friendly. It has to be something that people don't have revulsion over, like the after-taste of cod liver oil.

Vitamins and minerals are essential for health maintenance, but there is no single nutrient that addresses all of these health threats.

## One Antidote: An Old Remedy

Upon careful examination, nature does provide one antidote for what ails modern society – garlic.

Garlic, in particular its primary active principle – allicin:

- Allicin is described as an ideal antioxidant particularly because of its broad application for prevention, therapy, and aging.<sup>1</sup>

- Garlic controls heavy metals such as lead,<sup>2</sup> copper,<sup>3</sup> cadmium,<sup>4</sup> and iron.<sup>5</sup> Garlic removes some heavy metals better than mineral-chelating drugs.<sup>6</sup> While some herbal dietary supplements may increase circulating lead levels, garlic does not.<sup>7</sup>

- Byproducts of oxygen, nitrogen, and metals induce oxidation and damage to DNA and tissues. Garlic neutralizes all oxidants – oxygen free radicals,<sup>8</sup> nitrogen free radicals,<sup>9</sup> singlet oxygen,<sup>10</sup> and the dreaded hydroxyl radical.<sup>11</sup>

- Garlic does not eradicate beneficial bacteria in the digestive tract.<sup>12</sup>

- Garlic counters the effects of environmental chemicals and carcinogens such as dioxin,<sup>13</sup> acrylamide,<sup>14</sup> and asbestos.<sup>15</sup>

- Garlic counters the effects of poor health habits such as over-consumption of alcohol, tobacco use, and over-consumption of food.<sup>16</sup>

- Garlic works synergistically or protectively with many medications, such as statin drugs, antibacterial, and antifungal drugs.<sup>17</sup>

- Garlic counters the effects of aging on the pancreas, liver, brain, heart, arteries, kidneys, and other organs.<sup>18</sup>

- Garlic inhibited tumor necrosis factor

(TNF) about 47% in one human study. TNF is a master marker of inflammation.<sup>19</sup>

- Sulfur compounds in garlic calm and normalize the immune response so that the first arriving white blood cells (neutrophils) do not over-induce inflammation.<sup>20</sup>

- Garlic counters the adverse effects of fructose, considered at high levels to be a toxic form of sugar.<sup>21</sup>

## Garlic and Infectious Disease

- Garlic protects against food poisoning (48 million cases a year in U.S.).<sup>22</sup>

- Kills off a broad spectrum of germs – bacteria, viruses, fungi, amoeba and protozoa, and even ticks and nematodes as well as insect-borne malaria.<sup>23</sup> Garlic molecules eradicate germs effectively without inducing germ resistance.<sup>24</sup> Garlic is more effective than some antibiotics in the treatment of antibiotic resistance bacteria.<sup>25</sup>

- The Centers for Disease Control says modern medicine is in the post-antibiotic era and may be entering a point of no return, when man-made antibiotics won't work anymore. Allicin from garlic is posed as a possible answer to antibiotic resistance.<sup>26</sup>

- Garlic extract has been demonstrated to protect against influenza viruses in laboratory mice.<sup>27</sup> Given that the effectiveness of the flu vaccine is limited among those most at risk (the very young and the very old) for death from the flu and that most of the time the flu vaccine doesn't match the strain of the flu virus in circulation, this raises the possibility that lives are needlessly being lost because modern medicine overlooks garlic.

- Overreliance upon vaccines that deliver small amounts of viruses and bacteria in order to provoke antibodies has led to the problem of vaccine-derived illness and the realization there will never be complete eradication of communicable diseases because of the fact vaccines have become the primary source of circulating infectious disease today.

- Garlic completely eradicates warts with no recurrence reported.<sup>28</sup>

- Kills off intestinal parasites such as *H. pylori* (52% of Americans) and *Candida albicans* (70% of Americans).<sup>29</sup>

- Protects babies from infection in the

womb.<sup>30</sup>

- Garlic is even effective in eradication of hookworm and tapeworm.<sup>31</sup>

## Garlic and Cancer

- While there are no commonly prescribed cancer preventive agents in use today, there are numerous studies that indicate allicin from garlic inhibits cancer.<sup>32</sup> Garlic protects against carcinogenic nitrosamines in food.<sup>33</sup>

## Garlic and The Circulatory System

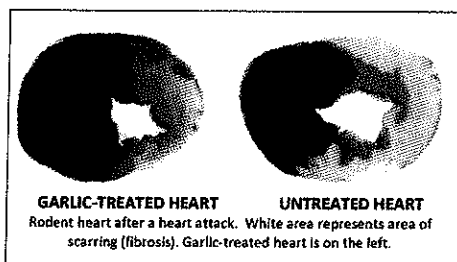
- Garlic inhibits the enzyme required to produce cholesterol.<sup>34</sup>

- Garlic decalcifies arteries.<sup>35</sup>

- Garlic intake is a predictor of whether a person will experience a stroke.<sup>36</sup>

- Garlic, particularly fresh-crushed garlic that provides allicin, produces a minute amount of hydrogen sulfide gas that activates internal antioxidant defenses prior to a heart attack, reducing the area of damage should a heart attack occur and turns mortal heart attacks into non-mortal events.<sup>37</sup>

- The reduced area of damage to the heart following a heart attack facilitated by garlic-derived hydrogen sulfide gas can be visualized, as shown below.



