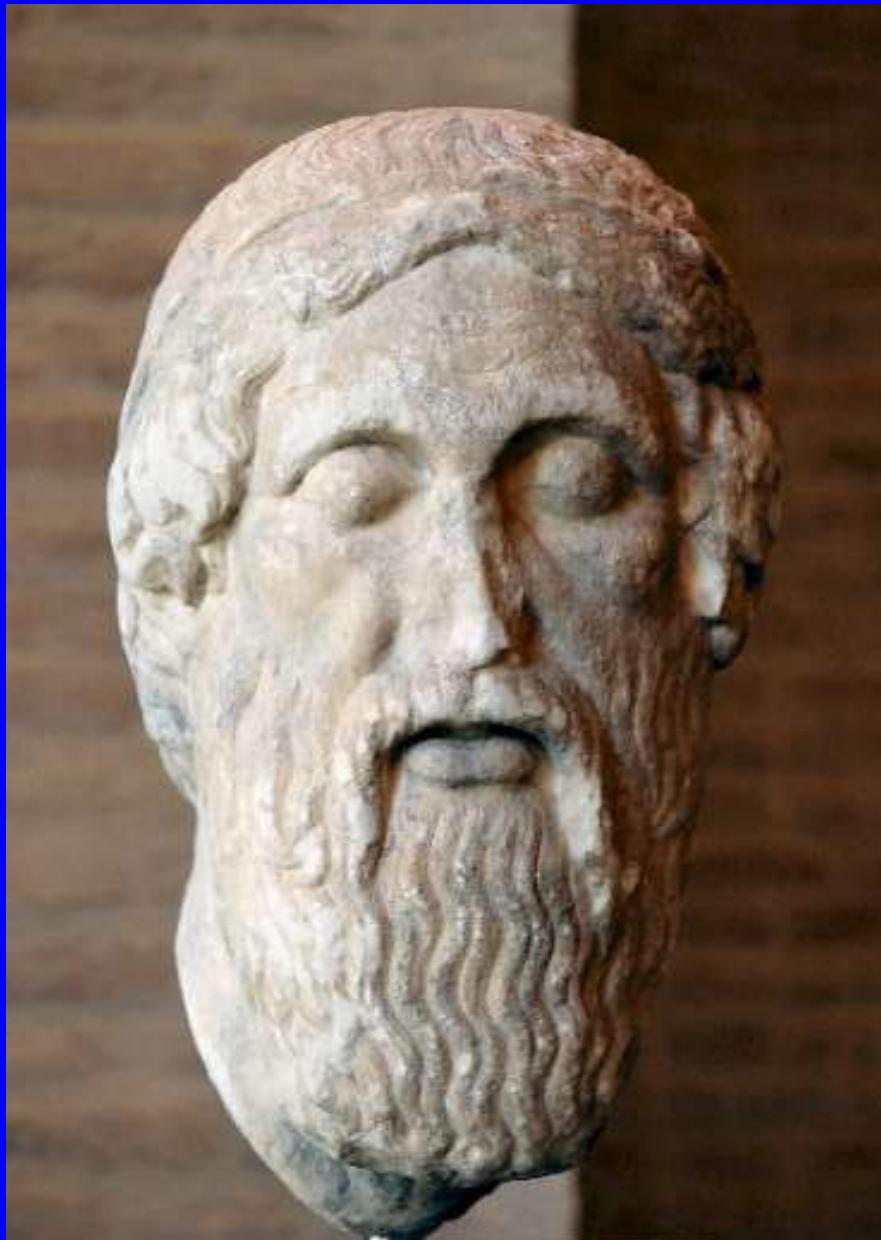


ΕΠΙΔΗΜΙΕΣ που καθόρισαν την ροή της Ιστορίας

Στέφανος Γερουλάνος

**Καθηγητής Χειρουργικής, Πανεπιστήμιο Ζυρίχης
τ. Διευθυντής Ιατρικής Υπηρεσίας & Κχ ΜΕΘ,
Ωνάσειο Καρδιοχειρουργικό Κέντρο**

**τ. Καθηγητής Ιστορίας Ιατρικής, Πανεπιστήμιο Ιωαννίνων
Πρόεδρος Γ.Σ. Διεθνούς Ιπποκρατείου Ιδρύματος
Μέλος Διεθνούς Ακαδημίας Γραμμάτων και Τεχνών**



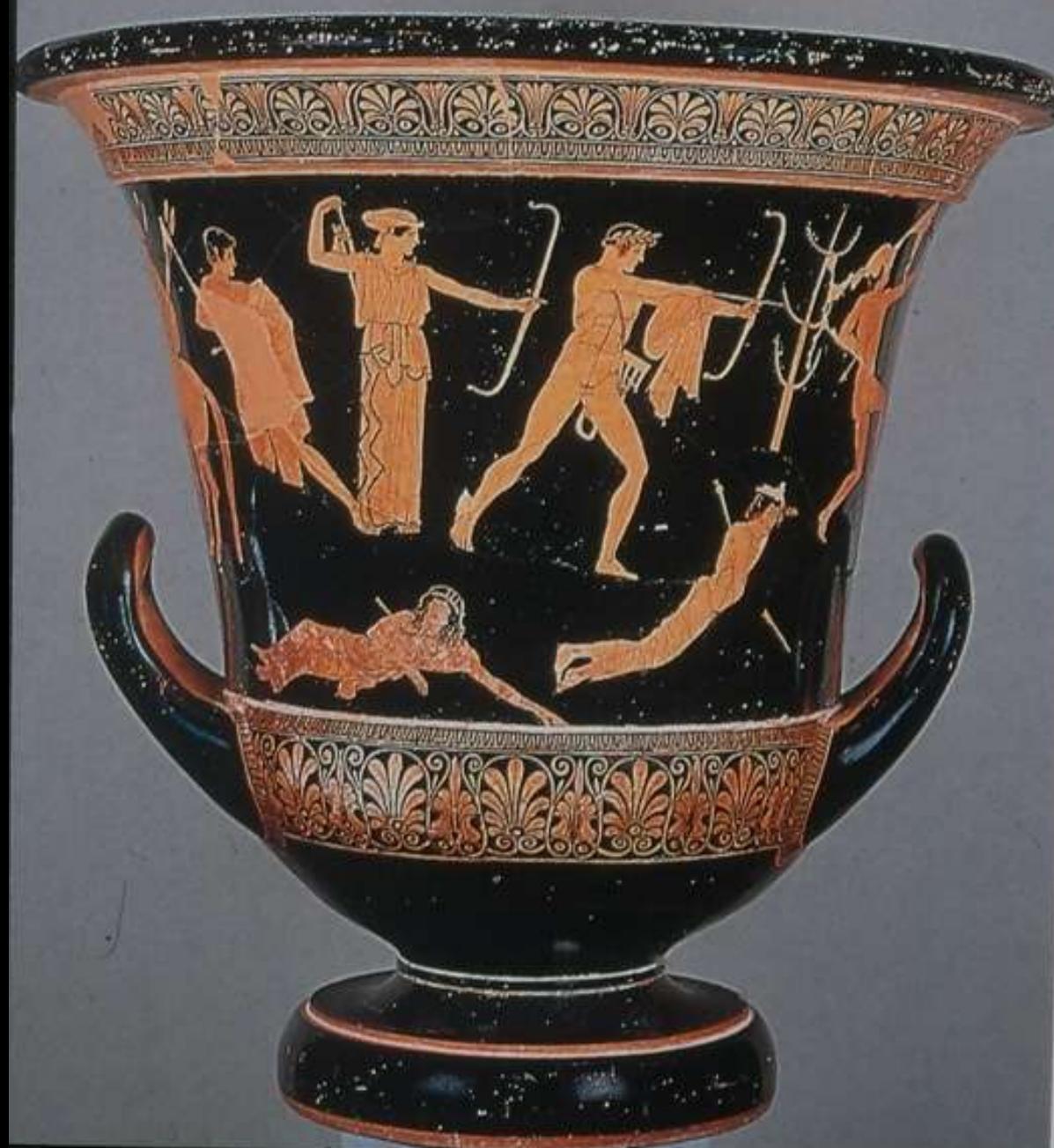
Ομηρος, 1200-750 π.Χ.

