

CONNECTING THE MIND AND BODY IN ANCIENT GREEK MEDICINE

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ABSTRACT

TAYLOR SAMUEL FERRIS: Connecting the Mind and Body in Ancient Greek
Medicine

(Under the direction of Aileen Ajootian)

I investigated Greek medicine and healing shrines in antiquity and focused on the issue of the mind-body connection and how this phenomenon was understood in antiquity. I researched the Athenian plague of 430-425 B.C., sleep and dreams, particularly in the Rites of Incubation, and Hippocratic medicine as well as religious medicine in order to understand more deeply the origins of Greek medicine and how the healing phenomena were practiced and understood. I have come to a greater understanding of this connection between the mind and the body and have come to redefine the placebo effect and argue that the mind can persuade the body, which can greatly aid in the healing process of mental and physical ailments.

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INTRODUCTION

Disease and illness have affected humanity constantly over time, and just as we have doctors and medicine in the present day, so did ancient Greeks and Romans in antiquity. Even though human physiology was not as well understood as it is today, and technology has been vastly advancing over the recent years, Greek and Roman doctors still healed people through medical treatments and surgeries. Studying ancient Greek medicine has revealed to me how deeply the ancient Greeks understood the connection between the mind and the body in antiquity. While they seemed to attribute this mental healing capacity to a divine revelation or even magic, it has become more and more apparent to me that they were aware of the ability to manipulate the mind into aiding the healing process.

In chapter I, I performed a case study on the Athenian plague of 430-425 B.C. From Thucydides' account of the plague, much can be learned about the limitations and understandings the Greeks possessed in the 5th century B.C. Furthermore, I laid out the basics of various diseases, and came to a conclusion on the cause of the plague based on scientific DNA studies and symptom descriptions from ancient accounts of the ailment. This chapter served to demonstrate that medicine was used as a response to a need for curing from some type of sickness. The rest of this paper dealt with that response.

In Chapter II, I examined healing sanctuaries, specifically Asklepieia across Greece which were healing cults devoted to the healing god Asklepios. Particularly, I

looked at the Asklepieion at Epidauros in detail. The layout of each Asklepieion varied, but I use this site as a base model because it contained all of the basic elements of a traditional Asklepieion. Some of these healing cults emerged after the plague in Athens. I also talk about the Asklepios cult at Athens and its origin and mention a few other sites that will be brought up later in discussion.

In Chapter III, I looked more closely at rituals performed at individual healing cults in Greece, and I ultimately studied religious medicine which deals with healing through a form of magical or divine intervention. While researching the main ritual at the sanctuary, the rite of incubation, I learned about the numerous healing stories recorded at Epidauros and began looking for explanations for these healing miracles which claimed that Asklepios cured them in a vision while the patient was asleep. From there, I studied sleep as a therapeutic exercise and dream theories. Furthermore, I came to a realization that these patients who entered the sanctuaries were being mentally prepared once they arrived at the sacred healing site, culminating in the actual curative process.

In Chapter IV, I discussed Hippocratic or rational medicine in Greek antiquity. This chapter served to distinguish between rational and religious medicine. I also talk about Greek physicians and how they practiced medicine and the drugs they used. More importantly, I used this chapter to redefine the placebo effect in a broader sense which may have removed some of the negative connotations associated with the term.

CHAPTER I: CASE STUDY

Examining a well-documented epidemic during the classical period of Greece as a case study will provide insights into medicine and medical practices. Epidemiology is, broadly, the study of the transmission of a specific disease over time. Epidemics can be studied by looking at a larger population, and many different methods can be used to study epidemics. Epidemic, endemic, and pandemic are all closely related words stemming from the word *demos*, meaning “the people”.¹ An epidemic, from the Greek prefix *epi* meaning “on,” is like an explosion affecting a large group of people in a confined area. An endemic, from the Greek prefix *en* meaning “in,” is similar to a rug on which people are standing until it occasionally trips a newcomer with its loose edge.² This metaphor implies that the only individuals susceptible to these diseases are ones that do not live within the city and are not used to certain illnesses that lie ineffective among the city population. And a pandemic, from the Greek prefix *pan* meaning “all,” is a larger scale epidemic that is not confined to a single space.³ The goal of epidemiology (and this chapter) is to determine the specific cause of the epidemic as well as identify the disease. I will use descriptive epidemiology in order to analyze the plague in 5th century Athens; examining person, place, and time.⁴ It is important to note that epidemiological studies

¹ Marks 1976, p. xii.

² Marks 1976, p. xii.

³ Marks 1976, p. xii.

⁴ Morens 1992, p. 273.

deal with mathematical equations and data analysis, and I am focusing more on the descriptive nature of this

specific epidemic in Athens. The plague in Athens lasted for 4 and 1/2 to 5 years (430 B.C. to 425 B.C.), and in this chapter I will analyze this public health event.

A Greek man by the name of Thucydides provided an essential account of this period. An Athenian historian, documenting the war between Athens and Sparta, he provides the only account of the plague and the Peloponnesian war (beginning in 431 B.C. and ending in 404 B.C.), and he will be a large focus in this chapter. Born in 460 B.C., he was the son of a wealthy and politically active family, and he was descended from Miltiades, who led Athens to victory against Persia at the battle of Marathon in 490 B.C.⁵ Thucydides fought in the first years of the Peloponnesian war as a soldier and general. Infected by the plague, he survived it and provided much information about the symptoms of the plague as well as the groups of people affected. He was subsequently exiled in 424 B.C.⁶ He died between 404 B.C. and 397 B.C. and left his account of the Peloponnesian war unfinished. Thucydides' report is unparalleled. An excerpt of his translated text, Book II.47-II.64, can be found in Appendix A.

This epidemic has a complicated chronology. The disease came in waves over 5 years, according to Thucydides. It began during early May of 430 B.C. just after the

⁵ Rhodes 2015, p. 8.

⁶ Rhodes 2015, p. 8.

Lacedaemonians laid siege on Athens and remained constant and relentless through the following summer of 429 B.C.⁷ It is thought that the plague never ceased completely, but these waves, instead, are time intervals where it was flaring up. These other waves were believed to be in the summer of 429 B.C. and the winter of 427/426 B.C.⁸

The Athenian plague began in the second year of the Peloponnesian War. Astronomical aids give supporting evidence to back up the seasons and months provided in Thucydides' account. Astronomical phenomena, such as solar eclipses, connect to the lunar calendar which can then be compared to the Athenian calendar.⁹ Thucydides records solar eclipses in his account, such as the one in 424 B.C., which can be correlated to other calendars and events during this time period.¹⁰ The Peloponnesian War was fought between Athens and Lacedaemon, during a time in which small cities allied with either one, and the two forces grew uneasy in the "Thirty Years' Truce" (II.2.i).¹¹ The truce was broken by an assault on the Plataeans by Thebans, and the Plataeans, subsequently, relayed the message to Athens (their ally) that the truce was broken; Both sides prepared for war.¹² Sparta, under the rule of king Archidamus, readied soldiers from across its allied lands to march on Athens, led by the general and statesman Pericles.

As the Peloponnesian war began, Athens and Sparta took separate approaches to the war. While the Spartans were more aggressive and invasive, Athens took a more defensive approach relying on its fortification walls.¹³ These walls included the so-called

⁷ Morens 1992, p. 276.

⁸ Morens 1992, p. 276.

⁹ Meritt 1971, p. 98.

¹⁰ Meritt 1971, p. 102.

¹¹ Thucydides 1910, II.2.

¹² Thucydides 1910, II.5-10.

¹³ Zatta 2011, p. 325.

long walls, which established a safe passageway between Athens and its harbors (fig. B-11). The Athenian long walls ran from the city of Athens to the harbor cities Piraeus and Phaleron.¹⁴ While the space between the walls was narrow, the walls themselves were massive with lengths of 6 km each.¹⁵ Furthermore, these walls prevented a besiegement where an enemy could cut off the imports to the main city. Both states were powerful. By 429 B.C. Lacedaemon had already invaded Attica two times. During these invasions, the walls of Athens, which held many refugees, were damaged. As Athens filled with refugees, the demographics of the city drastically changed and people were packed in the narrow space between the walls along the pathway to the harbor (less than 1 km wide).¹⁶ While they protected the city from destruction by the Lacedaemonians, they could have also aided in the spreading of the illness during the years of 430 B.C. to 425 B.C.

Due to war, evacuees flooded into Athens. “The Athenian population would have risen from at least 100,000 persons to about 300,000 or 400,000 persons” during this time period as the war was just beginning right before the plague started.¹⁷ Not only is this overcrowding ideal for the start of an epidemic, but rural people could have brought an illness with them into the city (fig. B-1). The relationship between the disease and the infected population is very important in understanding the epidemic’s ecology, but that relationship is not simply black and white as many factors complicate it. This connection is the difference between a “‘virgin-soil’ epidemic” and an endemic epidemic.¹⁸ An endemic epidemic is one where the population has previously encountered the disease,

¹⁴ Conwell 2008, p. 1.

¹⁵ Conwell 2008, p. 3.

¹⁶ Zatta 2011, p. 325.

¹⁷ Morens 1992, p. 427.

¹⁸ Sallares 1991, p. 250.

and a virgin-soil epidemic is one in which the disease is new and previously unseen by the population.¹⁹

War and plague influence each other, and both negatively impacted Athens. During war, there are common times of *stasis*, which is otherwise known as civil discord. Just as the plague's pathology travels through the population of Athens, "the rigors of war aggravate domestic pathology."²⁰ *Nosos*, Greek for disease, is etiologically associated with *stasis*, and both aid in deteriorating Athens. The word body has a double meaning: the literal meaning of an individual human body and the collection of people comprising a larger population; and, while diseases affect individuals, *stasis* affects the body of the public. As an epidemic, these symptoms on an individual level can be generalized to fit the singular public body. Both *stasis* and *nosos* are a "threat to the body," whereas *stasis* that threat is "of political origin," and in plague "the enemy is nonhuman."²¹ The relationship between the mind and body reveals itself in this instance because the mind, with limitless strength, cannot live on without the frail body that holds it. This civil strife has few symptoms affecting individuals and no etiology; rather, it can be seen in the loss of burial rights, increased crime, and lack of faith in the gods.²² The symptoms Thucydides associated with this civil discord are not so much technical terms as they are circumstantial and include *arrostia* ("weakness"), *sathros* ("unsound"), and *hupoulos* ("festering").²³ Looking at this sickness as a *stasis* of the body illustrates a holistic and artistic approach.²⁴ The individual symptoms, however, are indistinguishable

¹⁹ Sallares 1991, p. 250.

²⁰ Orwin 1994, p. 176.

²¹ Orwin 1994, p. 182.

²² Orwin 1994, p. 174.

²³ Hope 2000, p. 26.

²⁴ Hope 2000, p. 27.

from the public body's symptoms, proving that the idea of stasis is simply an artistic ploy to illustrate the whole state of Athens at this critical moment of war and disease.

Thucydides tells us that the plague originated in Ethiopia and moved, subsequently, into Egypt and Libya (II.48.i).²⁵ It is likely that the plague arrived to Athens via a ship, and the disease notably “devastated Hagnon’s naval expedition to Potidaea” which occurred in July of 430 B.C. which was the same time that the plague began wreaking havoc in Athens.²⁶ Furthermore, after the plague began at Piraeus, one of the Athenian ports connected to Athens via the long walls, it spread upward into the hills of Athens.²⁷ It is interesting that the plague did not travel into the Peloponnese from Athenian and Spartan contact during the war. The cause of this disease will explain this phenomenon.

When examining an epidemic, it is necessary to know the symptoms of the infected population as well as which subgroups (men vs. women, elderly vs. children, etc.) had higher risk of infection. According to Thucydides, “the disease began with a strong fever in the head and reddening and burning heat in the eyes; and internally the throat and tongue became bloody and the breath unnatural and malodorous” along with “sneezing and hoarsness,” which “resulted in violent coughing. When it became established in the heart, it convulsed that and produced every kind of evacuation of bile for which doctors have names, accompanied by great discomfort” (II. 49. ii-iii).²⁸ All were affected alike: slaves, citizens, military, and evacuees from rural communities.²⁹

²⁵ Thucydides 1910, II.48.

²⁶ Morens 1992, p. 275.

²⁷ Morens 1992, p. 275.

²⁸ Rhodes 2015, pp. 41-42.

²⁹ Morens 1992, p. 275.

There is no specific mention of those who were in contact with animals frequently, such as shepherds or farmers.³⁰ Thucydides does say that if people had a prior illness at the time the plague struck, they all were infected.³¹ He also notes that doctors had an increased risk to this disease, but he does not distinguish between becoming infected and dying from the infection.³² Thucydides also describes the dire situation in Athens saying “the bodies of the dead and dying were piled on one another,” and “the sanctuaries in which people were camping were filled with corpses.”³³ Thus, according to Thucydides, normal procedures for dealing with the sick and the dead were abandoned. He reported that death typically occurred around day 7 to 9 of being infected, and the physician’s medical art was useless as well as help from the gods.³⁴

Identifying the specific cause of this historic epidemic has been controversial. Critics have come up with a multitude of possibilities for this plague including Smallpox, Staphylococcus, Influenza, Ebola, Measles, and Typhus. One method for identifying this illness is to classify it based on the most significant and unique features. In order to make a structurally sound argument, the entire disease must be examined with no symptoms being excluded. Furthermore, we must examine demographics of the affected, and those who had a higher risk of infection. It is necessary as well to consider other environmental factors such as water and food supplies and sanitation in 5th century Athens. I will analyze each of these potential diseases mentioned above as the root of the Athenian plague. First, however, let us consider the sources of various widespread illness: viral or

³⁰ Morens 1992, p. 275.

³¹ Thucydides 1910, II.49.

³² Morens 1992, p. 275.

³³ Rhodes 2015, p. 42.

³⁴ Thucydides 1910, II.49-51.

bacterial. Bacteria are living organisms, and not all bacteria are harmful to humans. They are single cellular organisms with DNA enclosed by a plasma membrane that are capable of harming human beings, sometimes fatally. Viruses, on the other hand, are non-living pathogens which consist of a protective coat and either DNA or RNA inside.

When an individual contracts a disease, it is most likely bacterial or viral. These two broad categories are both capable of infecting mass populations; and viruses as well as bacteria can vary in their strength and contagiousness. Furthermore, humans are capable of developing immunity to both bacterial strains and viral strains. Once immunity for a specific strain is obtained, if that strain is ever encountered in the future, the immune response is so strong and quick that the strain does not harm the individual. Many diseases, such as the flu and the common cold, however, have many different strains. For example, if my friend and I both have the flu, we might, in fact, have two different strains or versions of this virus, and our immune systems would be immune only to the specific strain that our bodies encountered. Also, the mode of transmission varies from one bacterium and virus to another: some could be airborne and others transmitted via human contact. In antiquity, viral and bacterial infections attacked humans in the same ways that they do today, and as human immune systems constantly adapt to new pathogens, those pathogens, too, evolve. Therefore, humans have yet to overcome all diseases.

One group of scholars, Langmuir et al.,³⁵ proposed that the devastating disease in ancient Athens was a combination of Influenza and Staphylococcus (a bacterial

³⁵ Langmuir 1985, pp. 1027-1030.

infection), due to the wide range of symptoms.³⁶ Influenza, a prominent virus today, is characterized by vomiting, gastrointestinal irritation, diarrhea, respiratory infection, and general cold-like symptoms.³⁷ These scholars, however, contradict Thucydides in many aspects. Thucydides reports that the usual diseases, whatever these were in Athens, were inactive during the plague, and he notes a high rate of mortality. According to Thucydides, upon surviving the plague, Athenians “half entertained the vain hope that they were for the future safe from any disease whatsoever.”³⁸ It is not clear, however, on what evidence he based this assertion.³⁹ Influenza genetically modifies itself very frequently which would make immunity over 5 years very unlikely. We must receive flu vaccines annually, sometimes semiannually, because of how frequently the virus evolves. By comparing this identification approach with Thucydides’ account, it is clear that the plague was not influenza and staph; rather, it must be a single disease.

Other proposal identification of this illness spawn from a single, distinct symptom described by Thucydides, specifically the skin rash. Because of this symptom, some have suggested that the epidemic was a bubonic plague, a viral infection. One major characteristic of bubonic plague is the presence of buboes, which are swollen lymph nodes resembling large blisters, and Thucydides mentions nothing of this symptom.⁴⁰ Other general symptoms include fever, chills headache, fatigue, and muscle aches.⁴¹ The scholars neglect a holistic approach to classifying this disease. To propose a strong

³⁶ Sallares 1991, p. 245.

³⁷ Langmuir 1985, pp. 1027-1030.

³⁸ Thucydides 1910, II.51.

³⁹ Sallares 1991, p. 245.

⁴⁰ Sallares 1991, p. 247.

⁴¹ Sallares 1991, pp. 245-247

argument for the identification of this illness, symptoms must not be neglected or excluded.

Others have suggested the measles virus. Many symptoms mentioned by Thucydides match with measles including fever, sleeplessness, vomiting, thirst, and a specific rash. This rash is characterized by papules covering the face as well as the back, arms and chest. A papule is an elevated patch of skin that is red or purple in color with no visible fluid.⁴² He mentions plague victims jumping into pools of water to relieve thirst and fever, which resembles measles. Historically, people infected with measles were documented to have done this in an epidemic in 1875 in Fiji. This activity is less of a feature of measles in the present day.⁴³ But, we know that the plague began during the hot summer season where thirst is a problem for even healthy individuals.⁴⁴ Thucydides states, however, that “externally the body was not very hot to the touch” which negates the assertion that a fever was associated in this stage of the illness.⁴⁵ Instead, patients burned internally to the point where they “could not bear to have on[...] clothing,” and “what they would have liked best would have been to throw themselves into cold water.”⁴⁶ Therefore, according to this account, while the symptoms themselves do not evenly match up with measles, Thucydides’ description in some aspects matches with historic examples of a widespread measles outbreak. Moreover, he does not describe the skin rash in great detail (“reddish, livid, and breaking out into small pustules and

⁴² Mackey 1898, p. 152.

⁴³ Sallares 1991, p. 247.

⁴⁴ Sallares 1991, p. 247.

⁴⁵ Thucydides 1910, II.49.

⁴⁶ Thucydides 1910, II.49.

ulcer”II.49.v) which is a large objection to this proposal, along with the fact that children are typically at a higher mortality rate with this disease.⁴⁷

Ebola, a viral disease, has also been suggested as the cause of the Athenian epidemic. Common symptoms of ebola including fever, rash, vomiting, and diarrhea. As mentioned previously, Thucydides reports that physicians were at a higher risk of infection. Similarly, caregivers who come into contact with bodily fluids of ebola patients today are highly susceptible to this virus, and over 270 healthcare workers have fallen to ebola in the past few years.⁴⁸ Another major piece of evidence in support of this claim is the large and overcrowded population in 5th century Athens, which reflects present day overcrowded urban areas where ebola dominates.⁴⁹ Ebola, however, does not account for human to animal transmission which is a key part of Thucydides’ account.

As early as 1821 scholars believed the disease was small pox after considering a holistic approach to the disease.⁵⁰ Smallpox comes from the variola virus and is characterized by blisters, pus on the surface of the body, and small, red pockmarks. Other common symptoms are diarrhea, nausea, and vomiting as well as exhaustion and generalized aches. Demographically speaking, smallpox is a very close fit to this epidemic. Its mortality rate was about equal for children and adults.⁵¹ Even though smallpox historically mostly kills children, adults who have never been exposed to the disease are just as susceptible.⁵² For smallpox to be considered valid as the Athenian

⁴⁷ Sallares 1991, p. 247.