- Garlic, via its ability to generate hydrogen sulfide gas, is a potential treatment for heart failure.<sup>38</sup> Garlic has been demonstrated to improve the blood-pumping activity of the heart following chemotherapy-induced heart failure.<sup>39</sup>

- Raw, crushed garlic cloves yielding allicin, but not cooked garlic, effectively inhibits clumping of blood platelets and is known as a safe anti-blood clotting agent.<sup>40</sup> In one lab dish study, allicin completely inhibited blood platelets from clumping to form clots.<sup>41</sup> Allicin, the primary active ingredient in garlic, is a more potent anti-clotting agent than aspirin.<sup>42</sup> In one study, no bleeding episodes were recorded among patients

taking the blood thinning drug Warfarin and fresh garlic or garlic supplements.<sup>43</sup> In another study, garlic pills did not produce bleeding episodes among genetically vulnerable patients taking Warfarin.<sup>44</sup>

## Garlic and Aging

Because of its mineral-chelating (key-laying) properties, garlic addresses the aging process itself.<sup>45</sup> It is aging that is responsible for most chronic disease.

The "Overmineralization Theory of Aging" has been proposed.<sup>46</sup> Overmineralization has been called "the malignant spirit in successful aging."<sup>47</sup>

Garlic has been found to prolong the life of roundworms in a model of aging.<sup>48</sup>

Garlic activates internal enzymatic antioxidants via the Nrf2 gene transcription factor – catalase, superoxide dismutase, heme oxygenase and glutathione, which is considered an anti-aging effect.<sup>49</sup>

## Garlic Safety

- Garlic is safer and more effective than aspirin.<sup>50</sup>

- Garlic is safer than cholesterol-lowering statin drugs.<sup>51</sup>

- A survey revealed that 8% of 657 patients taking dietary supplements consumed garlic pills (53 patients) and there were no reported side effects. The authors of this study considered potential drug interactions as "worrisome" but could not identify any instances where garlic produced problems when blood thinners were being used.<sup>52</sup>

- A safety review did not find any published reports of adverse effect or mortality associated with garlic.<sup>53</sup>

- Garlic does not appear to interfere with drug metabolism.<sup>54</sup>

## The Reach and Impact of Garlic

In 1988, a report published in the *Journal of the National Medical Association* stated that garlic has "played in the therapy of many diseases since time immemorial .... Garlic has been a mainstay in the medicinal arsenal of many past civilizations, including the Egyptian, Hebrew, Chinese, Greek, Indian, Japanese, and Roman.... No other sub-

stance, either natural or synthetic, can match garlic's proven therapeutic versatility and effectiveness .... Allicin and other sulfur compounds are thought to be the major antimicrobial factors in garlic... Profound therapeutic and economic implications will evolve as data from studies continue to confirm the medicinal spectra of garlic.<sup>55</sup>

It is agonizing to recognize how long garlic and its primary active molecule allicin have been disregarded in preference for synthetic drugs that have boxed mankind into a corner. The plagues of the Dark Ages may return due to germ resistance emanating from overuse of antibiotics.

Aged garlic extract offers many proven health benefits, but lacks the pungent allicin molecule that is garlic's best-studied molecule. In one key study, raw crushed garlic providing allicin, but not boiled or aged garlic, prevented adverse effects upon coronary arteries.<sup>56</sup>

The importance of recognizing and obtaining allicin, its principal active ingredient, particularly because of garlic's germ-fighting properties, has been underscored in this report.<sup>57</sup>

Raw, crushed garlic cloves, by virtue of mixing the allicin-activating enzyme alliinase with garlic pulp, reliably produces al-

licin but, because of its pungency and odor, poses the problem of throat irritation<sup>58</sup> and garlic breath. The pungency and odor produced by raw garlic cloves is an obstacle to public adoption of this natural remedy. Heating garlic cloves to reduce pungency and odor negates any production of allicin, its key ingredient.<sup>59</sup>

Over a decade ago enteric-coated garlic pills were initially found to reduce circulating cholesterol levels, then later failed to do so due to a change in manufacturing. Enteric-coated garlic pills, designed to dissolve in the less acidic intestines rather than the acidic stomach, may not always be a reliable way to produce allicin.<sup>60</sup>

A 2007 trial published in the *Archives of Internal Medicine* conducted by investigators at Stanford Medical School using raw garlic, garlic powder, and aged garlic extract failed to demonstrate a statistical or clinically significant effect upon cholesterol.<sup>60</sup> This report generated negative news reports and a decline in the public's interest in garlic at that time.

(Since that time cholesterol has been authoritatively dismissed as a predictor of impending heart attacks and arterial calcifications have been identified as the primary cause of mortal heart attacks. A large

human trial published in the *European Heart Journal* recently reveals high blood pressure, cholesterol, and diabetes have no bearing on whether a person will experience a future heart attack while a calcium arterial score of zero indicates an individual has a one-half-of-one percent risk of experiencing a mortal heart attack over a 5-year period.<sup>62</sup> This is another giant misdirection by modern medicine. Garlic therapy has been shown to reduce calcification of coronary arteries.<sup>63</sup>)

Meanwhile, the challenge of overcoming garlic's pungency and odor while delivering allicin, its key molecule, has finally been overcome. The availability of an alkaline, buffered garlic capsule that assuredly delivers about 2500-2800 micrograms (2-3 milligrams) of allicin – about the same amount as a fresh-crushed clove of garlic, and that also eliminates garlic breath and odor – is a welcome development. Should adoption of this type of pill into people's daily health regimens occur, one can anticipate a favorable change in health status and longevity in the population at large.

Given the many published reports extolling garlic, its lack of adoption by modern medicine is a major oversight.

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Endnotes at: [sardigarlicendnotes.thenhf.com](http://sardigarlicendnotes.thenhf.com)