Λήξη Τρωικού πολέμου
10.6.1227 π.Χ.

Οδυσσεύς τίσω στην
Ιθάκη
25.10.1218 π.Χ.

**Η Άρτεμις και ο
Απόλλων σκοτώνουν
τα παιδιά της Νιόβης**

**Ερυθρόμορφος αττικός
κρατήρας
450 π.Χ..**





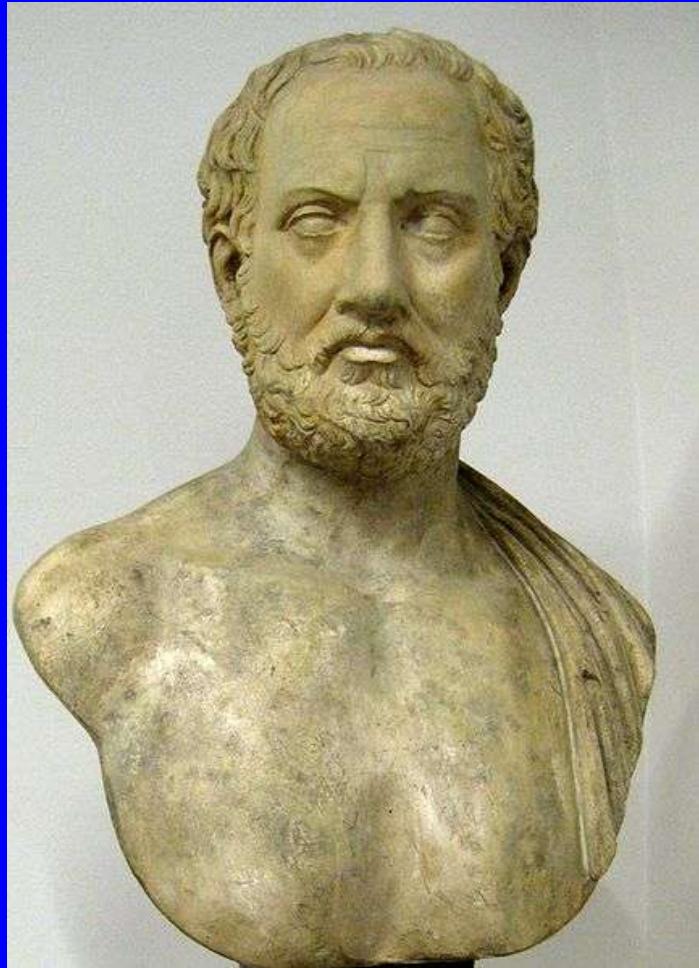
Ποδαλείριος,
2^{ος} αι. π. Χ.
Δίον

Στην Ιλιάδα του Ομήρου
1200-750 π.Χ.

Είναι η πρώτη φορά όπου
γραπτά ομολογείται ότι μια
ασθένεια είναι κολλητική και
περνά από ανθρωπο σε
άνθρωπο χωρίς θεϊκή
παρέμβαση.

Καλείται δε ο Ποδαλείριος γιός
του Ασκληπειού να
αντιμετωπίσει την επιδημία.

Λοιμός Αθηνών Θουκυδίδης



Πελοποννησιακός Πόλεμος

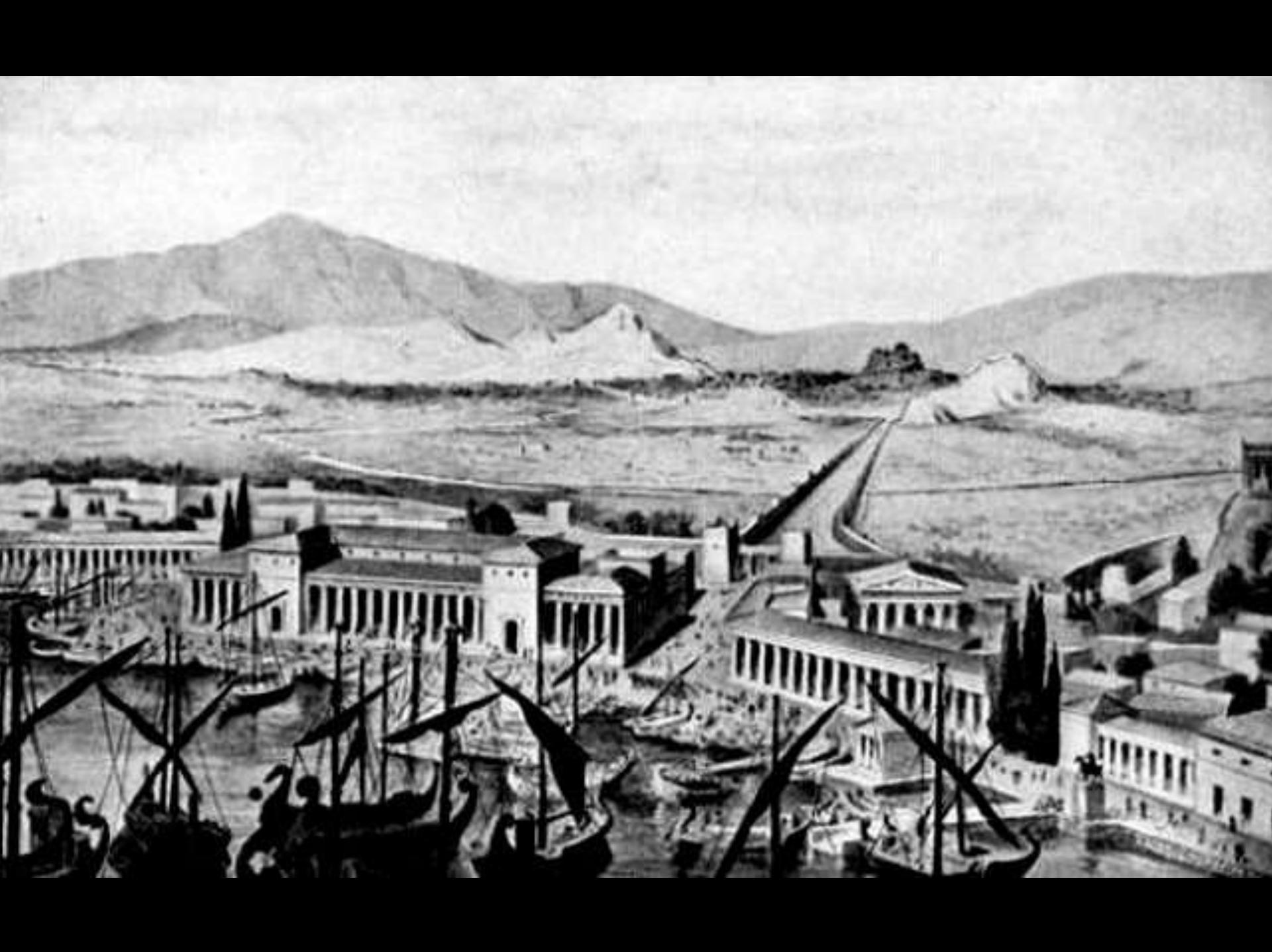
431-404 π.Χ.