⁴⁸ Kazanjian 2015, p. 963.

⁴⁹ Kazanjian 2015, p. 963.

⁵⁰ Sallares 1991, pp. 248-249.

⁵¹ Sallares 1991, p. 249.

⁵² Sallares 1991, p. 249.

plague, it would have to be a virgin-soil epidemic because if the opposite were true then very few adults would have been infected. Human population density plays a large role in classifying diseases like smallpox. With evacuees entering the city of Athens, diseases could have been easily introduced into the city, and smallpox is a density-dependent disease, meaning that it relies on having a certain density of people in order to propagate continually within the city.⁵³ Even with the population in Athens increasing dramatically with the introduction of the evacuees, the density was not large enough to be an endemic epidemic, and could not have been spread over the period of 430-427 B.C. during the first wave of the plague. About 30 percent of all age groups were affected, which means that the illness did not favor one age group over another.⁵⁴ Although there is no mention of the different groups of people affected the most, if we assume that the disease was smallpox, it is implied that the birthrates dropped severely as women have a very high likelihood of aborting their fetuses when infected with smallpox.⁵⁵

Scholars Holladay and Poole (1979), among others, reject smallpox as the culprit of this epidemic.⁵⁶ Of all the symptoms mentioned, pockmarks are not included, and this is a hallmark of smallpox. However, they argue that having these pockmarks was shameful, and probably the reason that Thucydides leaves out this symptom.⁵⁷ According to Thucydides, animals that ate the bodies of infected people became infected themselves. This means that the disease can be spread from humans to animals, and Smallpox does not infect animals.⁵⁸ While most of the information from Thucydides points to Smallpox

⁵³ Sallares 1991, pp. 252-3.

⁵⁴ Sallares 1991, pp. 257-8.

⁵⁵ Sallares 1991, p. 257.

⁵⁶ Sallares 1991, p. 248.

⁵⁷ Sallares 1991, p. 248.

⁵⁸ Sallares 1991, p. 249.

as the source, the one piece of evidence that directly opposes this claim is the fact that it is only transmitted amongst humans, and cannot infect birds and other animals which prey on dead plague victims.

Typhus is another possibility. It is a bacterial infection transmitted to humans via flea bites, tick bites, and other arthropod bites, and hallmark symptoms are gangrene, a rash, fever, chills, stupor, vomiting, and diarrhea.⁵⁹ The major symptom of typhus which is mentioned by Thucydides is gangrene.⁶⁰ He states that “even where [the disease] did not prove mortal, it still left its mark on the extremities; for it settled in the privy parts, the fingers and the toes.”⁶¹ Gangrene is necrosis of extremities due to insufficient blood supply (which matches with Thucydides’ description), and it leads to a loss in extremities. As typhus travels through the bloodstream, it affects the blood flow to the extremities which results in a necrosis of tissues in the extremity areas; however, this is not a symptom of every case of typhus. The most compelling evidence for typhus as the culprit stems from the transmission between rats and other animals, and humans. This is what distinguishes typhus from smallpox; smallpox is not transmitted to birds and other animals (only humans to humans), and Thucydides states that “birds and beasts” either avoided touching the fallen or died shortly after feeding on them.⁶² One might argue that because close contact is necessary to transmit the bacterial infection, it would not have spread at such a high rate; however, people were bathing in common pools and in close enough contact that would be sufficient for transmission of the bacterial infection. Poor sanitation and city water contamination, moreover, create a perfect environment for

⁵⁹ Lee 2013, pp. 155-157.

⁶⁰ Sallares 1991, p. 264.

⁶¹ Thucydides 1910, II.49.

⁶² Thucydides 1910, II.50.

transmitting typhus through an entire community. Furthermore, this disease outbreak is an epidemic, not a pandemic, which further strengthens the argument that the disease is strictly transmitted via direct contact with the bacteria.

Recently, good evidence for a typhus outbreak was discovered in Athens. Athenians were buried at a public burial ground outside of the city walls in the area called the Kerameikos, an ancient word meaning “potters’ quarter.”⁶³ It is located northwest of the Agora and was first used as a burial ground in 1200 B.C. (fig. B-2).⁶⁴ Recent excavations for the Metro in the Kerameikos discovered a large pit in the northwestern edge of the cemetery where skeletons were piled on top of one another (fig B-3).⁶⁵ At least 150 individual male and female bodies were found in this mass pit along with 8 infant pot burials (fig. B-4).⁶⁶ The greatest number of these graves dated to the 5th and 4th century B.C. based on ceramic evidence.⁶⁷ Even though burial rites were being abandoned during the plague, which is seen by the lack of dirt between piled bodies, children still seemed to be treated humanely.⁶⁸ Scientists were able to determine the date of the fallen in the pit grave to be the last third of the 5th century B.C. from the pottery such as white-ground, red-figure, and black-glazed lekythoi.⁶⁹

The mode of burial and the dating strongly suggest that these are the remains of victims of the Thucydides plague. This allows a new opportunity to identify the plague during the war.⁷⁰ From the dental pulp found in the remains of these Greeks, scientists

⁶³ Camp 2001, p. 261.

⁶⁴ Camp 2001, p. 20.

⁶⁵ Baziotopoulou-Valavani 2002, pp. 190-192.

⁶⁶ Baziotopoulou-Valavani 2002, p. 190.

⁶⁷ Baziotopoulou-Valavani 2002, pp. 190-192.

⁶⁸ Papagrigorakis 2008, p. 163.

⁶⁹ Baziotopoulou-Valavani 2002, pp. 190-192.

⁷⁰ Baziotopoulou-Valavani 2002, pp. 190-192.

were able to extract DNA. In the experiment, scientists investigated 3 intact teeth, which were collected randomly from the Kerameikos burial site, using control variables to further fortify their findings.⁷¹ The scientists chose teeth as the source of their DNA because it has been shown in previous studies that DNA remnants from bacterial pathogens are able to remain intact in dental pulp over long periods of time.⁷² They used various PCR amplification methods to amplify the amount of DNA from their dental pulp samples.⁷³ Because the identification of this pathogen has been greatly disputed, the scientists tested the DNA for multiple pathogens including typhus, anthrax, tuberculosis, cow-pox, and cat-scratch disease. Since results were positive for typhus in these mass graves probably contain the bodies of people who died during the time that Thucydides describes, the authors of this find conclude that the infectious culprit that plagued Athens for 5 years was, indeed, typhoid fever.⁷⁴

Sanitation in 5th century Athens was poor, and this was one of the primary reasons for the spreading of typhus among the Athenians. Athens relied on its wells and public sources of water.⁷⁵ Public fountains like the Southeast Fountain in the Agora, which was a communal source of drinking water, were open to all people which is indicated by vase paintings. Private wells in individual homes were rare in Athens, but there were public wells.⁷⁶ Athenian springs were said to have “brackish water.”⁷⁷ Wells, springs, and

⁷¹ Papagrigorakis 2006, pp. 206-214.

⁷² Papagrigorakis 2006, pp. 206-214.

⁷³ PCR is a biochemistry method used to enlarge the DNA sequence being examined. PCR stands for polymerase chain reaction, and it works by heating and cooling the DNA fragment being studied with added DNA primers and polymerase in order to turn the small amount of DNA into millions of DNA fragments. This allows scientists to basically zoom in on the DNA and more accurately examine the DNA fragment.

⁷⁴ Papagrigorakis 2006, pp. 206-214.

⁷⁵ Dillon 1996, p. 193.

⁷⁶ Dillon 1996, pp. 195-196.

⁷⁷ Morens, 1992, p. 276.

cisterns were present around Athens such as the Klepsydra spring found on the northwest part of the Acropolis.⁷⁸ Two rivers, the Kephissos and the Ilissos, ran under the long walls, and served as sources of water for Athens; also, many ravines and marshy areas surrounded these walls in the coastal plain.⁷⁹ This provides insight into the fertility of the soil around Athens as well as the crops cultivated around this coastal plain.⁸⁰ A bacterium such as typhus can travel very easily in water and through direct contact, and can cause an epidemic because the bacterial infection, once transmittable only via contact, is now in a watery medium which greatly increases the range of contact. Dead bodies being abandoned, along with communal water supplies, allowed for a perfect environment to incubate a bacterial disease.⁸¹

While Thucydides provides us with a detailed account of the plague, including the suspected origins, symptoms, and groups affected, he does so in a manner that leads to some confusions about the disease. Thucydides' account of the plague is not a diagnostic treatise that describes every symptom in detail with pictures and other helpful and necessary information to identify the disease, and controversy about the name of the illness stems from antiquity. Thucydides does, however, write with a philosophical approach to the war and plague.⁸² This philosophical impulse was paired closely with medicine, and sometimes the two were indistinguishable.

⁷⁸ Conwell 2008, p. 8.

⁷⁹ Conwell 2008, p. 5.

⁸⁰ Conwell 2008, p. 7. Organized sanitation in communities can be dated back to the Mesopotamian empire (ca 3000 B.C.) In the early 5th century, most buildings in Athens had drains which led to an underground sewer system. The Agora had a great drain which lead sewage out of the city. But, as Thucydides tells us, bodies were lying in the middle of the street and piling up, which contributed to the spreading of the typhus bacterial infection.

⁸¹ Hope 2000, p. 68.

⁸² Cochrane 1929, p. 138.

CHAPTER II: HEALING CULTS

. In response to this devastating illness, the Athenians began to develop new healing sanctuaries. Many of these shrines previously existed and were transformed to fit the changing needs of the times. These sanctuaries served as sites for Greeks to practice religious medicine which is broadly the belief that healing is performed by a divine intervention or magic (fig B-5). While many gods were worshipped at these sanctuaries, the main god of focus here is Asklepios (fig. B-6). In the last chapter, naturalistic medicine will be discussed, but in many cases, men, women, and children turned to other sources in order to be healed.

Many gods were praised and worshipped across Greece; some gods were well-known while others were local deities. Nonetheless, Greeks believed that gods were capable of many powers including healing the sick. Asklepios rumored to have been a mortal man and great physician before reaching deity status (fig B-15). He originated from Tricca which is in Thessaly and had many titles such as *heros iatros* (“hero physician”) and eventually *theios aner* (“god-man”).⁸³ According to myth, Asklepios, who was the son of Apollo Kunegetes, was such a great healer that he was able to resurrect a man from the dead; but this angered Zeus, so he cast a lightning bolt at Asklepios. Instead of killing Asklepios, it, rather, transformed him into an immortal.⁸⁴

⁸³ Meier 2005, p. 551.

⁸⁴ Meier 2005, p. 551.

Others say that Asklepios resurrected himself from the dead and became immortal (fig B-16). There was a need for the healing gods such as Asklepios because medicine could not be fully depended on for curing diseases consistently.

Sanctuaries of Asklepios were located across Greece. An Asklepeion was placed where there was fresh air and a variety of scenery.⁸⁵ Asklepios sanctuaries differed from traditional sanctuaries because they served an extra purpose, which was being a health resort.⁸⁶ Each sanctuary had a fresh water supply; springs were known to have special healing powers.⁸⁷ Other than Epidauros, Asklepieia were mostly attended by local inhabitants rather than pilgrims.⁸⁸ At Athens, the Asklepeion was most likely introduced on the Southern slope of the Acropolis where a spring was located (fig B-12). This implication comes from a stone found at this spring which marked the boundary of the Asklepios sanctuary at Athens; it says, “the boundary of the well,” and it is dated in the second half of the 5th century.⁸⁹ We shall return to this site later in the chapter.

The worship of Asklepios as a deity developed over time at Epidauros, an isolated Greek city state located on the northern side of the Argive peninsula and on the west coast of the Saronic Gulf.⁹⁰ Epidauros is only 50 km away from Athens.⁹¹ The sanctuary at Epidauros is thought originally to have been a heroon dedicated to a man called Maleatas, a hunter. Later on, the Apollo shrine, located above the Asklepios shrine, became the main focus at the sanctuary, and Apollo even engulfed Maleatas so that

⁸⁵ Walton 1894, p. 36.

⁸⁶ Walton 1894, p. 36

⁸⁷ Walton 1894, p. 41.

⁸⁸ Renberg 2017, vol. 1, p. 123.

⁸⁹ Walton 1894, p. 40.

⁹⁰ Tomlinson 1983, p. 9.

⁹¹ Tomlinson 1983, p. 9.

Apollo was the only god being religiously served at the temple, under the name “Apollo Maleatas” (fig B-7).⁹² Apollo Maleatas was worshipped in the upper sanctuary, particularly for hunting, and Asklepios, Apollo’s son, was worshipped in the lower sanctuary.⁹³

Around the earliest altar at the Asklepios site, which was used by Apollo and Asklepios, two inscriptions give us information on the dates when this altar was in use.⁹⁴ The first inscription is found on a bronze patera which is dated back to the early 5th century B.C., and it is a dedication to Asklepios by Mikylos.⁹⁵ The second inscription is a dedication to Pythian Apollo and is found on a bronze vase.⁹⁶ Furthermore, in the center of the Asklepios shrine there is a well on the eastern side which has a foundation dated to the 6th century B.C. (fig. B-8).⁹⁷ Wells can be dated by the pottery found at the bottom which were used to collect water out of the well. The sanctuary as a whole was sacred ground, and boundaries (natural and man-made) were marked distinctively with various structures such as the Propylon at the entrance.

Because the building project for the new sanctuary of Asklepios was becoming popular and costly during the 4th century, Athens began to take a leading role, and this can be seen by inscriptions relating to payrolls as well as lists of building materials and plans.⁹⁸ 4th century B.C. stonework is recognized easily by the cuttings which helps verify the building inscriptions. This Athenian attention may have been a response to the

⁹² Tomlinson 1983, p. 10.

⁹³ Tomlinson 1983, p. 15.

⁹⁴ LiDonnici 1995, p. 7.

⁹⁵ LiDonnici 1995, p. 7.

⁹⁶ LiDonnici 1995, p. 7.

⁹⁷ LiDonnici 1995, p. 9.

⁹⁸ LiDonnici 1995, p. 10.

devastating epidemic of the previous century. The temple, for instance, was partly contracted by Mnasikles, a native to Epidauros, and Lykios, a Corinthian.⁹⁹ Mnasikles constructed the foundations of the temple with marble from local quarries, and Lykios constructed the columns with Corinthian limestone; in fact, this stone was used extensively at Epidauros.¹⁰⁰ The cost of limestone from a quarry near Corinth was cheaper compared to Pentelic marble from near Athens, based on how far it had to travel.¹⁰¹ But the Pentelic marble was used for much of the Thymele.¹⁰² Wood was also used, and based on building inscriptions, we know that Lykios “was paid 4,390 drachmas for pine wood” while constructing the temple.¹⁰³

The Propylon is located at the northern boundary of the sanctuary which is just south of a small stream serving as the northern boundary. While there were no walls around the sanctuary, it is presumed that rocks or posts lined its borders.¹⁰⁴ There is a small stream slightly north from the Propylon which travelers also had to cross to enter the sanctuary. Pausanias, in the 2nd century A.D., says that “meat from the sacrificial victims had to be consumed within the peribolos” which is the sacred area.¹⁰⁵ This gateway framed a path to the center of the sanctuary with a group of buildings constructed by the Athenians between 420 and 370 B.C.¹⁰⁶ Interestingly, this building primarily serves to prepare those who are about to enter the sanctuary that they are approaching a sacred space.

⁹⁹ Tomlinson 1983, p. 35.

¹⁰⁰ Tomlinson 1983, p. 35.

¹⁰¹ Tomlinson 1983, p. 36.

¹⁰² Tomlinson 1983, p. 36. A round building that may have served as a home for Asklepios’ sacred snakes.

¹⁰³ Burford 1969, pp. 54-55.

¹⁰⁴ Tomlinson 1983, p. 41.

¹⁰⁵ Tomlinson 1983, p. 41.

¹⁰⁶ Tomlinson 1983, pp. 24-31.

The construction of the temple was around 375 to 370 B.C.¹⁰⁷ The size (it is unusually small) and location of the temple can be attributed to a number of reasons such as limited money, retention of the original altar, and steep topography to the north of the Abaton, which is in the form of a stoa, as we shall see.¹⁰⁸ Furthermore, a path remains that connects the altar of Asklepios to the front of the temple. It was built in the Doric order by the architect Theodotos (learned from building inscriptions) and made with Corinthian limestone.¹⁰⁹

One of the important central buildings, the Abaton, is where many important rituals and cures took place. The Abaton was located in the center of the sanctuary along with the Thymele, a round building, and the Temple and Altar of Asklepios (fig. B-9). The ancient Greek term *Abaton* comes from cure inscriptions at Epidauros. It literally means the place not trodden, and it was the place (building or room) where incubation was performed. Only people who were ritually cleaned could enter.¹¹⁰ The term is applied at other Asklepios sanctuaries with the same meaning. The Abaton at Epidauros is in the shape of a stoa, a long narrow building that is open on one side. The Abaton at Epidauros is open on the south side so that one could see the spiritual center of the sanctuary from it. Healing inscriptions were set up on the free-standing stelai in the area around the Abaton which is likely so that patients being prepared for their own rituals could see the miraculous cures of previous patients.¹¹¹ The stoa consisted of two stories as well as an altar inside, and it is the place where sick people slept in hopes that Asklepios would visit

¹⁰⁷ Burford 1969, p. 55.

¹⁰⁸ Burford 1969, pp. 54-55.

¹⁰⁹ Tomlinson 1983, pp. 55-56.

¹¹⁰ Tomlinson 1983, p. 19.

¹¹¹ LiDonnici 1995, p. 18.

them in their sleep and heal them (fig. B-10).¹¹² This practice is sometimes called incubation. These people slept (sometimes) outside in the open air.

A well is located east of the Abaton and a cistern to the north, and both of these water sources were deemed sacred. “The Greeks knew the positive effect of adding water to cities”—and at sanctuaries—which we see in the water in the well and the stream at the northern boundary of the sanctuary that goes under the Propylon.¹¹³ The idea of water along with sleep as helping heal a person connects with the overarching theme of the Abaton as a whole. A common theme in Asklepios shrines is the connection between a water source and the Abaton where sacred rites were performed (which will be analyzed further in the next chapter). Because Abaton quarters needed a nearby source of water, archaeologists were able to infer more precisely the identification of the various buildings within the Epidauros sanctuary as well as in other Asklepieia. Building inscriptions further support the identification of the Abaton.¹¹⁴

Asklepios was known for his miracle cures. We have evidence of people being healed through incubation reported by inscriptions found on the stelai outside of the Abaton.¹¹⁵ These inscriptions were dated beginning from the late 5th into the 4th century B.C.¹¹⁶ The cure inscriptions have been discovered on many fragments which make up four separate stelai east of the Abaton.¹¹⁷ The stelai are composed of a distinct, grayish limestone described as “lithographic stone.”¹¹⁸ The purpose of the inscriptions here is for

¹¹² Elderkin 1911, pp. 161-167.

¹¹³ Volker 2016, p. 1.

¹¹⁴ LiDonnici 1995, p. 9.

¹¹⁵ Manheim 1956, p. 24.

¹¹⁶ LiDonnici 1995, p. 42.

¹¹⁷ LiDonnici 1995, p. 15.