Λοιμός Αθηνών

430/29 π.Χ.

Θουκυδίδης

460~397 π.Χ.



Michiel Sweerts (1624-1664)
The “Plague of Athens”, 5th c. B.C.



The same is true for the famous Athenian Plague at the time of the Peloponnesian war, described by Thukidides. An epidemic that changed the route of history.



**Perikles, 5th c. B.C.
Roman copy, Berlin**

died from this disease

Michiel Sweerts (1624-1664)

The “Plague of Athens”, 5th c. B.C.



The Plague of Athens in the Peloponnesian war was recently identified as *Typhus exanthematicus* due to *Rickettsia prowazekii*.

Michiel Sweerts (1624-1664)

The “Plague of Athens”, 5th c. B.C.



The genes of the pathogen were identified in the pulpa of the teeth of dead persons buried in a massive grave of that time.

Παπαγρηγοράκης Μανώλης

Papagrigorakis, Manolis J.; Yapijakis, Christos;
Synodinos, Philippos N.; Baziotopoulou-
Valavani, Effie (2006).

«DNA examination of ancient dental pulp
incriminates typhoid fever as a probable
cause of the Plague of Athens».

International Journal of Infectious Diseases 10
(3): 206–214. doi:10.1016/j.ijid.2005.09.001. PMID
16412683.

NEON

ΑΓΓΛΟΕΛΛΗΝΙΚΟΝ ΛΕΞΙΚΟΝ

ΕΚΔΟΣΙΣ ΔΕΥΤΕΡΑ

ΜΕΤΑ ΤΗΣ ΑΚΡΙΒΟΥΣ ΠΡΟΦΟΡΑΣ ΟΛΩΝ ΤΩΝ
ΑΓΓΛΙΚΩΝ ΛΕΞΕΩΝ ΔΙΑ ΤΩΝ PHONETICS ΕΠΙ
ΤΗ ΒΑΣΕΙ ΤΟΥ ΛΕΞΙΚΟΥ DANIEL JONES

ΕΚΔΟΤΙΚΟΣ ΟΙΚΟΣ ΠΕΤΡΟΥ ΔΗΜΗΤΡΑΚΟΥ Α.Ε
ΑΘΗΝΑΙ ΟΔΟΣ ΠΕΣΜΑΖΟΓΛΟΥ, 9

φομηχανή||—**writing** δάκτυλο-
γραφία, δακτυλογράφησις
typhoid ('taifɔɪd, τάιφοΐντ),
τυφοειδής —**fever** τυφοειδής
πυρετός
typhoon (taifu:n, ταϊφούν), τυ-
φών (όρμητικός ἄνεμος τῶν
δαλασσῶν τῆς Κίνας)
typhus ('taifəs, τάιφες), τύφος
(νόσος)



Second College Edition

THE AMERICAN HERITAGE DICTIONARY



typhoid fever *n.* An acute, highly infectious disease caused by the typhoid bacillus, *Salmonella typhosa*, transmitted by contaminated food or water and characterized by red rashes, high fever, bronchitis, and intestinal hemorrhaging.

Typhoid Mary *n.* A person from whom something undesirable or deadly spreads to those around him or her. [After Mary Mallon (d. 1938), a carrier of typhoid.]

Ty·phon (tī'fōn') *n.* Gk. Myth. A monster called by Hesiod the son of Typhoeus. [Gk. *Tuphōn*.]

ty·phoon (tī-fōōn') *n.* A severe tropical hurricane occurring in the western Pacific or the China Sea. [Cantonese *tai fung*.]

ty·phus (tī'fəs) *n.* Any of several forms of an infectious disease caused by microorganisms of the genus *Rickettsia*, esp. when flea-borne as in endemic typhus, louse-borne as in epidemic typhus, or mite-borne as in scrub typhus, and characterized generally by severe headache, sustained high fever, depression, delirium, and red rashes. [NLat. < Gk. *tuphos*, stupor arising from a fever < *tuphein*, to make smoke.] —**ty'phous** (-fəs) *adj.*

typhus fever *n.* Typhus.

Exhibiting the symptoms of typhus fever. (See also *typhus*)

Τύφος / Εξανθηματικός τύφος

Τύφος = Typhoid fever due to **Salmonella**

Εξανθηματικός τύφος = Typhus or typhus
fever due to **Rickettsiae**

It is believed that over the centuries many Romans died of malaria, and the disease may have even played a part in the decline of the empire.

Alaric I, the Visigoth king, who sacked Rome in 410 AD died suddenly of a disease, which some scientists speculate was malaria.