¹¹⁸ LiDonnici 1995, pp. 15-16.

patients in the Abaton preparing for their own ritual, and there is evidence that reading the inscriptions was an activity for individuals to participate in during preparation for the incubation.¹¹⁹

Dogs and snakes are commonly symbols used for Asklepios, and also are equivalent in Greek mythology to the underworld.¹²⁰ Snakes are chthonic, they shed their old skin and emerge new just as those who go through the rituals at the sanctuary and wake up healed. One cure inscription found at this sanctuary describes a man's toe being healed by a snake (fig. B-20). "During the day he was carried out of the Abaton[...]. He fell asleep there, and then a snake came out of the Abaton and healed his toe[...]. When the man woke up, he was well and he said he had seen a vision."¹²¹ Another states that "a dog has cured a boy from Aigina, ...one of the sacred dogs treated him with its tongue."¹²² LiDonnici points out that in most of the healing stories, the actual cause of the healing does not get mentioned. There are more extreme cures such as a woman named Kleo who was pregnant for five years until sleeping in the Abaton.¹²³ Once she left the sacred area, she gave birth to her son who washed himself at the fountain and walked into the sanctuary.¹²⁴ Kleo inscribes an offering saying that it was an "act of the god."¹²⁵ The sanctuaries at Greece were kept pollution-free which meant birth and death were forbidden within, which is why Kleo had to leave the sacred space to give birth.¹²⁶ The stories range from healing paralysis, a mute boy, and external wounds to healing the

¹¹⁹ LiDonnici 1995, p. 18.

¹²⁰ Manheim 1956, p. 32

¹²¹ LiDonnici 1995, pp. 96-97.

¹²² Manheim 1956, p. 32.

¹²³ LiDonnici 1995, p. 85.

¹²⁴ LiDonnici 1995, p. 85.

¹²⁵ LiDonnici 1995, p. 85.

¹²⁶ LiDonnici 1995, p. 13.

blind, cancerous sores, and pregnancies.¹²⁷ With modern medicine and technology, we know that it was probably not true that a person just slept off a sickness or injury; however, in ancient times, people travelled from all over Greece to sleep at the Abaton for healing.

Other agents were used to aid in these rituals. In the cure inscriptions at Epidaurous, whenever a drug is used during the cure, it is referred to as “an herb,” but at another Asklepion, at Lebena in Crete, specific plants and herbs such as “lettuce, laurel, chestnut, and myrtle” are mentioned in the cures.¹²⁸ The Lebena Asklepion was affiliated with Epidaurous and dates back as far as the 4th century, but while its inscriptions are mostly dated to the 2nd century B.C, they use earlier stories.¹²⁹ In these healing stories, Asklepios was the agent of healing, and this divine interventional healing would take place within the Abaton at Lebena.

Asklepios came to Athens in 420 B.C. from Epidaurous where he was brought in a grand ceremony on a chariot to the south side of the Acropolis.¹³⁰ His arrival into Athens is very well documented, and much information comes from a monument called the Telemachos relief.¹³¹ Little is known, however, about why Athenians wanted Asklepios in Athens, but it can be speculated that it was because of the recent plague. The plague from 430 to 426 B.C. is also a reason for wanting Asklepios in Athens, but scholars provide evidence that argues the plague was not the sole reason for importing the

¹²⁷ LiDonnici 1995, pp. 85-100.

¹²⁸ LiDonnici 1995, pp. 47-48.

¹²⁹ LiDonnici 1995, p. 47.

¹³⁰ Wickkiser 2008, pp. 62-63.

¹³¹ Wickkiser 2008, pp. 62-63.

Asklepios sanctuary.¹³² Around these years, Asklepios was not only a healer god, but he was also becoming known as the “patron god of doctors;” and doctors and medicine were vastly expanding during this period in Greece.¹³³ The dating of the importation suggests a more complicated explanation. Jon Mikalson argues that Athens had to wait until the “Peace of Nicias in 421 B.C.”¹³⁴ to bring the god from Epidaurus, but Athenians could have acquired Asklepios from another sanctuary in Greece.¹³⁵ Furthermore, evidence for Asklepios actually treating plague victims of their symptoms and the disease itself is scarce. Although the reasons for importing Asklepios into Athens are not very well accounted for, with the war, plague, earthquake, and general health all concerning the city, it is clear that Athenians had many reasons to bring this healing god into their city.

The arrival itself is well documented on the Telemachos monument. Telemachos, an Athenian citizen, is the man accredited for establishing the sanctuary in Athens.¹³⁶ The marble structure, constructed around 400 B.C., is T-shaped consisting of a shaft with a rectangular plaque above it, and the shaft is full of inscriptions while the plaque has many sculpted reliefs (fig. B-14).¹³⁷ These structures give us a chronology of Asklepios’ arrival as well as information on the participants, rituals, and other noteworthy information on the site.¹³⁸ According to the shaft inscriptions, the first thing that Telemachos did was set up Asklepios’ sanctuary and altar, and he subsequently set up the sanctuary and altar to

¹³² Wickkiser 2008, pp. 64-65.

¹³³ Wickkiser 2008, pp. 63-64.

¹³⁴ Legon 1969, p. 323. The Peace of Nicias was a peace treaty signed in 421 B.C., which was the 10th year of the Peloponnesian war, between Athens and Sparta. Much of the treaty was disregarded by both sides, however, and Athens and Spartan troops battled three years later.

¹³⁵ Wickkiser 2008, p. 64.

¹³⁶ Wickkiser 2008, p. 67.

¹³⁷ Wickkiser 2008, p. 67.

¹³⁸ Wickkiser 2008, p. 67.

“Hygieia, the Asklepiadae and the daughters of Asklepios.”¹³⁹ The inscriptions say that Telemachos brought the god “at his own expense” according to one translation, which is strange because this would mean that not even the state helped fund this expensive import.¹⁴⁰ While it is possible that Telemachos could have done this whole task alone, the state of Athens surely would have needed to grant him permission for this task, and they also would have been very active and involved due to the placement of the sanctuary.¹⁴¹

Being placed on the slope of the Acropolis demonstrates how strong was Asklepios’ relationship to the Athenian community (fig. B-13). His sanctuary was situated next to the cult of Dionysos Eleuthereus.¹⁴² Other reasons affected the placement of the Asklepiion as well such as having an adequate water source¹⁴³ and traditional Asklepiion rituals took place there which can be observed in a votive relief from the sanctuary. In the relief, a family is sacrificing to Asklepios, and a serpent is coiled around a sacred tree which is above an altar.¹⁴⁴ It dates to around 330 B.C.¹⁴⁵

Asklepios spread past Greece and into the Roman empire. The site I will be exploring is located on the Tiber Island, in Rome. On the island there was a temple, which is now inside of a church built close to the year 1000 A.D., along with a well and an obelisk.¹⁴⁶ A well or a spring seemed to be a commonality in the Asklepios sites. Today, a wall remains on the southern tip of the island which depicts the god with a snake coiled around his staff. The entire wall itself, interestingly, made the entire island

¹³⁹ Wickkiser 2008, p. 70.

¹⁴⁰ Wickkiser 2008, pp. 70-71.

¹⁴¹ Wickkiser 2008, p. 71.

¹⁴² Wickkiser 2008, p. 77.

¹⁴³ Wickkiser 2008, pp. 77-78.

¹⁴⁴ Manheim 1956, p. 32.

¹⁴⁵ Manheim 1956, p. 32.

¹⁴⁶ Manheim 1959, pp. 4-5.

look like a ship. The need for Asklepios in Rome was a plague that emerged during 295 and 293 B.C., about 130 years after the typhoid plague in Athens. Livy notes that the bodies had an inner fire, much like the internal discomfort illustrated by Thucydides in 430 to 426 B.C.¹⁴⁷

Romans acquired Asklepios from Epidaurian priests. They, at the time, worshipped Apollo, father of Asklepios, and believed that this god was responsible for their misfortune. The Romans referred to the healing god as Aesculapius, which is equivalent to the Greek god Asklepios.¹⁴⁸ By this time, however, the fame of Asklepios as a healing god had reached the ears of the Roman empire and, in 293 B.C., they consulted the sibylline book which then instructed them to go to Epidauros and bring Asklepios to Rome.¹⁴⁹ They did not travel to Epidauros until 291 B.C., and they wished to bring the god back to Rome. The Epidaurians, on the other hand, believed that Asklepios should remain at their site, and sent the Romans home with a sacred snake which represented the god. When the ship arrived at Rome, legend says that the snake itself slithered to the Tiber Island, and it is for this reason that Asklepios resided on this island.¹⁵⁰

Other healing sanctuaries emerged following the epidemic at Athens in 430 B.C. which were dedicated to lesser known healing deities. One of these was a sanctuary of Artemis at Brauron, in southeastern Attica. This sanctuary had been present since the 9th century B.C. but was transformed over the years for various purposes. Around 420 B.C.

¹⁴⁷ Manheim 1959, p. 7.

¹⁴⁸ Claridge 2010, p. 257.

¹⁴⁹ Manheim 1959, p. 9.

¹⁵⁰ Manheim 1959, pp. 13-15.

in the middle of the Peloponnesian war, a stoa was constructed at Brauron.¹⁵¹ In this sanctuary, Artemis serves more as a protector of women's health and safety.¹⁵² The Athenians may have appealed to Artemis as an averter of evil and sickness. Another sanctuary was at the site of Oropos in northern Attica, and this sanctuary was under Athenian control predominantly from 490 B.C. to 411 B.C. This cult at Oropos was dedicated to a healing god by the name of Amphiaraos, who shares a similar history with Asklepios. Healing through prayer and rituals was a critical aspect of Greek medicine. The Temple of Nemesis at Rhamnous also emerged around 420 B.C. Nemesis personified the idea of divine retribution, and she was the guardian of human actions at Rhamnous.¹⁵³ Nemesis shares this sanctuary with the goddess Themis who similarly exemplifies fairness and justice.¹⁵⁴

At these sanctuaries, priests carry out the healing rituals, and Greek doctors during these centuries were pious and believed in the intervention of healing gods through dreams and the use of prayer in healing.¹⁵⁵ But, as we examine further, we see that the gods alone cannot heal; instead, it is combined effort from human actions and divine power. The authors of the Hippocratic corpus who report these attitudes on healing sanctuaries never explicitly oppose healing cults and prayer for healing, and, in fact, prayer and dreams was part of determining a patient's prognosis.¹⁵⁶ This interaction

¹⁵¹ Camp 2001, p. 278.

¹⁵² Miles 1989, p. 136

¹⁵³ Miles 1989, p. 138.

¹⁵⁴ Miles 1989, p. 138.

¹⁵⁵ Wickkiser 2008, p. 32.

¹⁵⁶ Wickkiser 2008, pp. 32-33. Book 4 of *Regimen*. It is not proven that all doctors during this time period worked with deities while practicing medicine; however, it is significant that there is literature from the author of Book 4 of *Regimen* telling people to pray to deities if certain visions occur.

clearly illustrates the relationship between philosophy and medicine and suggests that the mind plays a critical role in the healing of the body.

CHAPTER III: SLEEP, DREAMS, AND THE RITE OF INCUBATION

Thoughts on sleep are found as early as the latter half of the 8th century B.C. in the poetry of Homer and Hesiod.¹⁵⁷ Before this time period, Greek literature was nonexistent. In these works, Hypnos is introduced as the god of sleep; Homer, in the *Iliad*, connects this god with darkness and death referring to Hypnos as the son of Night and the twin brother of Death. In Hesiod's *Theogony*, besides being the son and twin brother of Night and Death, his siblings are also Pain and Suffering. From these notions of sleep, the rituals associated with Asklepios further define sleep as a cheating of death. The god's symbol of a snake that sheds its skin and emerges new and healthy from the ground embodies rebirth. Asklepios was considered Hygieia's ("Health") father.¹⁵⁸ Thus, Hypnos becomes known as one who saves and rescues those who have been injured in some way and are in need of sleep.¹⁵⁹ Homer's *Odyssey* introduces us to the dream gods Oneiroi, which literally means dreams, with the understanding that the Oneiroi were sent to people as a form of communication with the gods.¹⁶⁰ Only later do philosophers such as Aristotle propose more rational explanations for dreaming.

A major practice "the rite of incubation"¹⁶¹ was performed at Epidauros, which is the reason that many travelers made the pilgrimage there. In Greek, the word incubation

¹⁵⁷ Askitopoulou 2015, p. 70.

¹⁵⁸ Renberg 2017, vol. 1, p. 117.

¹⁵⁹ Askitopoulou 2015, pp. 70-71.

¹⁶⁰ Askitopoulou 2015, p. 71.

¹⁶¹ Tomlinson 1983, p. 68.

is *enkoimesis*, but this word is rarely used in context.¹⁶² Dreams were thought of as being received from a divinity. The term incubation refers to meeting a divinity inside a dream along with the respective rituals that occur within a sacred sanctuary.¹⁶³ The locations of the incubation rituals were most frequently at Asklepieia cults. Furthermore, rituals were not only for the sick; they were written, also, for healthy individuals and for the ill who did not perform the incubation.¹⁶⁴ For example, healthy individuals might pray for continuation of good health, and they certainly honored Asklepios at festivals as well as house cults for the god.¹⁶⁵ Healing sanctuaries were all unique in terms of the gods and goddesses whom they served, and the layout of their sanctuaries, but still commonalities existed. This chapter focuses on religious medicine while a later chapter will cover rational medicine.

Before an individual was to sleep in the Abaton for healing at the Epidauros cult, a set of rites and practices had to take place. Inscriptions were found on the remaining four stelai displayed outside of the stoa along the eastern side.¹⁶⁶ They depicted healing stories, and the common factor was that Asklepios appeared, as a man or a snake, in a dream or vision while the person was sleeping.¹⁶⁷ It is thought that during incubation, the dream or vision healed the individual because it was a therapeutic experience (fig. B-22).¹⁶⁸ There was controversy over whether or not that which was witnessed during sleep was generated from the unconscious mind of the sleeper or from a divine source (in this

¹⁶² Collins 2013, p. 35.

¹⁶³ Ehrenheim 2015, p. 18.

¹⁶⁴ Ehrenheim 2015, p. 13.

¹⁶⁵ Ehrenheim 2015, p. 13.

¹⁶⁶ Renberg 2017, vol. 1, p. 172.

¹⁶⁷ Tomlinson 1983, p. 19.

¹⁶⁸ Meier 2005, p. 551.

case, Asklepios). This argument ultimately led to a debate amongst philosophers to determine where dreams truly come from, and it is an argument still discussed controversially today. Nevertheless, those who believed in a type of divine intervention where the unconscious person witnessed a deity referred to their account as a vision, and those who offered up a more naturalistic and self-originating explanation of the occurrence termed it a dream. This thought process does not, however, provide a substantive argument for those with physical wounds such as broken bones or visible cuts and sores. Dreaming was thought to heal people via divine communication in antiquity.¹⁶⁹ Greek philosophers attempted to understand this phenomenon, and in the 2nd century A.D., dream interpretation manuals were published in the *Oneirocritica* of Artemidorus.¹⁷⁰ The sources used for the analysis of Greek incubation rituals are epigraphical as well as literary testimony.¹⁷¹

Before and after the incubation dream, many rites took place which are broadly organized into categories. It is important to understand that each sanctuary had its own specific set of intricacies, and the set of rituals being explained refers to the generalized process of ritualistic incubation in the Classical and Hellenistic periods. These categories include all of the rites and prerequisites performed in preparation for the incubation, prayers and offerings, entering the dormitory and the act of dormition, and a thanksgiving for the divine communication while sleeping.¹⁷²

¹⁶⁹ Ehrenheim 2015, p. 13.

¹⁷⁰ Barbera 2008, p. 907.

¹⁷¹ Ehrenheim, 2015, p. 16.

¹⁷² Ehrenheim 2015, pp. 24, 109.

Firstly, before the devotees could sleep, they needed to purify, prepare, and make payments or sacrifices.¹⁷³ This process began with an invitation by the god to the sanctuary through a private dream that guided the worshipper there.¹⁷⁴ Two Hellenistic inscriptions at the Asklepieion at Lebena on Crete specify two people, Demandros and Phalaris, who were invited to the sanctuary by the god.¹⁷⁵ Worshippers seeking incubation were also required to abstain from sex as well as certain foods in preparation, which is seen on an inscription at the Asklepieion at Pergamon: “he who enters the dormitory must be pure from... sex and from goat meat and from goat cheese and...the third day.”¹⁷⁶ Here is an example of a variation on the word incubation (“he who enters the dormitory”). We also learn that only the person preparing for incubation must abstain, and he or she must do so for three days before entering.

Another major stipulation in Asklepieia was the avoidance of birth and death within the sacred grounds of the sanctuary. There is evidence of this prohibition from the Epidaurian sanctuary where women are incubated in order for them to be able to give birth, but they must leave the sanctuary to actually give birth to their child (or many children in some cases). Prohibition of birth and death was a rule at all Greek sanctuaries or sacred places, and it was thought that birth and death were impure and polluted sacred areas which were otherwise clean and pure.¹⁷⁷ Being pure extends beyond physical cleanliness. Having a pure mind is also necessary when preparing to enter into the Asklepieion. It is thought that the following now lost inscription hung at the entrance of

¹⁷³ Ehrenheim 2015, p. 23.

¹⁷⁴ Ehrenheim 2015, p. 24.

¹⁷⁵ Ehrenheim 2015, pp. 23-24.

¹⁷⁶ Ehrenheim 2015, p. 25. Late 1st/early 2nd century A.D.

¹⁷⁷ Ehrenheim 2015, pp. 27-28.

the Asklepios shrine at Epidauros: “He who goes inside the sweet-smelling temple must be pure. Purity is to have an honest mind.”¹⁷⁸ By having mental purity, those entering the sanctuary were also readying their bodies to be healed, leading one to believe that the mind, in some way, has the capability of healing the body from certain illnesses.

Continuing with the theme of purity, water is talked about extensively. Bathing in water was meant to cleanse those who entered from outside pollutants of all kinds including ones mentioned previously such as birth, death, and sex.¹⁷⁹ At the sanctuary of Amphiaros at Oropos in northern Attica, for instance, Xenophon asks us “which is colder to bathe in, the water at [our] house or that in the temple of Amphiaraus,” which indicates that the water in which worshippers bathed was cold at the Oropos sanctuary, hinting at a healing function.¹⁸⁰ A similar cold bathing is performed at the cult of Trophonios at Lebadeia, according to Pausanias. The reason for the cold bath, however, is not for purification or healing, but it is performed to make the patient susceptible to autosuggestion.¹⁸¹ Autosuggestion is also known as “communication to the subconscious” which will be explored later in this chapter.¹⁸² Water installations had multiple uses because baths were also used for everyday purposes as well as ritualistic ones, which makes it difficult to determine what role bathing played specifically in the incubation ritual. The Asklepieion at Corinth required patients to bathe before incubation, according to Ginouves.¹⁸³ A way to determine whether water sources were connected to incubation is by their proximity to the place where patients were incubated. Both at the

¹⁷⁸ Ehrenheim 2015, p. 29; quoted in a late Hellenistic epigram.

¹⁷⁹ Ehrenheim 2015, p. 36.

¹⁸⁰ Ehrenheim 2015, pp. 36-37. Early 4th century B.C.

¹⁸¹ Ehrenheim 2015, pp. 36-37.

¹⁸² Mommaerts 2012, p. 44.

¹⁸³ Ehrenheim 2015, pp. 36-37.

sanctuaries of Epidauros and Athens water sources are within and adjoined to the space which held the incubation dormitories.¹⁸⁴ Water certainly is cleaner when it is isolated and only used for a few practices because it is common knowledge that a mass of people bathing and washing their hands in a common water source spreads germs and diseases.