Evidence on the presence of malaria includes a high number of children buried in child cemeteries in a short time around A.D. 450 and the presence of things like raven's claws and decapitated puppies, indicating desperation and panic as people sought folk cures and magic. DNA analysis of bones reveals the presence of malaria. Archaeologists admit that most of their evidence for the "malaria theory" is circumstantial, and based on the way the infants were quickly buried and reports of plagues in Roman literature of that time

The DNA work of Robert Sallares has now confirmed that **malaria was a killer during late Roman times**. The children of Lughano died of malaria, and it is likely that there were also many adult victims of the disease, although their cemetery has not yet been found. This would have made it difficult for farmers to collect crops and for the local army commanders to raise troops. What was once a footnote in the history books on the fall of Rome, must now become a whole chapter.

David Soren's theory that malaria contributed to the fall of Rome has finally been vindicated.

*Τοις δε Σελινουντίοις
εμπεσόντος λοιμού δια τας από του
παρακειμένου ποταμού δυσωδίας,
ώστε και αυτούς φθείρεσθαι
και τας γυναικας δυστοκείν,
επινοήσαι Εμπεδοκλέα
και δύο τινάς ποταμούς επαγαγείν
ιδίαις δαπάναις,
και καταμίξαντος γλυκήναι τα ρεύματα,
ούτω δε λήξαντος του λοιμού*

Διογένης Λαέρτιος, Βίοι φιλοσόφων, Ε. 62.

A thanks giving
commemorative coin in
honor of Asklepios
proves the success.

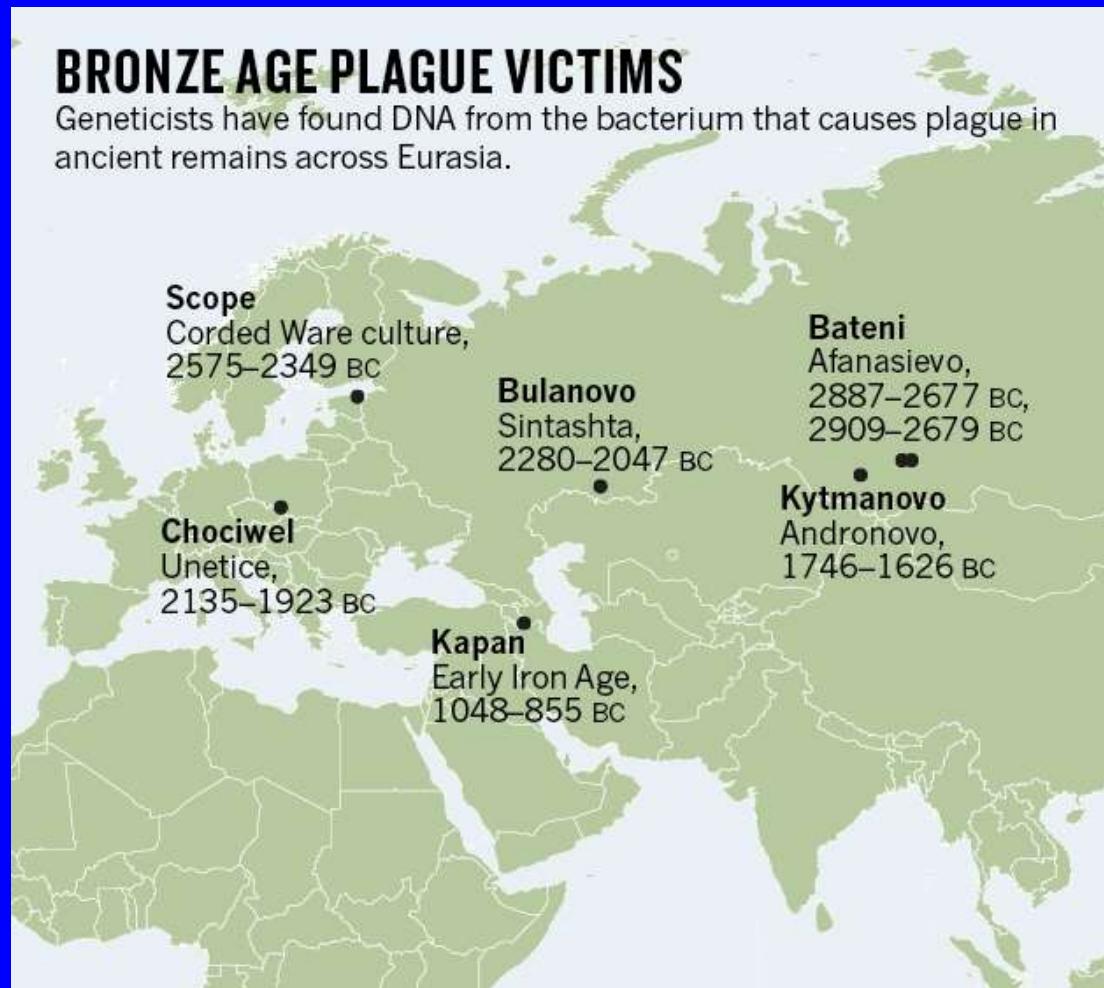


Empedocles (5th c. B.C.) turned for example with success the waters of a river into the swamps around the city of Selinunt in order to clear the region from malaria.

The Plague

Η πανώλη

1st Yersinia found in Skeletons 5.000 BC



Nicolas Poussin (1594-1665)

The Plague of the Philistines, 1000 B.C. (Old testament)





The Plague Η πανώλη

**Antoninian Plague or Galens plague
(165-180 AD)
at Marc Aurels times
(121-161-180 AD)**



**Antoninian Plague
or Galens plague
165-180 AD
at Marc Aurels
times
121-161-180 AD**

Killed an estimated 3.5 million to 7 million people, including Emperor Marcus Aurelius.

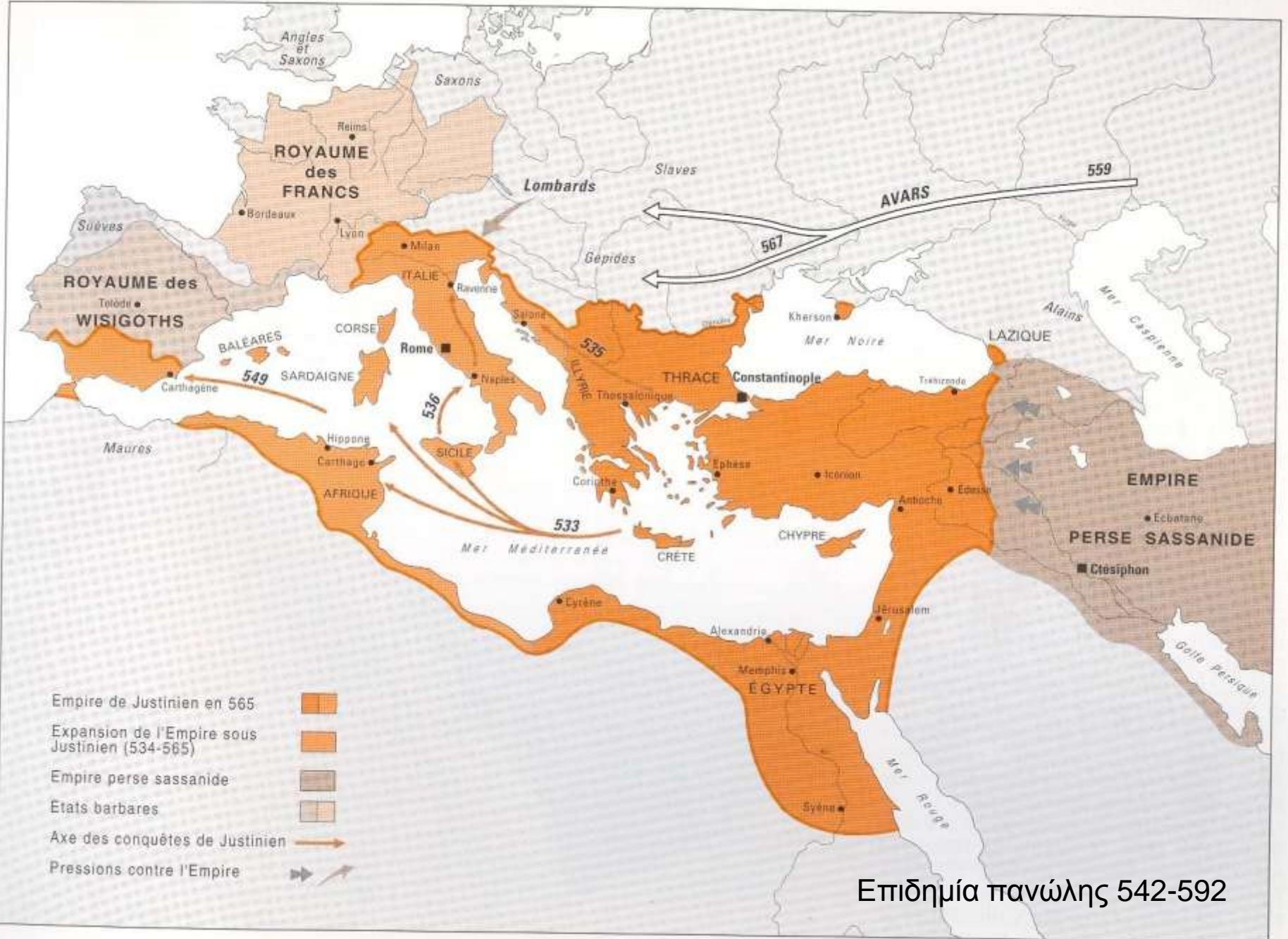
Death of M.A. marks the End of the Pax Romana

Ιουστινιάνειος Πανώλη

542-592



Byzantine emperor Justinianus, 527- 565
50% of Justinians subjects all over the Byzantine empire died



Surroundings of Ayia Sofia, 19th century



"In the beginning of the Justinianian plague 543 AD only few died, a bit later there were 1000 per day, and soon after 5000 and 10000".

Prokopios, Anekdotia

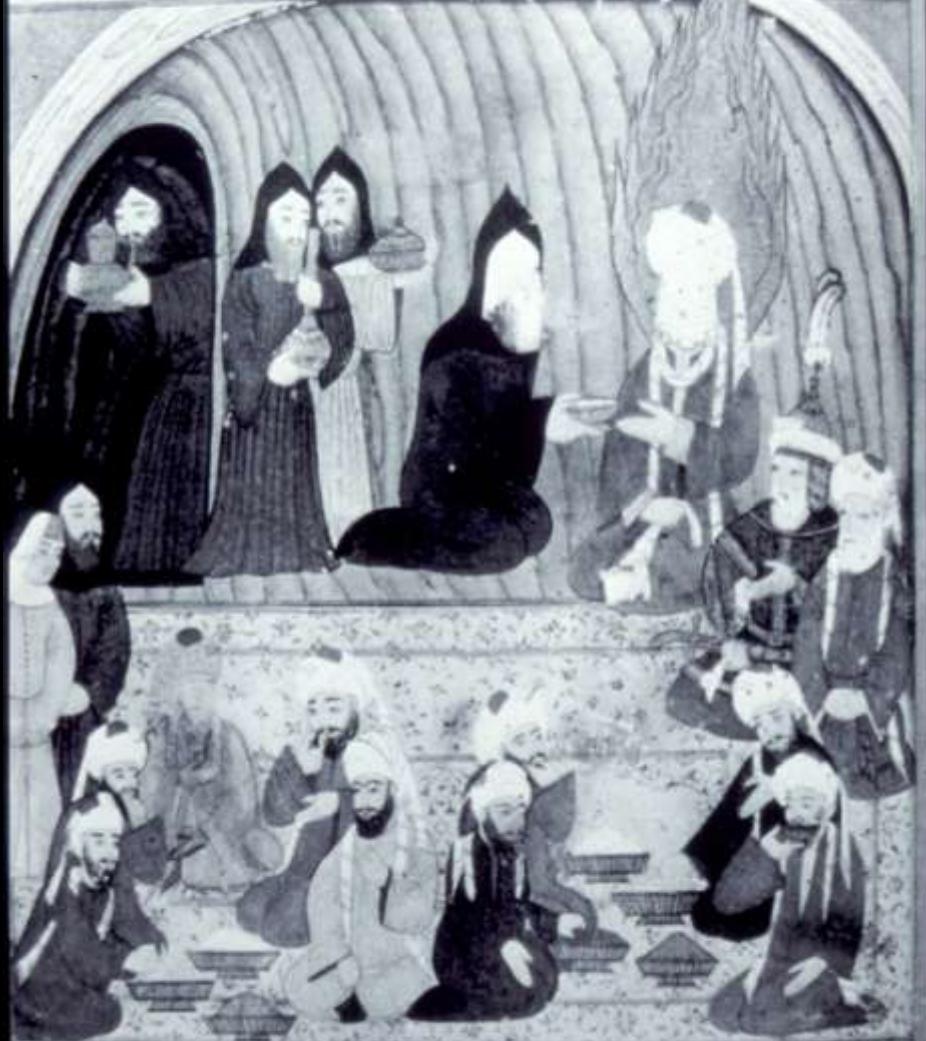


The equivalent for Athens of today would be 100'000 deaths per day and for New York 250'000 deaths daily.