Before the second series of rites could take place, the sacrificial offerings and worshipping prayers, purification of the sacrifices along with a monetary fee was required.¹⁸⁵ Other items were sacrificed to the gods along with animals including cakes, fruit, and incense. Animal sacrificing was necessary before incubation according to testimony from Oropos. Two laws dating to the 4th century B.C. (specifically 386-374 B.C.) explicitly speak of sacrifice and a monetary fee: “whoever comes to be cured by the god is to pay a fee of no less than nine obols of good silver [...]. The skin of every animal sacrificed in the sanctuary is to be sacred,” which refers to purifying the animals before killing them.¹⁸⁶ The sacred law goes further to speak directly to those who are preparing for incubation: “whoever needs to incubate in the sanctuary.”¹⁸⁷ Thus, there is a distinction for Greeks who are at the shrine for incubation.¹⁸⁸ The priest and worshippers pray as well during this time before the appearance of the incubant for sleeping.

Monetary fees were required throughout the process, making this ritual quite expensive. Also, this change could have excluded lower class individuals who did not have enough money to pay for the ritual. These contributions are referred to as “medical

¹⁸⁴ Ehrenheim 2015, p. 38.

¹⁸⁵ Ehrenheim 2015, pp. 40-47.

¹⁸⁶ Ehrenheim 2015, pp. 207-209.

¹⁸⁷ Ehrenheim 2015, pp. 207-209.

¹⁸⁸ Ehrenheim 2015, pp. 207-209.

fees” at the sanctuary at Epidauros, but are not limited to this sanctuary.¹⁸⁹ Evidence for these payments is documented in *thesauroi* which reveal that coinage was the main mode of payment.¹⁹⁰ Also, the *lex sacra* at Pergamon specifies at least at least two payments.¹⁹¹

About to enter the dormitory, the incubant has clothing rules. A customary outfit of some kind was to be worn to distinguish the incubant from others. According to Walton, white linens were worn, which is taken from Aristides’ writings.¹⁹² One possibility of the origin of white garments when dealing with deities comes from Plato where he specifies the preferred color of the gods being white, but it is uncertain if white was worn at all Asklepieia.¹⁹³

In general, the Asklepieia provided areas for people to sleep overnight and later (either immediately or soon afterward) to be healed by divine intervention by Asklepios.¹⁹⁴ The sleeping took place in the *temenos* or sacred space at Asklepieia which was different at individual sanctuaries. At Epidauros this space was the stoa called the Abaton, and at Athens it was also a Doric stoa. In some sanctuaries dormitories are thought to be located inside of the temples.¹⁹⁵ Incubants sometimes slept in groups outside such as at Oropos.¹⁹⁶ The type of bed incubants slept on varied as well. Sometimes patients slept on a *stibas* which is a rather uncomfortable and rough mattress which could be meant to symbolize the temporary nature of the bed.¹⁹⁷ Incubants also are

¹⁸⁹ Renberg 2017, vol. 1, p. 261.

¹⁹⁰ Renberg 2017, vol. 1, p. 262.

¹⁹¹ Renberg 2017, vol. 1, p. 262. *I. Pergamon* 3, 161, II. 31-33.

¹⁹² Walton 1894, pp. 76-82.

¹⁹³ Ehrenheim 2015, pp. 77-79.

¹⁹⁴ Meier 1989, p. 53.

¹⁹⁵ Ehrenheim 2015, pp. 79-83.

¹⁹⁶ Ehrenheim 2015, pp. 80-82.

¹⁹⁷ Ehrenheim 2015, pp. 86-87.

seen sleeping on the skin of animals such as the sleepers in Hellenistic votive reliefs (fig. B-22).¹⁹⁸ Also seen in votive reliefs are individuals sleeping on *klinai* which is a type of ancient furniture used for sleeping and reclining during meals suggesting that these dormitories were located inside (fig. B-21). Finally, Greeks believed that incubation could still be performed if the patient was unable to make it to the sanctuary by having another person perform the ritual in his or her place, known as incubation by proxy.¹⁹⁹ Proxy incubation was seen initially at Epidauros (a 4th century B.C. testimony) and also seen in Libanius's later account.²⁰⁰

After the patients have woken up from their incubation, a few more rites and practices were in order. The dream that the patient has witnessed must be deciphered by a priest, and money was donated along with more animal sacrifices to show thanks to the gods. Another post incubation rite performed, specifically at Epidauros, was recording the miracles that took place during or soon after incubation which served as a type of advertisement to those who traveled to the site.²⁰¹

Many of these miracle stories at the Epidaurian Asklepieion have been recovered. One inscription tells the story of Euhippos who had a spear head stuck in his jaw for six years.²⁰² He slept at the Abaton, the god reportedly took the spearhead out of his jaw, and Euhippos "walked out well" holding the spear head.²⁰³ Another inscription tells the story of Pandaros of Thessaly who had tattoos or marks on his forehead.²⁰⁴ He claims to have

¹⁹⁸ Ehrenheim 2015 pp. 88.

¹⁹⁹ Renberg 2017, vol. 2, pp. 613-615.

²⁰⁰ Renberg 2017, vol. 2, p. 615.

²⁰¹ Ehrenheim 2015, pp. 100-105.

²⁰² LiDonnici 1995, p. 95.

²⁰³ LiDonnici 1995, p. 95.

²⁰⁴ LiDonnici 1995, p. 91.

seen a vision in which the god bound a fillet or band around his forehead with instructions to dedicate the fillet to the temple next to the Abaton, and when he woke up the next day the tattoos were gone.²⁰⁵ The fillet which he dedicated in the temple had the marks from his forehead.²⁰⁶ Many stories dealt with childbirth such as the mid-4th century inscription beginning with “ Andromache from Epirus, concerning child birth.”²⁰⁷ She saw a dream while sleeping in the Abaton where a young boy uncovered her, and the god touched her; from this vision, Andromache had a son by Arybbas (the king of a tribe of Epirus).²⁰⁸ Other stories speak of mute children who see the god and speak.²⁰⁹

Rational explanations for these stories can range widely. For one, it seems improbable that Euhippos was able to walk out of the Abaton the next morning healed. The markings on Pandaros’s forehead could be scrapes or ink drawings or a variety of things; bandaging a wound would likely speed up the healing process, and ink could likely rub off onto a rag like the one used. Many of these examples are similar to later Christian traditions, although they were written between 350 and 300 B.C. Pandaros’s story, for example, shares similarities with the shroud of Turin and giving birth without having intercourse is similar to the story of Mary’s immaculate conception.

A Sophist by the name of Libanius (314- 393 A.D.) had a series of illnesses (both mental and physical) during his lifetime which were recorded in his many letters and autobiography. Libanius tried many different treatments for his ailments, and one of these

²⁰⁵ LiDonnici 1995, p. 91.

²⁰⁶ LiDonnici 1995, p. 91.

²⁰⁷ LiDonnici 1995, p. 109.

²⁰⁸ LiDonnici 1995, p. 109

²⁰⁹ LiDonnici 1995, pp. 89, 117.

was seeking out Asklepios's aid.²¹⁰ This account provides valuable information on general health concerns during the 4th century A.D. and how an individual patient would go about receiving medical help. Libanius first began experiencing health troubles in his twenties from a thunderbolt striking near him during his younger years.²¹¹ He refers to his major symptom as an "affliction of the head" explaining that this was chronic and incapacitating.²¹² At least three separate records indicate that his symptoms were alleviated in the years 362 A.D., 363 A.D., and 371 A.D., and Libanius credits Asklepios for curing his headaches.²¹³ He later noted that his chronic headaches returned in 386 A.D. and lasted for the remainder of his lifetime.²¹⁴ He was also afflicted with gout, an eye injury, kidney problems, a leg injury, and loss of vision towards the end of his life.²¹⁵ He wrote a letter to a friend in 362 A.D. that reads "in my head there lives a pain which makes life burdensome, and puts death in my prayers"²¹⁶ as well as a letter in 355/6 A.D. which reads "my head is possessed by an illness on account of which I drink more wine than medicine, and my kidneys have forced me to my bed, and I have been shut off from everything that makes life pleasureable."²¹⁷ Libanius sought treatment from medical authorities as well as divinities, but unfortunately there is little evidence in his writings concerning specific prescribed medicines and orders from doctors and the practice of

²¹⁰ Renberg 2017, vol. 2, pp. 689-691.

²¹¹ Renberg 2017, vol. 2, pp. 691-692.

²¹² Renberg 2017, vol. 2, p. 692. Libanius, *Orationes* 1.243.

²¹³ Renberg 2017, vol. 2, pp. 692-693. Libanius, *Orationes* 1.143.

²¹⁴ Renberg 2017, vol. 2, p. 693. Libanius, *Orationes* 1.243-244, 268.

²¹⁵ Renberg 2017, vol. 2, p. 693. Libanius, *Orationes*, 1.93, 183, 1281. Libanius, *Epistulae* 409.3 (355 A.D.), 555.1-2 (357 A.D.), 1039 (392 A.D.), 1051.2 (392 A.D.), 1064.1 (392 A.D.).

²¹⁶ Renberg 2017, vol. 2, p. 693. Libanius, *Epistulae* 707.

²¹⁷ Renberg 2017, vol. 2, pp. 693-694. Libanius, *Epistulae* 409.3.

medicine during his lifetime.²¹⁸ Most noteworthy, however, was his use of incubation at various Asklepieia for healing.

Typical participants in Asklepieia rituals were ones who had chronic illnesses which were not deadly and often those who had lost hope in rational medicine at the time.²¹⁹ Individuals that sought aid from Asklepios believed that they were directly healed by the god himself as though he was the surgeon or physician.²²⁰ This could be through a healing touch, medical orders to follow, diet changes, or even a prescription for a certain drug.²²¹ Furthermore, in some cases, the healing took a significantly longer time than the ritual itself, particularly in the Roman era (sometimes over one hundred days before being cured).²²² There are instances when Asklepios fails to heal particular patients.²²³ According to this evidence and votives, a therapeutic dream is the source of divine interventional healing (fig. B-19). Moreover, there is no source evidence that Asklepios issued these healing orders through a medical professional or cult priest, but certain cases state the prescriptions issued in the dream were determined by doctors or cult priests.²²⁴ Also, as rational medicine was simultaneously being practiced across Greece, multiple parallels exist between Asklepios's reported prescriptions and ones which doctors were prescribing.²²⁵

²¹⁸ Renberg 2017, vol. 2, pp. 694-695.

²¹⁹ Renberg 2017, vol. 1, pp. 213-214.

²²⁰ Renberg 2017, vol. 1, p. 215.

²²¹ Renberg 2017, vol. 1, pp. 215-218.

²²² Renberg 2017, vol. 1, p. 218.

²²³ Renberg 2017, vol. 1, p. 218.

²²⁴ Renberg 2017, vol. 1, p. 226. most evidence for medical practitioners at an Asklepeion is at the Kos sanctuary, but no evidence exists of them actually practicing medicine at the sanctuary.

²²⁵ Renberg 2017, vol. 1, p. 235.

This practice of medicine is heavily intertwined with philosophy and religious beliefs. Early Greek philosophers formulated wide-ranging theories about the origin of the occurrences during sleep which will be referred to as dreams from now on. Philosophers who endorsed religious medicine argued that dreams had a divine origin, and the dreamers were miraculously healed through intervention.²²⁶ But others rejected this philosophical belief and moved to other explanations for occurrences of dreams and ultimately healing. These philosophers moved away from divine interventions and began looking within their own bodies for answers.

Two philosophers, among others, offer up different explanations of dreaming. Aristotle (384-322 B.C.) proposes the idea that dreams have no function and are simply residual perceptions.²²⁷ Plato (427-327 B.C.), in the *Republic*, on the other hand, believes that dreams fulfill a person's deepest desire.²²⁸ While different from one another, these are both naturalistic explanations of dreaming unconnected to a divine source. This thought process ultimately led others to naturalistic medicine, otherwise known as rational medicine, a system of medicine based on natural causes and mostly free from magical and religious elements.²²⁹ While these two branches of medicine, rational and religious, appear to be in competition with one another, doctors in antiquity did not oppose religious medicine, in fact, they even would tell patients to pray to certain gods and goddesses to fulfill various needs.²³⁰ Moreover, the question of which branch came first is controversial. Nevertheless, in both medicine practices, philosophy is the source.

²²⁶ Barbera 2008, pp.906-910.

²²⁷ Barbera 2008, p. 908.

²²⁸ Barbera 2008, p. 908.

²²⁹ Longrigg 1993, p. 1.

²³⁰ Longrigg 1993, p. 1.

In modern day medicine, sleep is used as a healing tool. According to Rottger, sleep benefits a person's productivity and efficiency in daily tasks and mood, and it plays an important role in overall health.²³¹ Also, a lack of sleep has been proven to lead to health risks such as a higher risk of mortality as well as cardiovascular disease.²³² Sleep deprivation is also linked with a large number of problems ranging from psychological problems like depression to poor decision making and low level task performances.²³³ Moreover, not only how much sleep but how well a person sleeps matter. Medical professionals have defined normal sleep, which is generally agreed upon to be between 7 and 9 consecutive hours of sleep every night; however, as humans age, that number changes.²³⁴ Sleep disorders exist such as sleep apnea and insomnia, which is why various breathing equipment and pharmaceuticals are on the market to aid in sound sleep. Pills such as Ambien, Rozerem, or even melatonin are all sleep drugs which affect the body differently in terms of how long they make a person sleepy.²³⁵ On the other hand, drugs such as caffeine serve to do the opposite and are sometimes used to counteract certain sleeping drugs when a person needs to wake up in the morning. A large group of people oppose solving their day to day problems by simply taking a pill, and I believe that something can be learned from the early forms of sleep therapy implemented at these healing cults on how sleep therapy can aid in the healing process.

Presently, several working theories about dreams exist. Modern intellectual Bernard Baars formulated a theory called the Global Workspace Theory which separates

²³¹ Rottger 2017, p. 685.

²³² Gallicchio and Kalesan 2009; Lietal.2014 in Rottger 2017, p. 685.

²³³ Rottger 2017, p. 686.

²³⁴ Wolf-Meyer 2012, p. 257.

²³⁵ Wolf-Meyer 2012, p. 259.

the unconsciousness and consciousness during sleep.²³⁶ He uses a theater metaphor to explain this distinction stating that the conscious mind converges on the stage of the theater, where the mind integrates perceptual information from the consciousness, and the audience is as the other parts of the brain that converge onto the stage.²³⁷ The unconsciousness, then, is the backstage of the theater because it shapes conscious events.²³⁸ This theory has been revised in the recent years through the study of neural mechanisms and pathways observed in the brain during sleep and dreaming. Multiple studies argue that integrated sensory experiences dominate the subjective part of the dream, such as images, emotions, and complex thought, and these perceptual modalities which are present in consciousness also exist in our dreams.²³⁹ Furthermore, during REM (rapid eye movement) sleep, the most shallow stage of sleep, visual occipital and auditory temporal cortices are activated, which provides a neural correlation to visual and auditory elements in a dream.²⁴⁰ Interestingly, a lesion in the bilateral medial occipito-temporal region of the brain causes nonvisual dreaming where all or some of visual dreaming is lost.²⁴¹ Other lesions “in or near the right (or, in a few cases, bilateral) temporo-parieto-occipital junction are associated to a complete loss of dreaming” suggesting “that this area is essential for dreaming itself.”²⁴² These recent discoveries, among many others,

²³⁶ Pantani 2018, p. 177.

²³⁷ Pantani 2018, p. 177.

²³⁸ Pantani 2018, p. 177.

²³⁹ Pantani 2018, p. 181. Calkins 1893; Domhoff 2003; Hall and Van de Castle 1996; Hobson 2009; Nir and Tononi 2009; Strauch et al. 1996.

²⁴⁰ Pantani 2018, p. 182. Braun et al. 1997; Horikawa et al., 2013; Maquet et al. 2005; Perogamvros et al., 2013; Siclari et al. 2013.

²⁴¹ Pantani 2018, p. 182.

²⁴² Pantani 2018, p. 182.

have recently been made which provide empirical evidence for mechanisms of dreaming illustrating mankind's progress to uncovering the nature of dreams and the subconscious.

As we have uncovered more information on dreaming, it has become more and more apparent that humans are influenced by their conscious perceptions during dreams. As Asklepieia rituals illustrated, "faith/hope/belief cures (or heals) when it is deep, true, touching one's inner self."²⁴³ As an individual entered an Asklepieion sanctuary such as Epidaurus, she was greeted with inscriptions and votive reliefs that mentally prepared her to be touched in her dream by the god. Although this idea of healing via touching the subconscious through a therapeutic dream is not very well known, evidence of successful examples exists in ancient Greece and across time, which sheds light on the role the mind plays in the mind-body relationship. Even though we do not fully understand the source of dreams and the unconscious/subconscious, this phenomenon could be utilized in modern medicine alongside rational medicine.

²⁴³ Mommaerts 2012, p. 46.

CHAPTER IV: RATIONAL MEDICINE

As discussed in the last chapter, religious practices were frequently used to treat illnesses throughout antiquity and even in the present day. Actual medical practices were also used since at least the 8th century B.C. where Homer and Hesiod mention using medicine in their works. But even since the beginning of the human race, it is conjectured that mankind developed a variety of sicknesses and subsequently attempted to treat them with some forms of medicine. Pindar in *Pythian* III. 51-53 mentions Asclepius's treatments ranging from surgery and soothing potions and amuletic drugs to incantations and magical herbs.²⁴⁴ Well known physicians like Hippocrates and Galen and other researchers and medical doctors practiced medicine in ways that are similar to present day views of medicine in terms of diagnoses, prescriptions, and dietary restrictions.²⁴⁵ Here, I will explore rational medicine, Greek doctors, and drugs used in antiquity.

Rational medicine broadly refers to healing practices using natural medicine without magical or divine interventions, although "Greek physicians never opposed religious medicine."²⁴⁶ Rational medicine and Hippocratic medicine are interchangeable terms. Rational medicine is credited to the Greeks, and Seneca in the 1st century A.D. referred to the man known as Hippocrates as the "greatest physician and the founder of

²⁴⁴ 518 B.C.-438 B.C. Scarborough 2010, p. 143.

²⁴⁵ King 2001, p. viii, 9, 38. Hippocrates is suspected to have lived around 430 B.C., and Galen of Pergamum lived from 129 A.D. to 216 A.D.

²⁴⁶ Edelstein and Edelstein 1945/1998, p. 139.

medicine.”²⁴⁷ Hippocrates is not very well known historically, but he is believed to have lived ca 430 B.C. based on evidence of his name being mentioned by Plato in *Protagoras*. The text known as *The Hippocratic corpus* is a group of at least sixty texts which mostly date from 420 to 370 B.C. with some of them emerging later than 370 B.C., and it is unknown whether Hippocrates wrote any of these treatises.²⁴⁸ There are many different “Hippocratic” authors. Asklepios, however, is given credit for establishing “medicine as a profession” according to Plato in the *Symposium*.²⁴⁹

In the *Hippocratic Ancient Medicine*,²⁵⁰ the anonymous writer opposed and attacked philosophical influences on medicine.²⁵¹ The author attempted to distinguish philosophy from medicine by saying that “it is impossible to have any clear knowledge about nature from any other source than medicine.”²⁵² The writer believes that philosophy is completely theoretical in nature and that it is impossible to learn anything about nature and man unless it is from a scientific perspective.²⁵³ In comparison, Aristotle in the *De Sensu* sees philosophy and medicine as already separate fields, and distinguishes between “most physical inquirers” and “those physicians who pursue their art more philosophically,” stating that “the latter start from a consideration of nature.”²⁵⁴ To Aristotle, form and matter are necessary to understand the basics of medicine and nature, and according to his writings, natural philosophy should be the foundation of

²⁴⁷ King 2001, p. 9.

²⁴⁸ King 2001, p. 9.