**The equivalent for today's Istanbul would be 400'000
deaths in one day!**

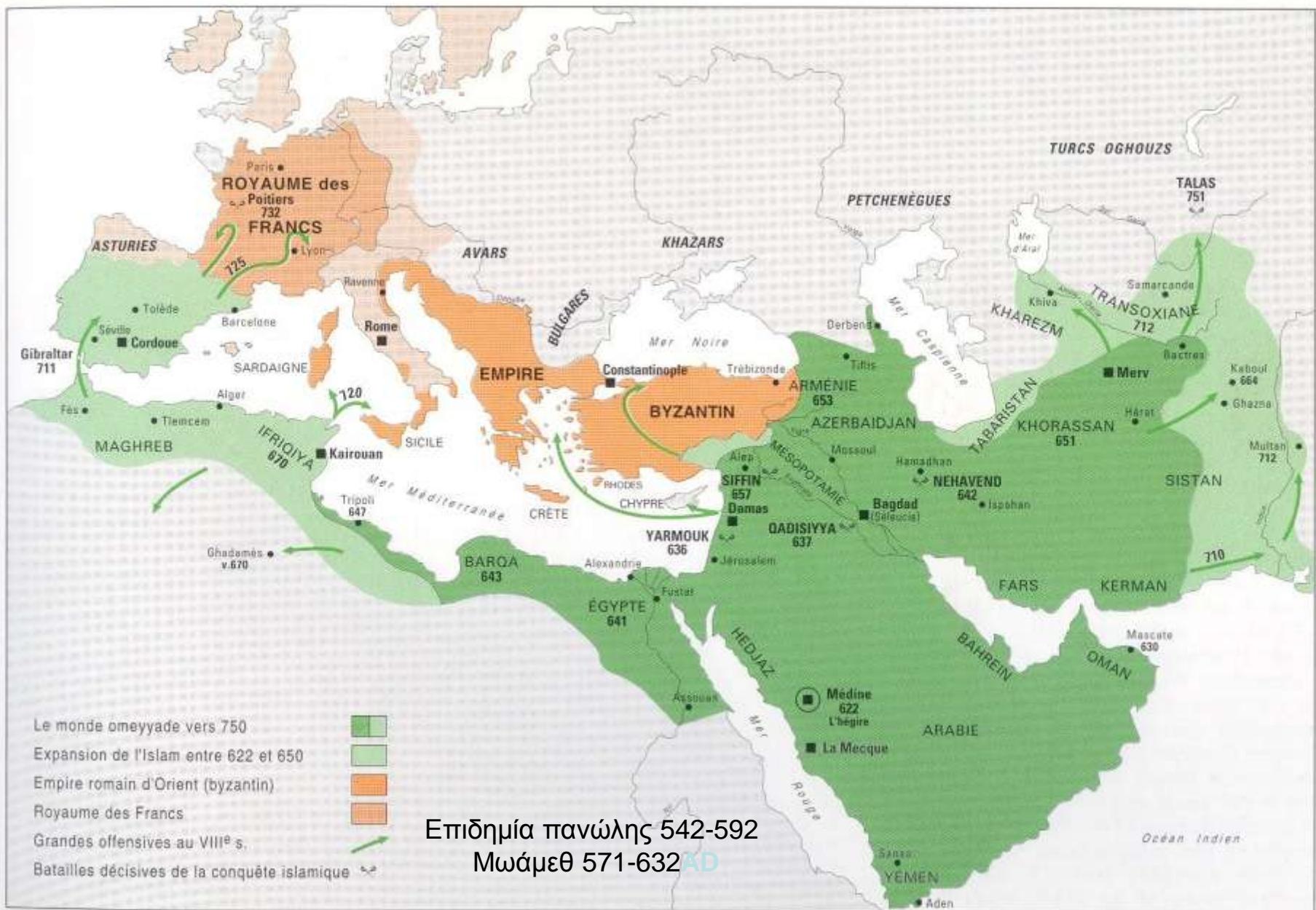
ددي و دخني مجيره ايدي يا مهر سنك شربك شرابك ندر
ددي حضرت رسول ايندي بوم شريم سود در شر ايم صودور



Muhammad

571-632 AD

اکرسودوارسه کنورک واکرسود یوعس سوکنورک ددی مجیر
بیور دی سود کنور دلر صوحاضرا بلدبلر فلاز جماعت خمر اجدل





Golden coin, Alexios Komnenos, 1081- 1118

1st Crusade

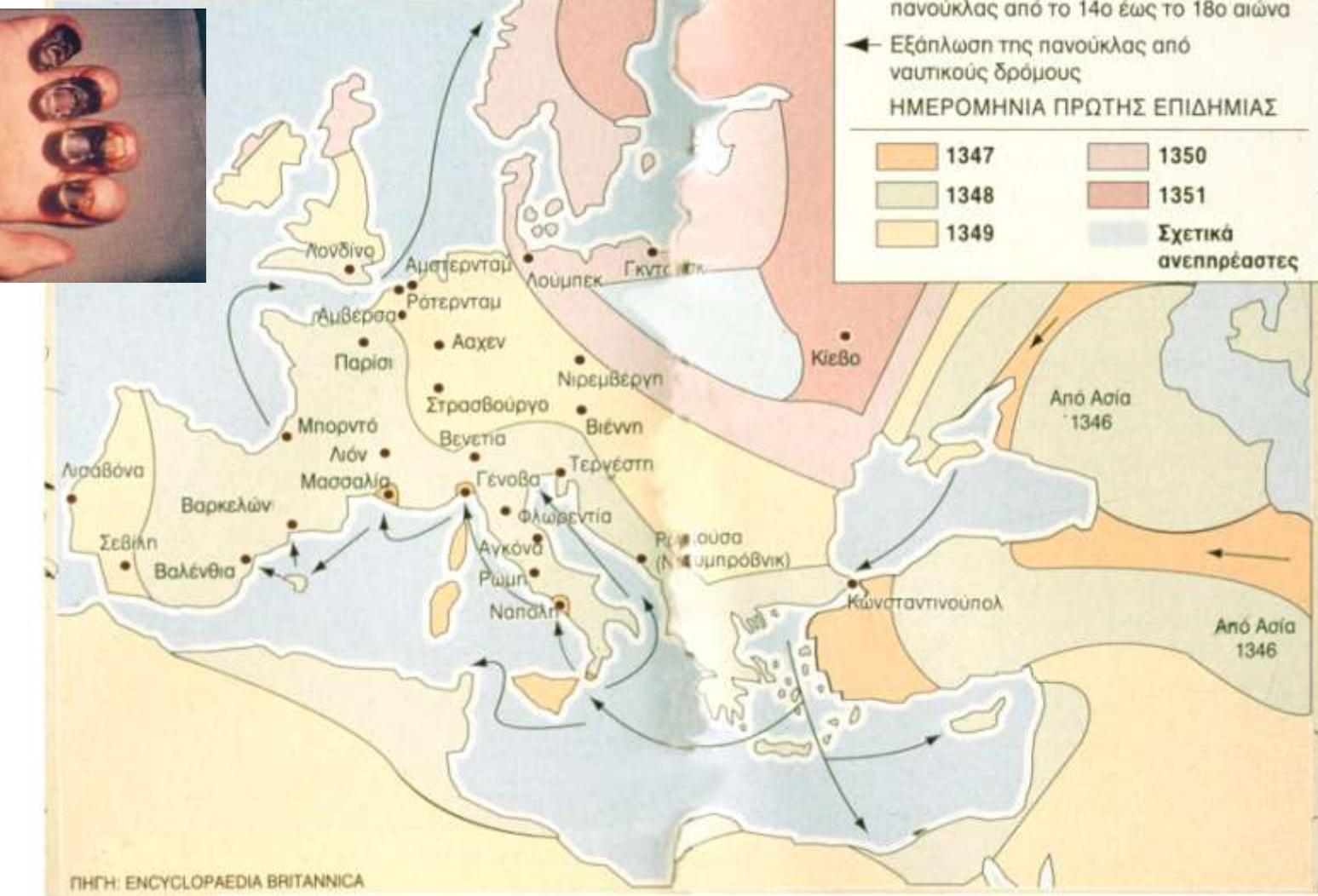
1096-99

**From the 100 000 that had reached
Constantinople only 21 000 reached Jerusalem**

**1097: Siege of Antiochia: 50 000 crusaders dead
due to plague !**

**From 1500 Germans who reached Antiochia by
boat died 1400 !**

Η εξάπλωση του «Μαύρου Θανάτου»



Between 1347- 52 the plague killed in Europe 25 million persons
After Wikipedia worldwide 75-100 millions.

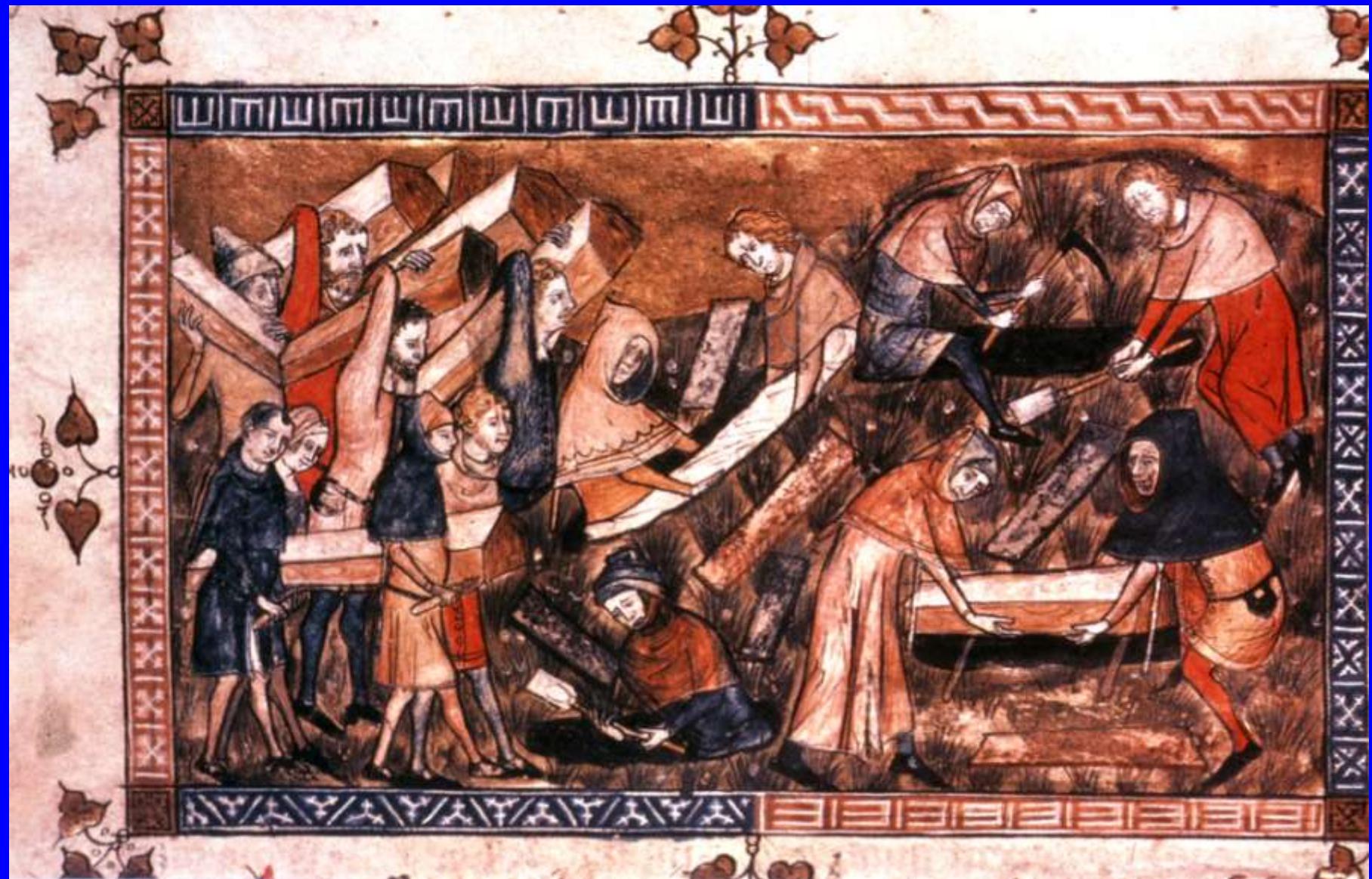


The Black Death was for in medieval times the equivalent of a nuclear war of today !



**25 million people
1/3-1/2 of Europe's
population vanished.**

**The equivalent for today
would be
120-175 million dead
Europeans
in less than ten years.**



Tournai, 1349



Special construction might be necessary like in medieval times

A coffin for multiple use.

Museum of History of Medicine, Zurich



Due to the epidemic the entire economy collapsed



It was nobody there to clean the houses, to milk the cows, nobody to collect the wheat or even to bring water to the sick or to the tided animals.