²⁴⁹ Collins 2013, pp. 33-34.

²⁵⁰ ca late 5th century B.C.

²⁵¹ Scarborough 2010, p. 143.

²⁵² Schiefsky 2005, p. 103. Translation from *Ancient Medicine* 20.2.

²⁵³ Schiefsky 2005, p. 301.

²⁵⁴ Schiefsky 2005, pp.301-302. Barnes translation.

medicine for all reasoning behind healing practices originate in conscious thought about matter and form in the human body.²⁵⁵

Instead of believing that diseases manifested from gods or other magical origins, philosophers and other intellectuals began to offer naturalistic explanations. The Hippocratic writers also sought explanations in nature for certain maladies. Epilepsy, for example, was a so-called “sacred disease” that Hippocratic authors asserted had a unique cause from other illnesses, but it did not have divine origins simply because it was frightening or because people were ignorant of its true cause; furthermore, these Hippocratic writers believed that it was treatable.²⁵⁶

The Hippocratic Oath links religion and Hippocratic medicine revealing the multi-layered approach to curing. It roughly dates around 4th century B.C.²⁵⁷ Taking this oath embodied the competitive nature these doctors possessed among one another as physicians were constantly being judged and fighting for a good reputation.²⁵⁸ It was not commonly taken as it is today. The Oath is broken into two main parts. The first part deals with how a pupil behaves to his teacher and how he passes down his knowledge to another pupil.²⁵⁹ The second part deals with how to deal with treating diseases that have ethical dilemmas associated with them, in other words, the grey areas of medicine. Here is the full Oath:

²⁵⁵ Schiefsky 2005, pp. 301-302.

²⁵⁶ Longrigg 1998, pp. 20-21. Hippocrates, *Sacred disease* 1 (VI.352, 1-9L; VI.354, 12-20L); Hippocrates, *Sacred disease* 18 (VI. 394, 9-15L).

²⁵⁷ Edelstein 1943, pp. 55-57.

²⁵⁸ King 2001, p. 16.

²⁵⁹ Edelstein 1943, p. 4.

“I swear by Apollo the healer, by Asclepius, and Health and all the powers of healing, and call to witness all the gods and goddesses that I may keep this Oath and Promise to the best of my ability and judgement.

I will pay the same respect to my master in the Science as to my parents and share my life with him and pay all my debts to him. I will regard his sons as my brothers and teach them the Science, if they desire to learn it, without fee or contract. I will hand on precepts, lectures and all other learning to my sons, to those of my master and to those pupils duly apprenticed and sworn, and to none other.

I will use my power to help the sick to the best of my ability and judgment; I will abstain from harming or wronging any man by it.

I will not give a fatal draught to anyone if I am asked, nor will I suggest any such thing. Neither will I give a woman means to procure an abortion.

I will be chaste and religious in my life and in my practice.

I will not cut, even for the stone, but I will leave such procedures to the practitioners of that craft.

Whenever I go into a house, I will go to help the sick and never with the intention of doing harm or injury. I will not abuse my position to indulge in sexual contacts with the bodies of women or of men, whether they be freemen or slaves.

Whatever I see or hear, professionally or privately, which ought not to be divulged, I will keep secret and tell no one.

If, therefore, I observe this Oath and do not violate it, may I prosper both in my life and in my profession, earning good repute among all men for all time. If I transgress and forswear this Oath, may my lot be otherwise.”²⁶⁰

Many aspects of the Oath were significant, one of which was the idea of generational connection similar to an apprenticeship. and even further connecting practitioners to the source: the deities.²⁶¹ There was also a movement around the 4th century B.C. to improve medicine and ethical practice of it.²⁶² Significantly, not many doctors took this oath when

²⁶⁰ Chadwick and Mann 1978, p. 67.

²⁶¹ King 2001, p. 16.

²⁶² Edelstein 1943, p. 59.

it was first written, however towards the end of antiquity the Oath became popular and physicians decided to obey the moral ethics outlined by it.²⁶³

Medicine as a profession was mentioned by Homer, practiced by travelling craftsmen who had knowledge of medicine and herbs.²⁶⁴ He also mentions doctors by name.²⁶⁵ According to Burkert, these origins of medical professionals provide evidence for the view of medicine as a family trade passed down through generations.²⁶⁶ Doctors, as seen in the oath above, were thought to have been descended from Asklepios, and claimed him as their divine patron in the late 5th century B.C.²⁶⁷ Furthermore, these physicians had their reputations to look out for so they would not be placed into the category of quacks, and proper, repetitive training was necessary to accomplish a good reputation.²⁶⁸

Doctors in Greece were surgeons as well as medical practitioners.²⁶⁹ The word *cheirourgia* is the Greek word meaning surgery, and surgical manuals are present in the Hippocratic writings. Asklepios was mentioned in the *Iliad* as a Thessalian doctor (as Thessaly was already famously known to have healing herbs) who possessed a knowledge of herbs and surgery.²⁷⁰ There is epigraphical evidence that Asklepios, the god himself, used surgical techniques at his sanctuaries.²⁷¹ In fact, the Asklepios shrine at Epidauros has yielded actual surgical tools. Examining these tools will provide a sense of

²⁶³ Edelstein 1943, p. 63.

²⁶⁴ Scarborough 2010, p. 140.

²⁶⁵ Wickkiser 2008, p. 13.

²⁶⁶ Scarborough 2010, pp. 140-141.

²⁶⁷ Wickkiser 2008, pp. 11, 53-54.

²⁶⁸ Wickkiser 2008, p. 27.

²⁶⁹ Longrigg 1998, p. 178.

²⁷⁰ Ehrenheim 2015, pp. 166-167.

²⁷¹ Longrigg 1998, p. 181.

how doctors approached performing surgeries. It is possible that herbs used to aid in surgery and the healing process because of practitioners' understanding of their effects to a certain degree.

Homer mentions mostly the effects of the drugs, not the substances themselves, although he does mention specific plants as well as their locations.²⁷² These drugs carried a magical and divine quality and drugs were generally categorized by Homer as beneficial remedies or evil poisons.²⁷³ Drug theory, examining naturalistic properties of drugs and how they interact in the human body, begins to develop in the works of Theophrastus (370 B.C.-288/85 B.C.), a student of Aristotle.²⁷⁴ When the Hippocratic writers explore drug theory in their many treatises, an argument can be made that they simply recognized previously used pharmaceuticals²⁷⁵ in Greek history and removed any magical or divine connections to them.²⁷⁶ Edelstein makes an argument, however, that this removal of the magical or divine nature of pharmaceuticals happened as early as 700 B.C. and continued through Hippocratic writers.²⁷⁷

In the *Hippocratic Corpus*, there are many examples of doctors prescribing medicine. There are also correlations to the medicine used at Asklepieia, such as the 1st century B.C. Asklepieion at Lebena from testimony.²⁷⁸ Herbs and their usage are mentioned from this evidence, and some have suggested that doctors working at the

²⁷² Scarborough 2010, pp. 139, 140.

²⁷³ Scarborough 2010, p. 139.

²⁷⁴ Scarborough 2010, pp. 143,353.

²⁷⁵ Herbs, minerals, and animal products.

²⁷⁶ Scarborough 2010, pp. 324-324.

²⁷⁷ Edelstein 1937, pp. 233-235.

²⁷⁸ Ehrenheim 2015, p. 100.

sanctuary put these prescriptions together.²⁷⁹ Theophrastus provides a useful list of herbs and their uses as well as his understanding of *pharmaka*.²⁸⁰ I will give examples of some herbs mentioned and postulate connections to their usage at Asklepieia.

Theophrastus was interested in naturalistic explanations from herbals without connections to magical properties; thus, his empirical approach to drugs at this time period is significant to examine.²⁸¹ One herb was used as a sleep inducer among other uses, *mandragoras* or mandrake, with specific instructions for preparation: stringing balls of the cut root over wine and smoking over a fire.²⁸² In today's medicine, mandrake is used in veterinary medicine as an antispasmodic but no longer used on people. Here is an example of a Doctor giving a prescription to a patient from the Hippocratic *Internal Affections*: "When this happens, give the patient to drink five obols weight of black hellebore, in sweet wine."²⁸³ *Helleboros*, according to Theophrastus, is found in black and white forms, and the former is deadly to horses.²⁸⁴ Moreover, he reports that it grows in Elea's vineyards, and they make diuretic wine from this herb at these vineyards.²⁸⁵ He knew that hellebore was a toxic herb, and it is known that taking this drug would induce vomiting.²⁸⁶ Another sleep inducer, *hypnodes*, which is a kind of *strychnoi*, promoted relaxation if prepared as Theophrastus describes. While drugs are clearly implemented at Asclepios sanctuaries, it is uncertain who administers the medicine, but one might argue that doctors are present and administering the drugs.

²⁷⁹ Zingerle 1937, p. 88.

²⁸⁰ Scarborough 2010, p. 359.

²⁸¹ Scarborough 2010, pp. 358-359.

²⁸² Scarborough 2010, p. 360.

²⁸³ King 2001, p. 47.

²⁸⁴ Scarborough 2010, p. 361.

²⁸⁵ Scarborough 2010, p. 361.

²⁸⁶ Scarborough 2010, p. 362.

Drugs and other prescribed doctor orders were responsible for much of the healing in ancient Greece, but other sources of healing could also exist. The healing stories at Asklepieia that had no plausible explanation other than a miracle or divine intervention perhaps embody examples of autosuggestion. This mode of healing is known more commonly as the placebo effect. This term carries a negative connotation in modern usage; therefore, I will attempt to expand its definition and how it is responsible for many healing stories across time. From entering the Asklepeion at Epidauros at the Propylon, the patient seeking healing is mentally primed to open her mind. She crosses over a river to enter the sanctuary and witnesses the many miracle stories seen on the stelai of the Abaton, baths in preparation for the ritual, and changes clothes all to receive a dream and be healed. Much like taking a vacation relieves monotonous stress from the hectic lives people live, entering the Asklepieion accomplishes the same task which further opens the mind for autosuggestion and a willingness and openness for healing. Therefore, the placebo effect occurs anytime that one's mind has the desire to heal its body. This phenomenon is not fully understood; however, this is not a reason to pretend it is nonexistent and instead to see its beneficial promise in practice. Thus, taking a more holistic approach to medicine could enhance overall patient health and well-being.

CONCLUSION

In researching these intricacies of Greek Medicine, I came to several conclusions about how these doctors and other Greek intellectuals understood the inner workings of the body and the role the mind played in healing. Although some people believed that healing was performed by a divine intervention of sorts, I have come to the conclusion that these believers used religious medicine to actually persuade or auto-suggest the mind of the patients which positively impacted their healing process and had a significant effect on the patients' overall wellness and recovery from their affliction. Although there is no specific literary or epigraphical evidence for surgery performed at these sites, I have also concluded that even though it is not explicitly recorded at these Asklepieia, rational or Hippocratic medicine was likely performed in conjunction with religious medicine by practicing doctors or other priests or healers. The archeological evidence of medical equipment supports this conclusion.

Although this auto-suggestion or mental priming was not clearly classified with terminology in Greek antiquity, I believe that this practice defines the placebo effect; furthermore, this definition has been more broadly and positively explained in this paper. Moreover, I believe that combining this mental priming with rational medicine could be utilized more and could significantly impact the way western medicine is administered today.

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APPENDICES

APPENDIX A

Thucydides. II.47-II.64, trans. J.M. Dent, London, 1910.

47.

Such was the funeral that took place during this winter, with which the first year of the war came to an end. [2] In the first days of summer the Lacedaemonians and their allies, with two-thirds of their forces as before, invaded Attica, under the command of Archidamus, son of Zeuxidamus, king of Lacedaemon, and sat down and laid waste the country. [3] Not many days after their arrival in Attica the plague first began to show itself among the Athenians. It was said that it had broken out in many places previously in the neighborhood of Lemnos and elsewhere; but a pestilence of such extent and mortality was nowhere remembered. [4] Neither were the physicians at first of any service, ignorant as they were of the proper way to treat it, but they died themselves the most thickly, as they visited the sick most often; nor did any human art succeed any better. Supplications in the temples, divinations, and so forth were found equally futile, till the overwhelming nature of the disaster at last put a stop to them altogether.

48.

It first began, it is said, in the parts of Ethiopia above Egypt, and thence descended into Egypt and Libya and into most of the king's country. [2] Suddenly falling upon Athens, it first attacked the population in Piraeus,—which was the occasion of their saying that the Peloponnesians had poisoned the reservoirs, there being as yet no wells there—and afterwards appeared in the upper city, when the deaths became much more frequent. [3] All speculation as to its origin and its causes, if causes can be found adequate to produce so great a disturbance, I leave to other writers, whether lay or professional; for myself, I shall simply set down its nature, and explain the symptoms by which perhaps it may be recognized by the student, if it should ever break out again. This I can the better do, as I had the disease myself, and watched its operation in the case of others.

49.

That year then is admitted to have been otherwise unprecedentedly free from sickness; and such few cases as occurred, all determined in this. [2] As a rule, however, there was no ostensible cause; but people in good health were all of a sudden attacked by violent heats in the head, and redness and inflammation in the eyes, the inward parts, such as the throat or tongue, becoming bloody and emitting an unnatural and fetid breath. [3] These symptoms were followed by sneezing and hoarseness, after which the pain soon reached the chest, and produced a hard cough. When it fixed in the stomach, it upset it; and

discharges of bile of every kind named by physicians ensued, accompanied by very great distress. [4] In most cases also an ineffectual retching followed, producing violent spasms, which in some cases ceased soon after, in others much later. [5] Externally the

body was not very hot to the touch, nor pale in its appearance, but reddish, livid, and breaking out into small pustules and ulcers. But internally it burned so that the patient could not bear to have on him clothing or linen even of the very lightest description; or indeed to be otherwise than stark naked. What they would have liked best would have been to throw themselves into cold water; as indeed was done by some of the neglected sick, who plunged into the rain-tanks in their agonies of unquenchable thirst; though it made no difference whether they drank little or much. [6] Besides this, the miserable feeling of not being able to rest or sleep never ceased to torment them. The body meanwhile did not waste away so long as the distemper was at its height, but held out to a marvel against its ravages; so that when they succumbed, as in most cases, on the seventh or eighth day to the internal inflammation, they had still some strength in them. But if they passed this stage, and the disease descended further into the bowels, inducing a violent ulceration there accompanied by severe diarrhea, this brought on a weakness which was generally fatal. [7] For the disorder first settled in the head, ran its course from thence through the whole of the body, and even where it did not prove mortal, it still left its mark on the extremities; [8] for it settled in the privy parts, the fingers and the toes, and many escaped with the loss of these, some too with that of their eyes. Others again were seized with an entire loss of memory on their first recovery, and did not know either themselves or their friends.

50.

But while the nature of the distemper was such as to baffle all description, and its attacks almost too grievous for human nature to endure, it was still in the following circumstance that its difference from all ordinary disorders was most clearly shown. All the birds and beasts that prey upon human bodies, either abstained from touching them (though there were many lying unburied) , or died after tasting them. [2] In proof of this, it was noticed that birds of this kind actually disappeared; they were not about the bodies, or indeed to be seen at all. But of course the effects which I have mentioned could best be studied in a domestic animal like the dog.

51.

Such then, if we pass over the varieties of particular cases, which were many and peculiar, were the general features of the distemper. Meanwhile the town enjoyed an immunity from all the ordinary disorders; or if any case occurred, it ended in this. [2] Some died in neglect, others in the midst of every attention. No remedy was found that could be used as a specific; for what did good in one case, did harm in another. [3] Strong and weak constitutions proved equally incapable of resistance, all alike being swept away, although dieted with the utmost precaution. [4] By far the most terrible feature in the malady was the dejection which ensued when anyone felt himself sickening, for the despair into which they instantly fell took away their power of resistance, and left them a much easier prey to the disorder; besides which, there was the awful spectacle of men dying like sheep, through having caught the infection in nursing each other. This caused the greatest mortality. [5] On the one hand, if they were afraid to visit each other, they perished from neglect; indeed many houses were emptied of their inmates for want of a

nurse: on the other, if they ventured to do so, death was the consequence. This was especially the case with such as made any pretensions to goodness: honor made them unsparing of themselves in their attendance in their friends' houses, where even the members of the family were at last worn out by the moans of the dying, and succumbed to the force of the disaster. [6] Yet it was with those who had recovered from the disease that the sick and the dying found most compassion. These knew what it was from experience, and had now no fear for themselves; for the same man was never attacked twice—never at least fatally. And such persons not only received the congratulations of others, but themselves also, in the elation of the moment, half entertained the vain hope that they were for the future safe from any disease whatsoever.

52.

An aggravation of the existing calamity was the influx from the country into the city, and this was especially felt by the new arrivals. [2] As there were no houses to receive them, they had to be lodged at the hot season of the year in stifling cabins, where the mortality raged without restraint. The bodies of dying men lay one upon another, and half-dead creatures reeled about the streets and gathered round all the fountains in their longing for water. [3] The sacred places also in which they had quartered themselves were full of corpses of persons that had died there, just as they were; for as the disaster passed all bounds, men, not knowing what was to become of them, became utterly careless of everything, whether sacred or profane. [4] All the burial rites before in use were entirely upset, and they buried the bodies as best they could. Many from want of the proper appliances, through so many of their friends having died already, had recourse to the most shameless sepultures: sometimes getting the start of those who had raised a pile, they threw their own dead body upon the stranger's pyre and ignited it; sometimes they tossed the corpse which they were carrying on the top of another that was burning, and so went off.

53.

Nor was this the only form of lawless extravagance which owed its origin to the plague. Men now coolly ventured on what they had formerly done in a corner, and not just as they pleased, seeing the rapid transitions produced by persons in prosperity suddenly dying and those who before had nothing succeeding to their property. [2] So they resolved to spend quickly and enjoy themselves, regarding their lives and riches as alike things of a day. [3] Perseverance in what men called honor was popular with none, it was so uncertain whether they would be spared to attain the object; but it was settled that present enjoyment, and all that contributed to it, was both honorable and useful. [4] Fear of gods or law of man there was none to restrain them. As for the first, they judged it to be just the same whether they worshipped them or not, as they saw all alike perishing; and for the last, no one expected to live to be brought to trial for his offences, but each felt that a far severer sentence had been already passed upon them all and hung ever over their heads, and before this fell it was only reasonable to enjoy life a little.

54.

Such was the nature of the calamity, and heavily did it weigh on the Athenians; death raging within the city and devastation without. [2] Among other things which they remembered in their distress was, very naturally, the following verse which the old men said had long ago been uttered:

“ A Dorian war shall come and with it death.
” [3]

So a dispute arose as to whether dearth and not death had not been the word in the verse; but at the present juncture, it was of course decided in favor of the latter; for the people made their recollection fit in with their sufferings. I fancy, however, that if another Dorian war should ever afterwards come upon us, and a dearth should happen to accompany it, the verse will probably be read accordingly. [4] The oracle also which had been given to the Lacedaemonians was now remembered by those who knew of it. When the God was asked whether they should go to war, he answered that if they put their might into it, victory would be theirs, and that he would himself be with them. [5] With this oracle events were supposed to tally. For the plague broke out so soon as the Peloponnesians invaded Attica, and never entering Peloponnese (not at least to an extent worth noticing) , committed its worst ravages at Athens, and next to Athens, at the most populous of the other towns. Such was the history of the plague.

55.

After ravaging the plain the Peloponnesians advanced into the Paralian region as far as Laurium, where the Athenian silver mines are, and first laid waste the side looking towards Peloponnese, next that which faces Euboea and Andros. [2] But Pericles, who was still general, held the same opinion as in the former invasion, and would not let the Athenians march out against them.

56.

However while they were still in the plain, and had not yet entered the Paralian land, he had prepared an armament of a hundred ships for Peloponnese, and when all was ready put out to sea. [2] On board the ships he took four thousand Athenian heavy infantry, and three hundred cavalry in horse transports, then for the first time made out of old galleys; fifty Chian and Lesbian vessels also joining in the expedition. [3] When this Athenian armament put out to sea, they left the Peloponnesians in Attica in the Paralian region. [4] Arriving at Epidaurus in Peloponnese they ravaged most of the territory, and even had hopes of taking the town by an assault: in this however they were not successful. [5] Putting out from Epidaurus, they laid waste the territory of Troezen, Halieis, and Hermione, all towns on the coast of Peloponnese, [6] and thence sailing to Prasiai, a maritime town in Laconia, ravaged part of its territory, and took and sacked the place

itself; after which they returned home, but found the Peloponnesians gone and no longer in Attica.

57.

During the whole time that the Peloponnesians were in Attica and the Athenians on the expedition in their ships, men kept dying of the plague both in the armament and in Athens. Indeed it was actually asserted that the departure of the Peloponnesians was hastened by fear of the disorder; as they heard from deserters that it was in the city, and also could see the burials going on. [2] Yet in this invasion they remained longer than in any other, and ravaged the whole country, for they were about forty days in Attica.

58.

The same summer Hagnon, son of Nicias, and Cleopompus, son of Clinias, the colleagues of Pericles, took the armament of which he had lately made use, and went off upon an expedition against the Chalcidians in the direction of Thrace and Potidaea, which was still under siege. As soon as they arrived, they brought up their engines against Potidaea and tried every means of taking it, [2] but did not succeed either in capturing the city or in doing anything else worthy of their preparations. For the plague attacked them here also, and committed such havoc as to cripple them completely, even the previously healthy soldiers of the former expedition catching the infection from Hagnon's troops; while Phormio and the sixteen hundred men whom he commanded only escaped by being no longer in the neighborhood of the Chalcidians. [3] The end of it was that Hagnon returned with his ships to Athens, having lost one thousand and fifty out of four thousand heavy infantry in about forty days; though the soldiers stationed there before remained in the country and carried on the siege of Potidaea.

59.

After the second invasion of the Peloponnesians a change came over the spirit of the Athenians. Their land had now been twice laid waste; and war and pestilence at once pressed heavy upon them. [2] They began to find fault with Pericles, as the author of the war and the cause of all their misfortunes, and became eager to come to terms with Lacedaemon, and actually sent ambassadors thither, who did not however succeed in their mission. Their despair was now complete and all vented itself upon Pericles. [3] When he saw them exasperated at the present turn of affairs and acting exactly as he had anticipated, he called an assembly, being (it must be remembered) still general, with the double object of restoring confidence and of leading them from these angry feelings to a calmer and more hopeful state of mind. He accordingly came forward and spoke as follows:

60.

'I was not unprepared for the indignation of which I have been the object, as I know its causes; and I have called an assembly for the purpose of reminding you upon certain

points, and of protesting against your being unreasonably irritated with me, or cowed by your sufferings. [2] I am of opinion that national greatness is more for the advantage of private citizens, than any individual well-being coupled with public humiliation. [3] A man may be personally ever so well off, and yet if his country be ruined he must be ruined with it; whereas a flourishing commonwealth always affords chances of salvation to unfortunate individuals. [4] Since then a state can support the misfortunes of private citizens, while they cannot support hers, it is surely the duty of everyone to be forward in her defence, and not like you to be so confounded with your domestic afflictions as to give up all thoughts of the common safety, and to blame me for having counselled war and yourselves for having voted it. [5] And yet if you are angry with me, it is with one who, as I believe, is second to no man either in knowledge of the proper policy, or in the ability to expound it, and who is moreover not only a patriot but an honest one. [6] A man possessing that knowledge without that faculty of exposition might as well have no idea at all on the matter: if he had both these gifts, but no love for his country, he would be but a cold advocate for her interests; while were his patriotism not proof against bribery, everything would go for a price. [7] So that if you thought that I was even moderately distinguished for these qualities when you took my advice and went to war, there is certainly no reason now why I should be charged with having done wrong.

61.

For those of course who have a free choice in the matter and whose fortunes are not at stake, war is the greatest of follies. But if the only choice was between submission with loss of independence, and danger with the hope of preserving that independence,—in such a case it is he who will not accept the risk that deserves blame, not he who will. [2] I am the same man and do not alter, it is you who change, since in fact you took my advice while unhurt, and waited for misfortune to repent of it; and the apparent error of my policy lies in the infirmity of your resolution, since the suffering that it entails is being felt by every one among you, while its advantage is still remote and obscure to all, and a great and sudden reverse having befallen you, your mind is too much depressed to persevere in your resolves. [3] For before what is sudden, unexpected, and least within calculation the spirit quails; and putting all else aside, the plague has certainly been an emergency of this kind. [4] Born, however, as you are, citizens of a great state, and brought up, as you have been, with habits equal to your birth, you should be ready to face the greatest disasters and still to keep unimpaired the lustre of your name. For the judgment of mankind is as relentless to the weakness that falls short of a recognized renown, as it is jealous of the arrogance that aspires higher than its due. Cease then to grieve for your private afflictions, and address yourselves instead to the safety of the commonwealth.

62.

If you shrink before the exertions which the war makes necessary, and fear that after all they may not have a happy result, you know the reasons by which I have often demonstrated to you the groundlessness of your apprehension. If those are not enough, I will now reveal an advantage arising from the greatness of your dominion, which I think

has never yet suggested itself to you, which I never mentioned in my previous speeches, and which has so bold a sound that I should scarce adventure it now, were it not for the unnatural depression which I see around me. [2] You perhaps think that your empire extends only over your allies; I will declare to you the truth. The visible field of action has two parts, land and sea. In the whole of one of these you are completely supreme, not merely as far as you use it at present, but also to what further extent you may think fit: in fine, your naval resources are such that your vessels may go where they please, without the king or any other nation on earth being able to stop them. [3] So that although you may think it a great privation to lose the use of your land and houses, still you must see that this power is something widely different; and instead of fretting on their account, you should really regard them in the light of the gardens and other accessories that embellish a great fortune, and as, in comparison, of little moment. You should know too that liberty preserved by your efforts will easily recover for us what we have lost, while, the knee once bowed, even what you have will pass from you. Your fathers receiving these possessions not from others, but from themselves, did not let slip what their labor had acquired, but delivered them safe to you; and in this respect at least you must prove yourselves their equals, remembering that to lose what one has got is more disgraceful than to be baulked in getting, and you must confront your enemies not merely with spirit but with disdain. [4] Confidence indeed a blissful ignorance can impart, ay, even to a coward's breast, but disdain is the privilege of those who, like us, have been assured by reflection of their superiority to their adversary. [5] And where the chances are the same, knowledge fortifies courage by the contempt which is its consequence, its trust being placed, not in hope, which is the prop of the desperate, but in a judgment grounded upon existing resources, whose anticipations are more to be depended upon.

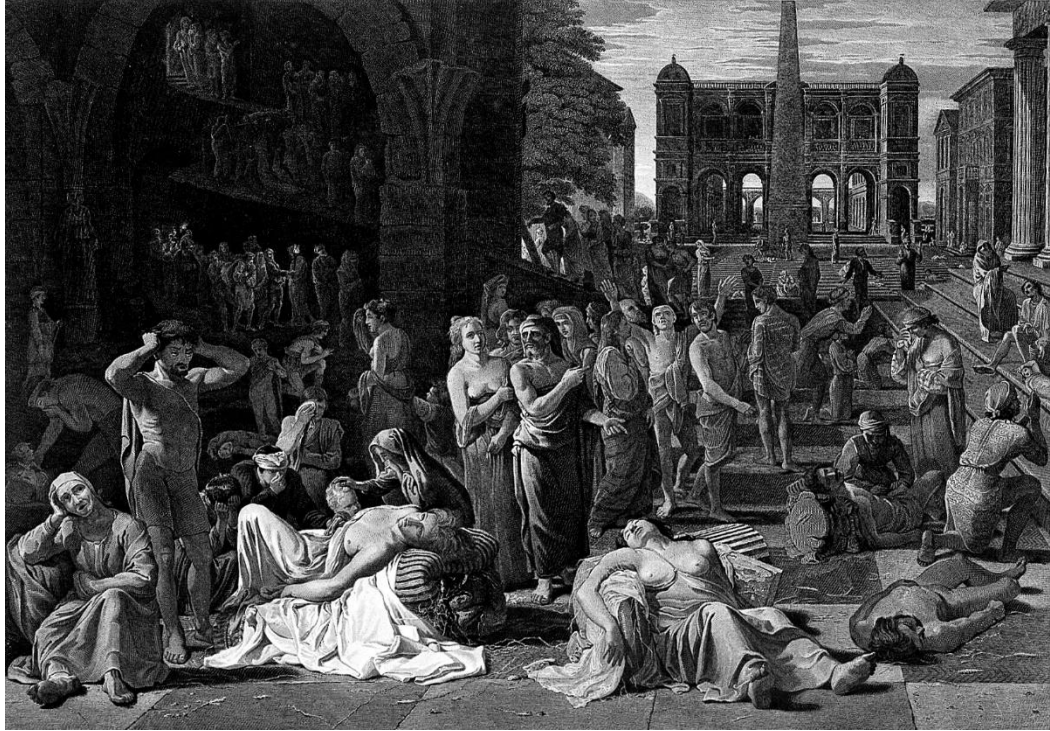
63.

Again, your country has a right to your services in sustaining the glories of her position. These are a common source of pride to you all, and you cannot decline the burdens of empire and still expect to share its honors. You should remember also that what you are fighting against is not merely slavery as an exchange for independence, but also loss of empire and danger from the animosities incurred in its exercise. [2] Besides, to recede is no longer possible, if indeed any of you in the alarm of the moment has become enamored of the honesty of such an unambitious part. For what you hold is, to speak somewhat plainly, a tyranny; to take it perhaps was wrong, but to let it go is unsafe. [3] And men of these retiring views, making converts of others, would quickly ruin a state; indeed the result would be the same if they could live independent by themselves; for the retiring and unambitious are never secure without vigorous protectors at their side; in fine, such qualities are useless to an imperial city, though they may help a dependency to an unmolested servitude.

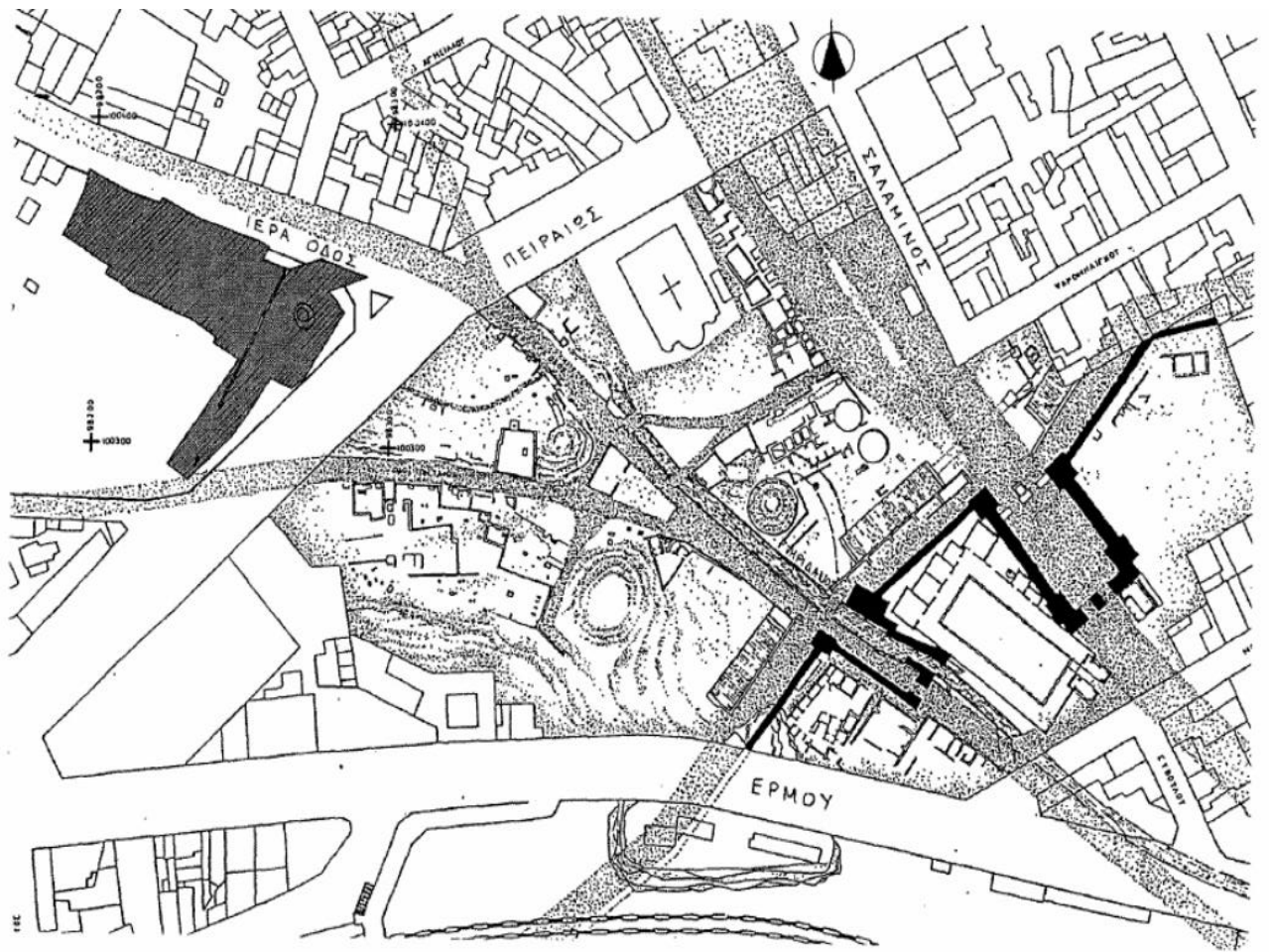
64.

But you must not be seduced by citizens like these nor be angry with me,—who, if I voted for war, only did as you did yourselves,—in spite of the enemy having invaded your country and done what you could be certain that he would do, if you refused to comply with his demands; and although besides what we counted for, the plague has come upon us—the only point indeed at which our calculation has been at fault. It is this, I know, that has had a large share in making me more unpopular than I should otherwise have been,—quite undeservedly, unless you are also prepared to give me the credit of any success with which chance may present you. [2] Besides, the hand of Heaven must be borne with resignation, that of the enemy with fortitude; this was the old way at Athens, and do not you prevent it being so still. [3] Remember, too, that if your country has the greatest name in all the world, it is because she never bent before disaster; because she has expended more life and effort in war than any other city, and has won for herself a power greater than any hitherto known, the memory of which will descend to the latest posterity; even if now, in obedience to the general law of decay, we should ever be forced to yield, still it will be remembered that we held rule over more Hellenes than any other Hellenic state, that we sustained the greatest wars against their united or separate powers, and inhabited a city unrivalled by any other in resources or magnitude. [4] These glories may incur the censure of the slow and unambitious; but in the breast of energy they will awake emulation, and in those who must remain without them an envious regret. [5] Hatred and unpopularity at the moment have fallen to the lot of all who have aspired to rule others; but where odium must be incurred, true wisdom incurs it for the highest objects. Hatred also is shortlived; but that which makes the splendor of the present and the glory of the future remains for ever unforgotten. [6] Make your decision, therefore, for glory then and honor now, and attain both objects by instant and zealous effort: do not send heralds to Lacedaemon, and do not betray any sign of being oppressed by your present sufferings, since they whose minds are least sensitive to calamity, and whose hands are most quick to meet it, are the greatest men and the greatest communities.’

APPENDIX B: FIGURES

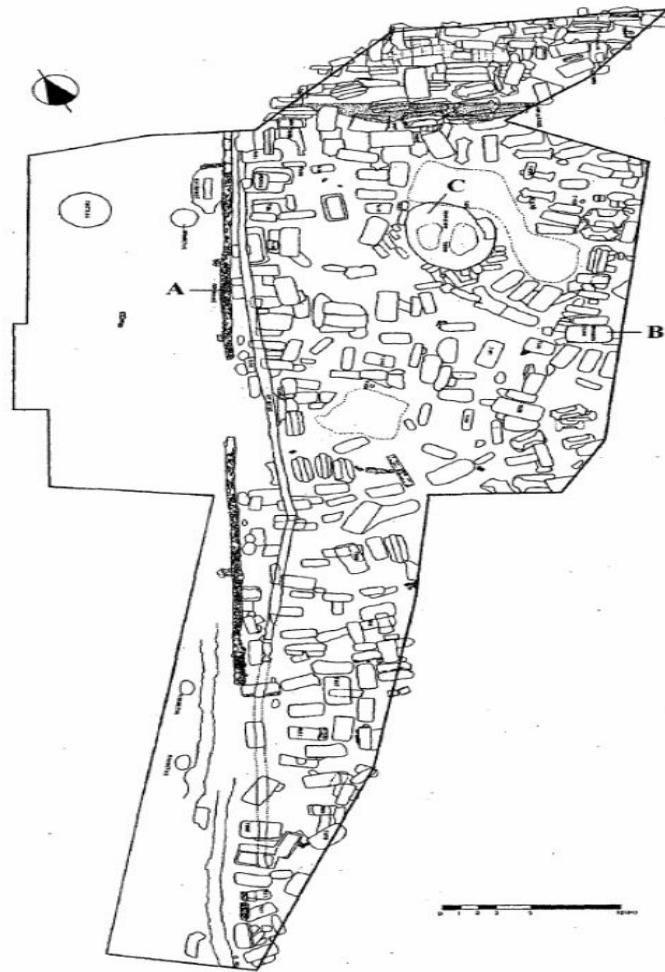


B-1: Modern Painting of Athenian Population during the plague of 430 B.C. by Nicolas Poussin.



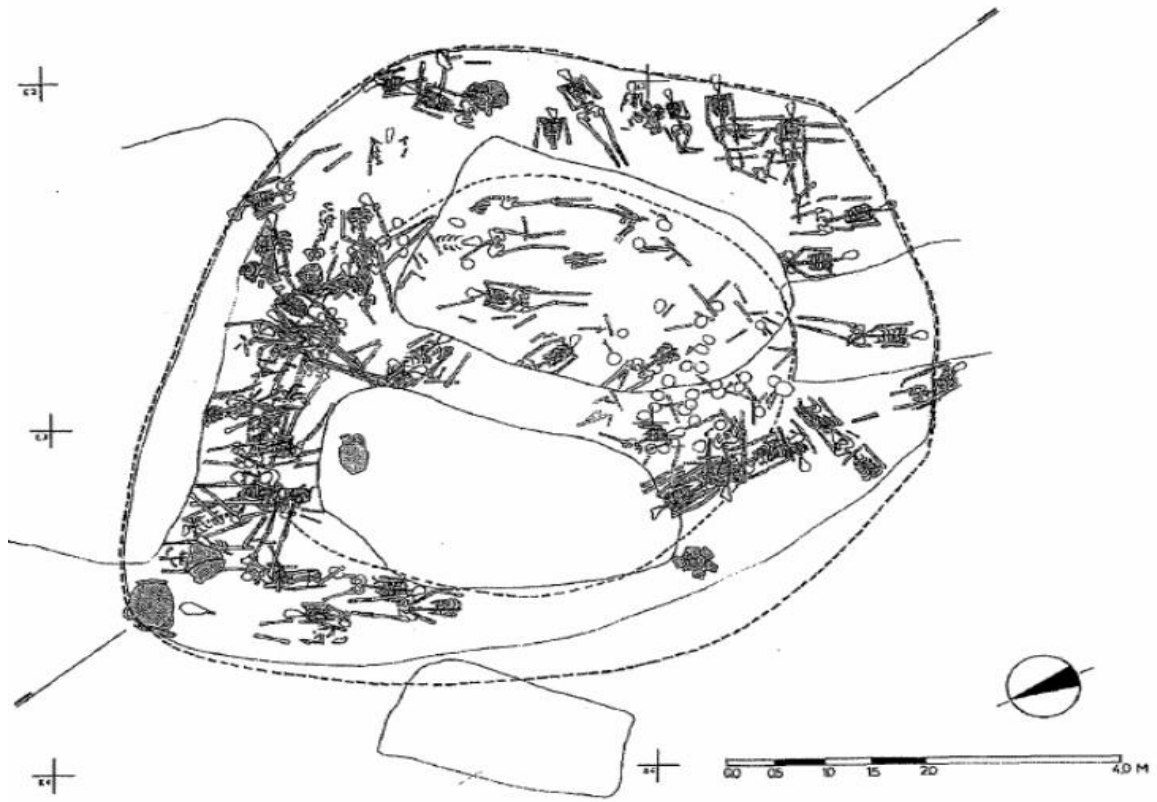
B-3: Kerameikos Area map.

Source: Baziotopoulou-Valavani 2002, p. 188.



B-3: Plan of the cemetery at the Kerameikos.

Source: Baziotopoulou-Valavani 2002, p. 189.



B-4: Mass Burial Plan in Kerameikos with Children Burials Shown in Grey.

Source: Baziotopoulou-Valavani 2002, p. 191



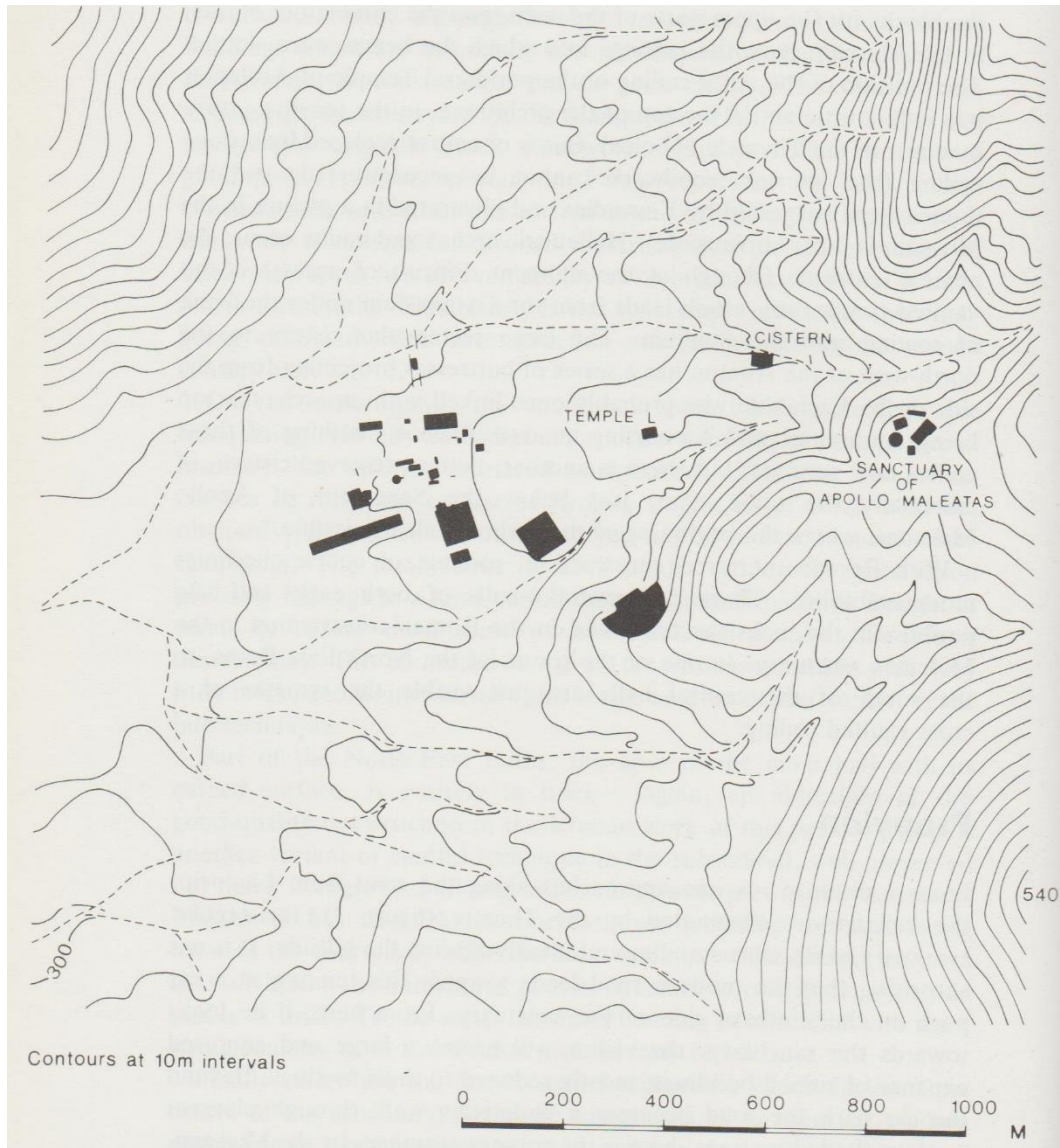
B-5: Map of Ancient Greece.

Source: Online Pic



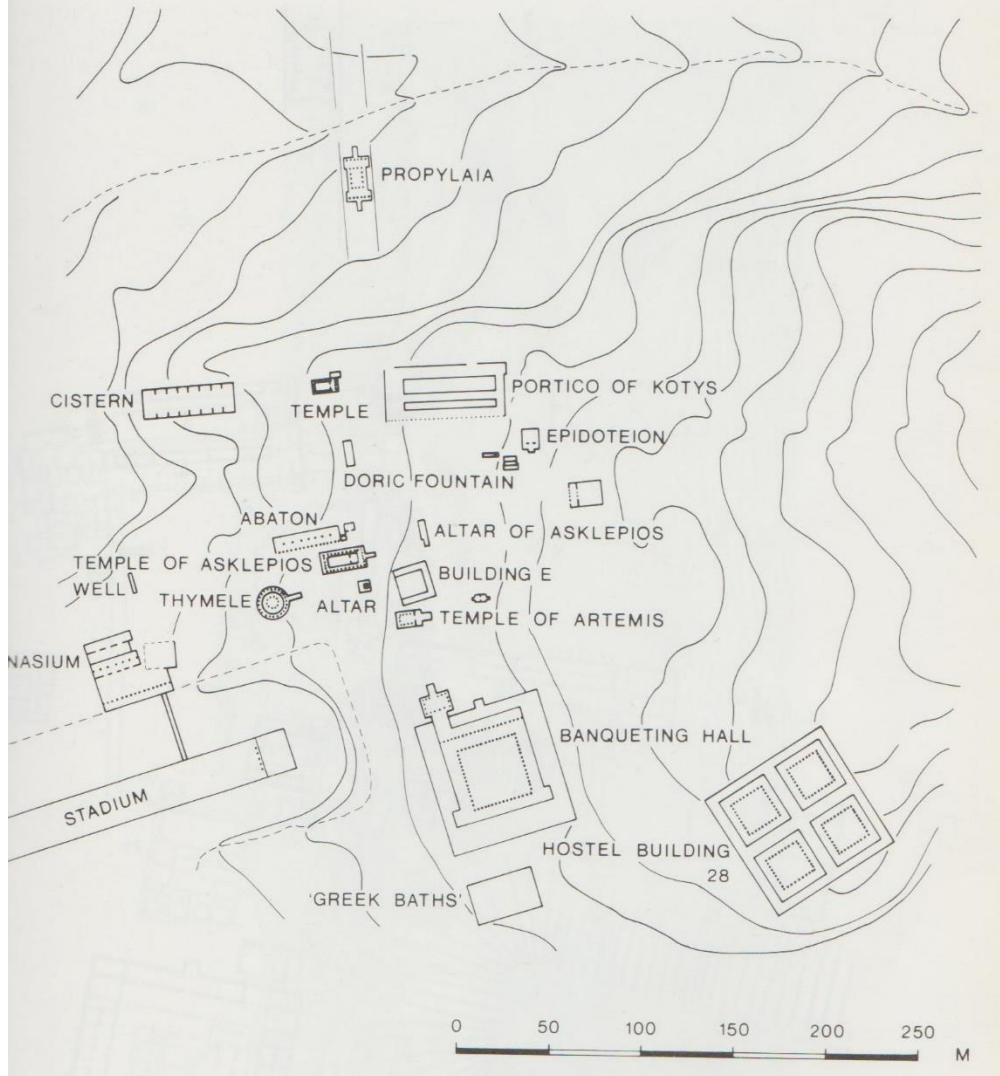
B-6: Locations of Asklepieia and associated sites.

Source: Renberg 2017, vol. 1, p. LXIII



B-7: Apollo Maleatas Sanctuary and Asklepios Sanctuary at Epidauros.

Source: Tomlinson 1983, p. 40.

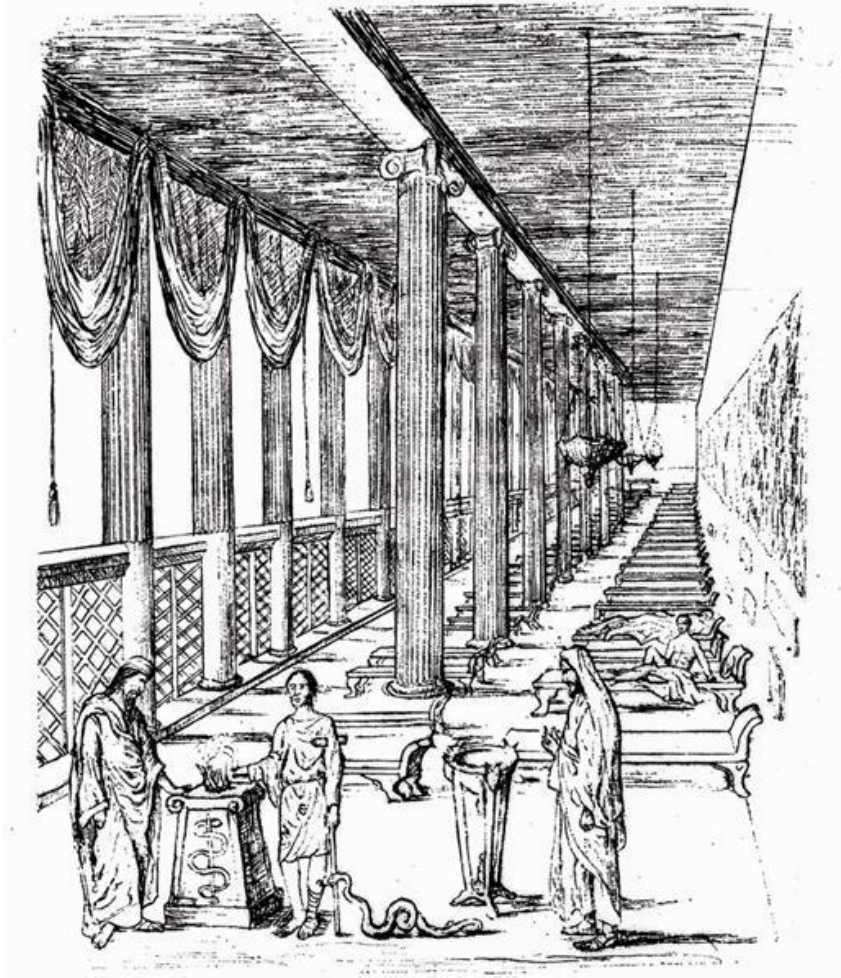


B-8: Sanctuary of Asklepios at Epidauros (theater not included).

Source: Tomlinson 1983, p. 41

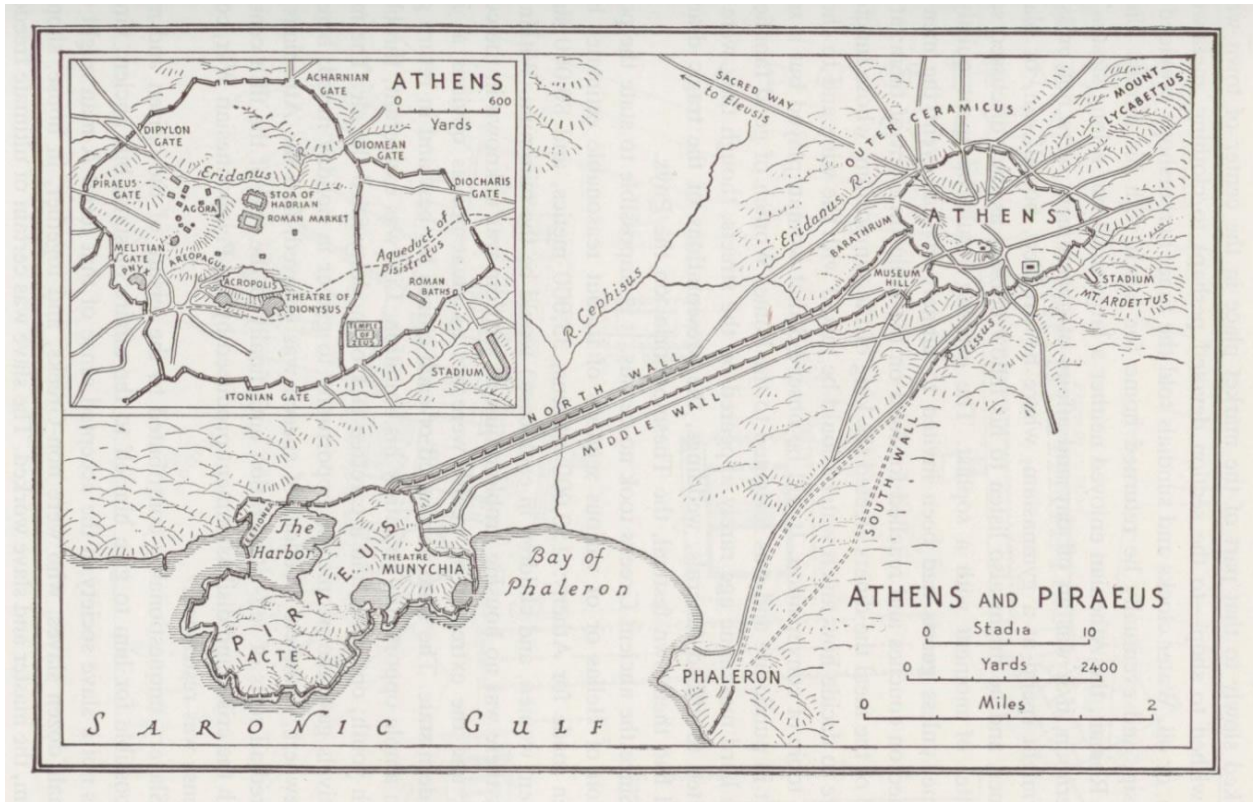


B-9: The Epidaurian Abaton in the Asklepion.

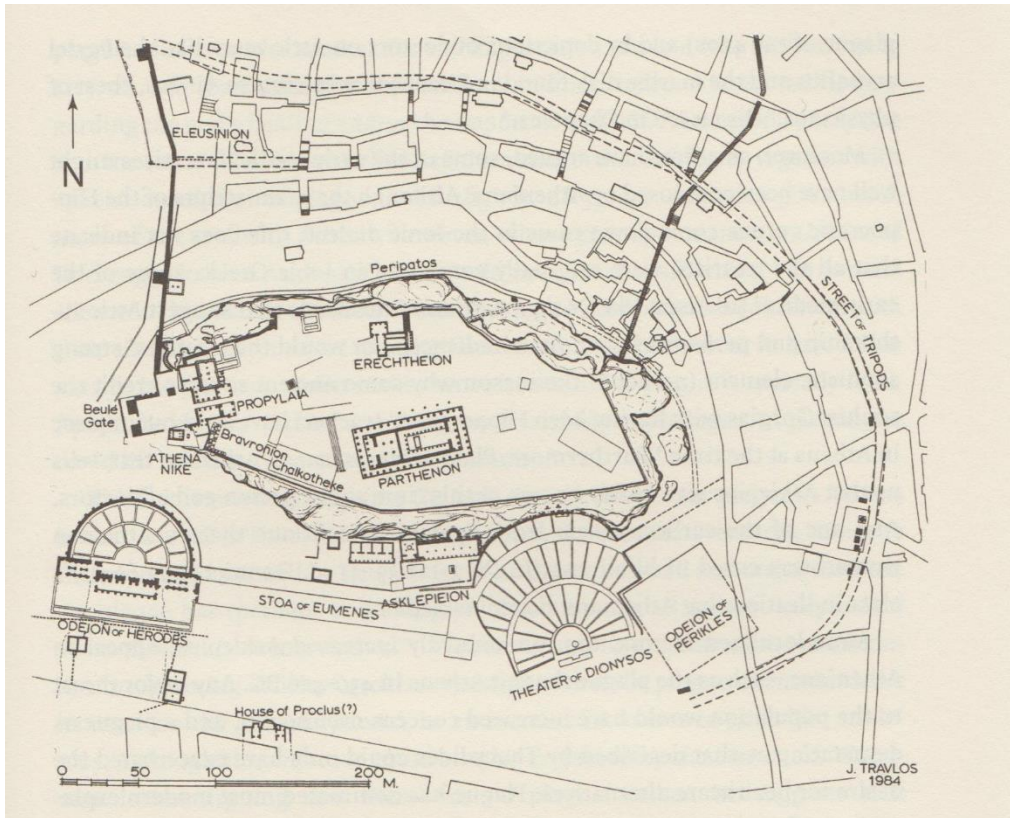


B-10: Interior of the Dormitory at Epidauros (artistic illustration).

Source: Renberg 2017, vol. 1, p. 132.

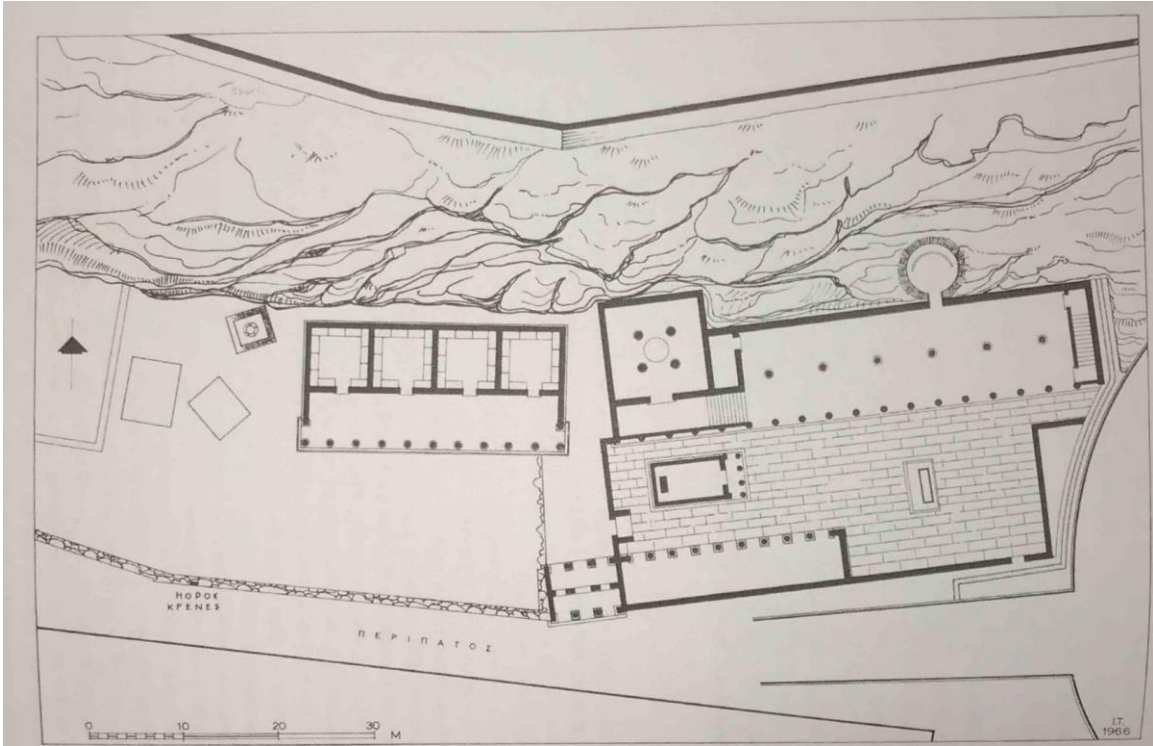


B-11: Athenian Long Walls.



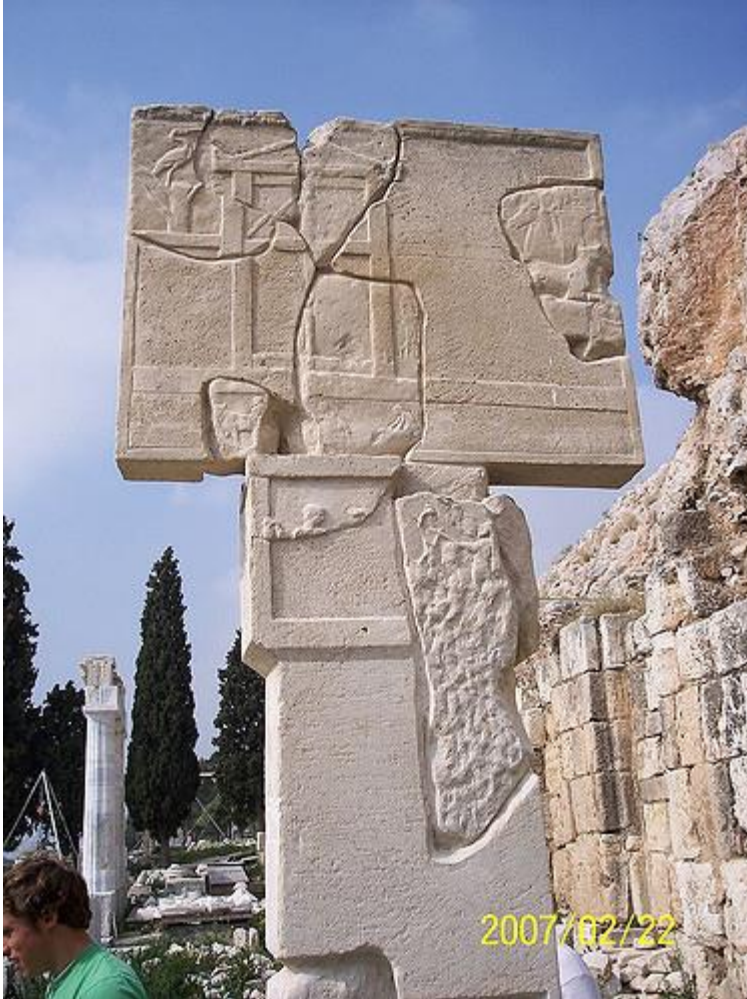
B-12: Athenian Acropolis Illustrating the Asklepieion on the South Side.

Source: Wickkiser 2008, p. 63.

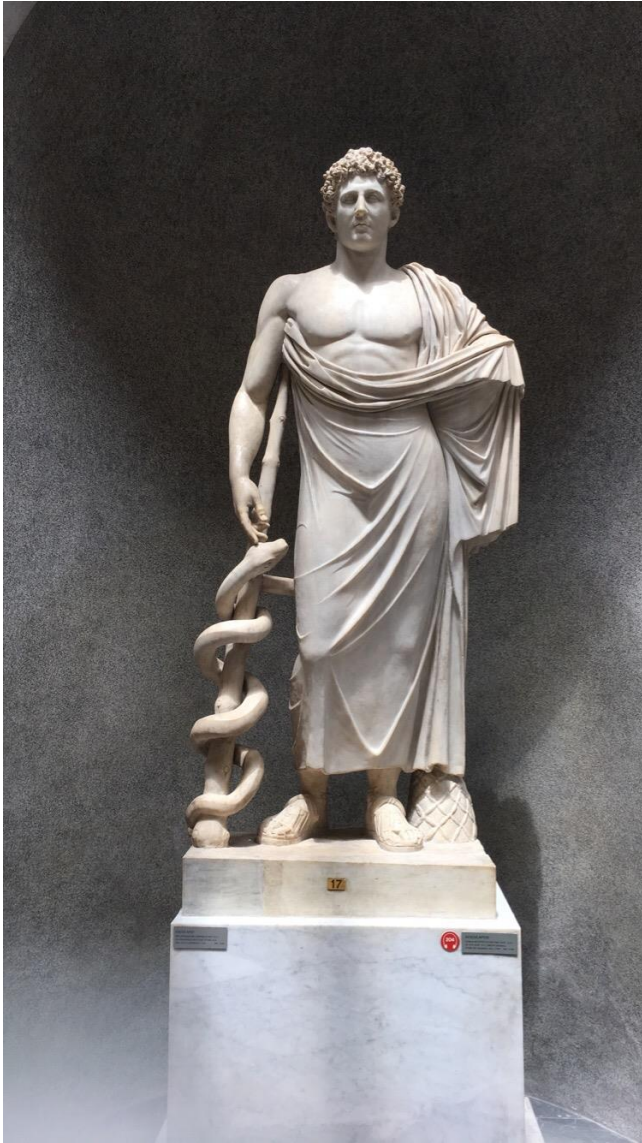


B-13: Athenian Askleieion in 1st century A.D. illustrating the Stoa (right side) for incubation.

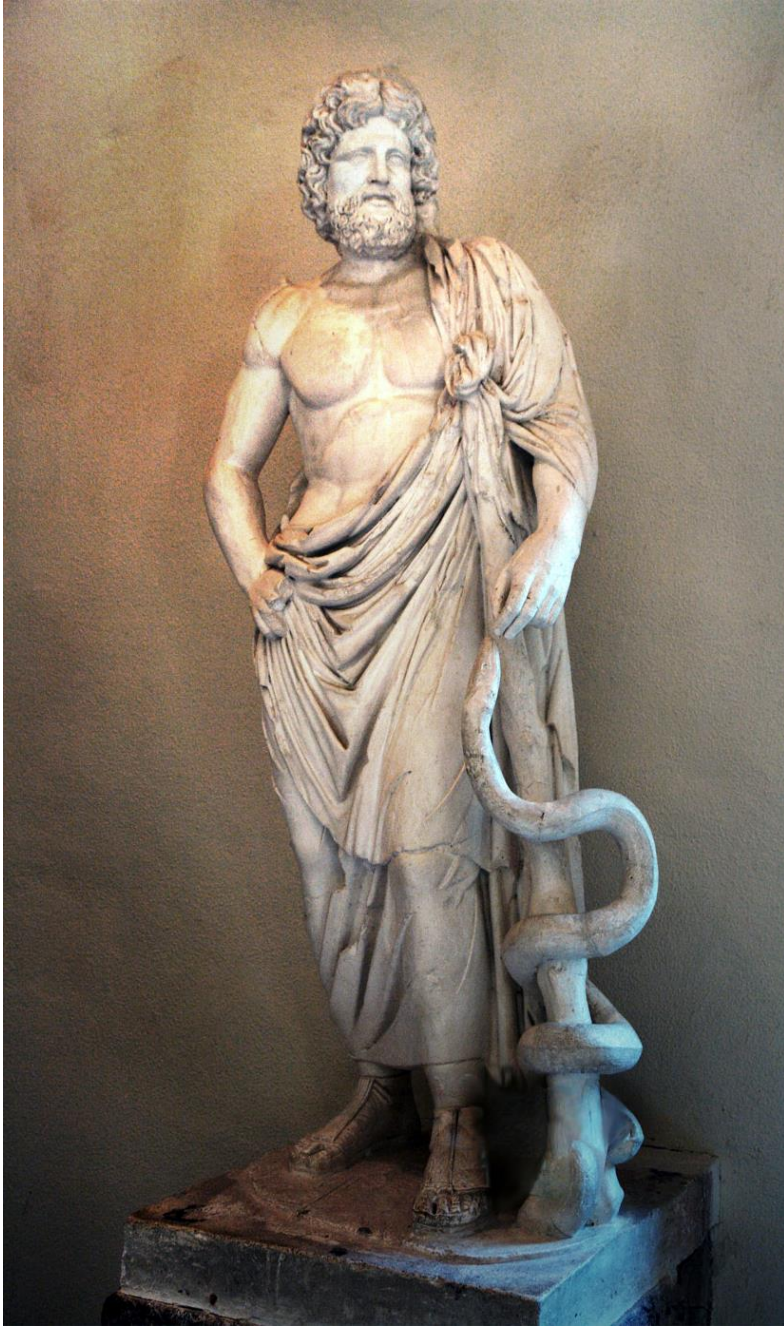
Source Renberg 2017, vol. 1, p.134.



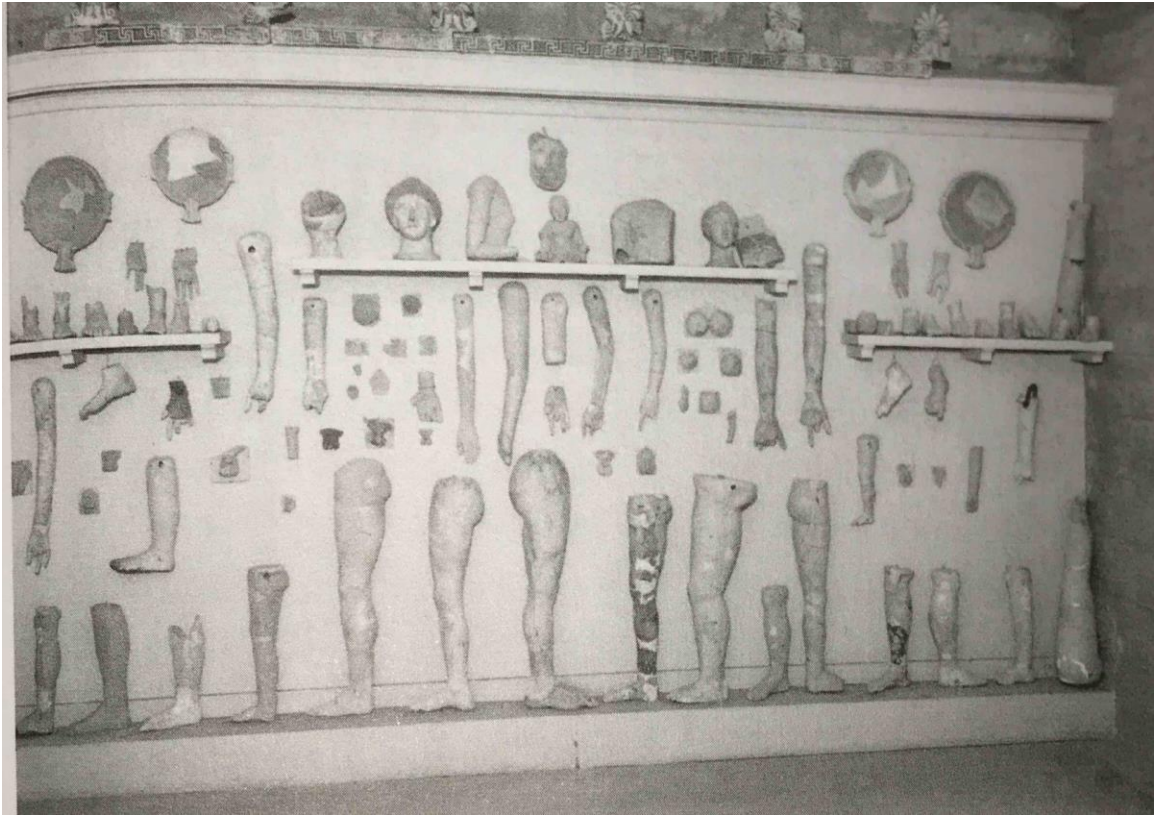
B-14: Telemachos Monument.



B-15- Beardless Asklepios with staff

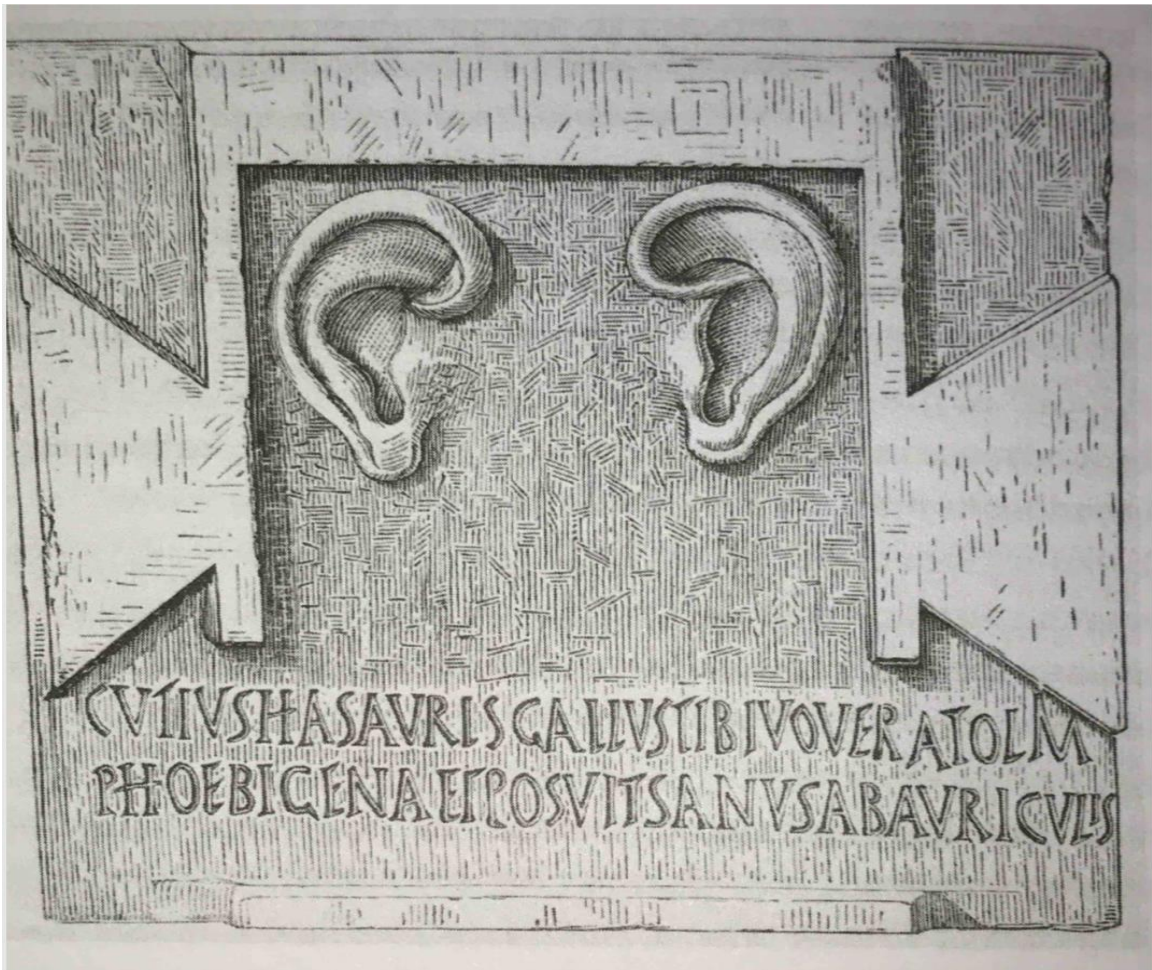


B-16- Asclepius statue with staff



B-17: Anatomical votives found at Corinthian Asklepieion.

Source: Renberg 2017, vol. 1, p.155.



B-18: Ears dedicated to Asklepios at Epidauros

Source: Renberg 2017, vol. 2, p. 354.



B-19: Votive relief of incubation ritual and Asklepios standing over incubant.

Source: Ehrenheim 2015, p. 90.



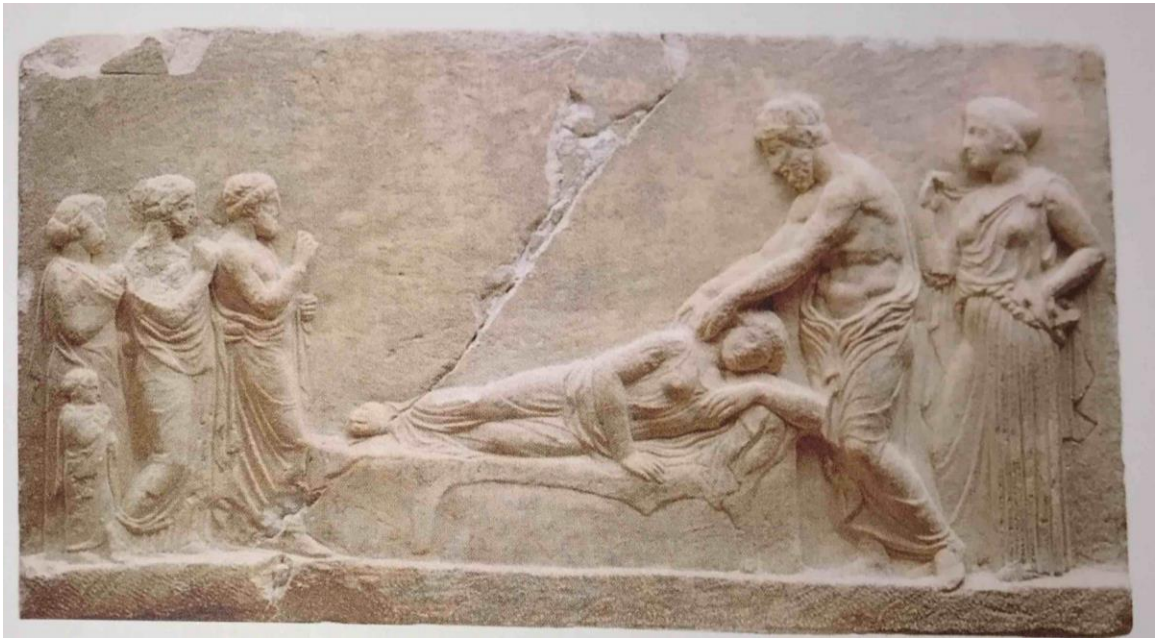
B-20: Incubant sleeping with snake over her shoulder.

Source: Ehrenheim 2015, p. 93.



B-21: Votive relief of Incubation ritual.

Source: Ehrenheim 2015, p. 93



B-22: Votive relief with Asklepios laying hands on a sleeping incubant at Piraeus

Source: Renberg 2017, vol. 2, p. 635.



B-23- A Few Surgical Tools.