Chronicle by Jean Froissart:
Battle of Auray, 1364

100-ετής
Πόλεμος
1337-1453

Pieter Brueghel the elder (1520-1569)

The triumph of death, 1562

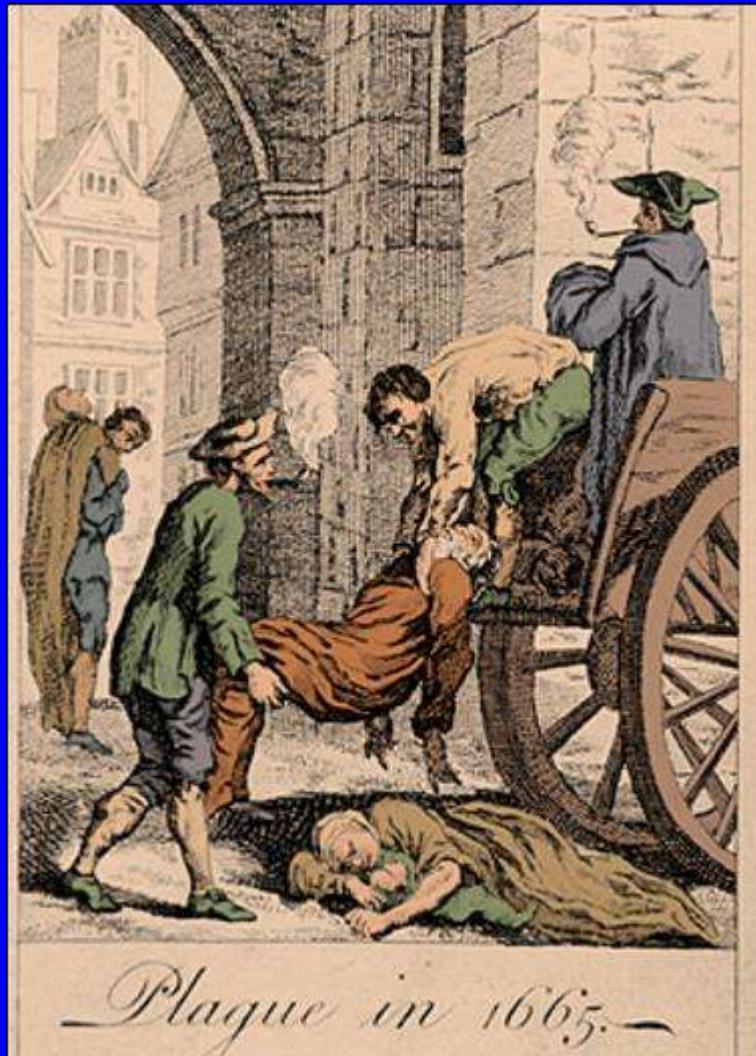




Pieter Brueghel the elder
(1520-1569)
The triumph of death, detail.

Just by these simple numbers one can imagine the insufficiency of the state Infrastructures and the chaotic situation that was created.

Great Plague of London 1665



The Great Plague of London, in 1665, killed up to 100,000 people.



A generall Bill for this present year,
ending the 19 of December 1665. according to.
the Report made to the KINGs most Excellent Majestie.

By the Company of Parish Clerks of London, &c.



Parish Name	Buried P.D.	Buried Pla.	Buried P.D.	Buried Pla.	
St Albans Woodfleete	200	131	St Clement Eastcheap	18	10
St Alhallows Barking	174	126	St Dunstans Back-church	78	27
St Alhallows Bread	180	116	St Etheldredas Eaff	165	150
St Alhallows Bishopsgate	155	426	St Edmund Lombard	70	105
St Alhallows Houndsditch	19	71	St Ethelburgh	195	105
St Alhallows Leadenhall	171	70	St Faust	104	70
St Alhallows Lombard	62	57	St Frideswide	104	70
St Alhallows Staining	28	117	St Gabriel Fen-church	143	70
St Alhallows the Wall	200	120	St George Bloxham	51	27
St Alphege	71	113	St Gregory by Pauls	76	13
St Andrew Hubbard	71	115	St Helens	108	75
St Andrew Undershaft	174	189	St James Duke place	361	100
St Andrews Undershaft	10	10	St James Garlickhithe	189	138
St Anne Aldersgate	53	19	St John Baptist	135	83
St Anne Blackfriars	43	167	St John Evangelist	9	5
St Antholus Paish	33	33	St John Zacharias	85	54
St Audreys Basingstoke	11	5	St Katharine Coleman	599	113
St Barnabas Exchange	71	113	St Katherine Creech	135	21
St Benet Finsbury	71	113	St Lawrence Jewry	94	48
St Benet Grace-church	71	113	St Lawrence Pountney	314	140
St Benet Pauls Wharf	71	141	St Leonard Eastcheap	42	37
St Benet Sherehole	1	1	St Leonard Poultry	1464	2500
St Borodolph Billinggate	81	10	St Magnus Paish	103	60
St Cyprian Church	653	167	St Margaret Lothbury	103	66
St Christopher	60	17	St Margaret Lothbury	103	53

Buried in 97 Parishes within the Ward, 15107 *Whereof of the Plague* 9857

St Andrew Holborn	1913	103	Bridewell Precinct	110	179	St Dunstan Westf	192	1065	St Saviour Southwark	4219	1446
St Bartholomew Gress	491	344	St Borodolph Aldergate	997	755	St George Southwark	161	1200	St Sepulchre Paish	4509	3746
St Bartholomew Leffe	21	19	St Borodolph Algate	4916	4015	St Giles Cripplegate	8069	4383	St Thomas Southwark	475	371
St Botolph	311	1437	St Borodolph Bishopsgate	4793	1785	St James Clerkenwell	179	100	St Stevens Coleman	50	47
St Botolph	1	1	St Leonard Eastcheap	135	53	St Matthew Fridesfitre	24	2	St Stevens Walbrook	14	17
St Botolph Bishopsgate	81	10	St Leonard Poultry	1464	2500	St Mauritius Milkstreet	43	37	St Swithin	16	56
St Botolph Bishopsgate	81	10	St Magnus Paish	103	60	St Maudlin Oldgate	126	121	Thomas Apostle	161	119
St Cyprian Church	653	167	St Margaret Lothbury	103	66	St Michael Bassishaw	153	64	Trinity Paish	115	79

Buried in 16 Parishes within the Ward, 4331 *Whereof of the Plague* 28888

At the Pesthouse 1595



A. Fumiani
1643-1710

St. Pantaleone in gloria
25 x 50 m

Soffitto in tela
di Chiesa di St. Pantaleone
Venice





ΠΑΝΩΛΗ

Μέτρα προστασίας

Απομόνωση ασθενών

Καταστροφή ιματισμού

Ταφή νεκρών σε ασβέστη



Vorstellung des Doct Chiconeau Lanckier der Universität zu
er welcher A. 1720 vom Könige in Frankreich nach Marseille geschickt
m denen mit der Pest behafteten Leuten beizusuchen Er trug daselbst ein
von Corduan Leder mit einer Masque die Augen von Cr. Vall hatte und der
Lase mit wölkenden Sachen wider das Mist angefüllt war Dabey er einen Stab
führte womit er auf die Leiber der von der Pest angeschlagenen Personen deutete wie er
man in deren Gangsam sein sollte





30=Trenta

Trentina

40 = Quaranta

Quarantina

Гкаραντίνα

Isola di san Lazzaro



Isola ---> Isolation ---> Isolation

St. Lazzaro ---> Lazzareto ---> Λαζαρέτο

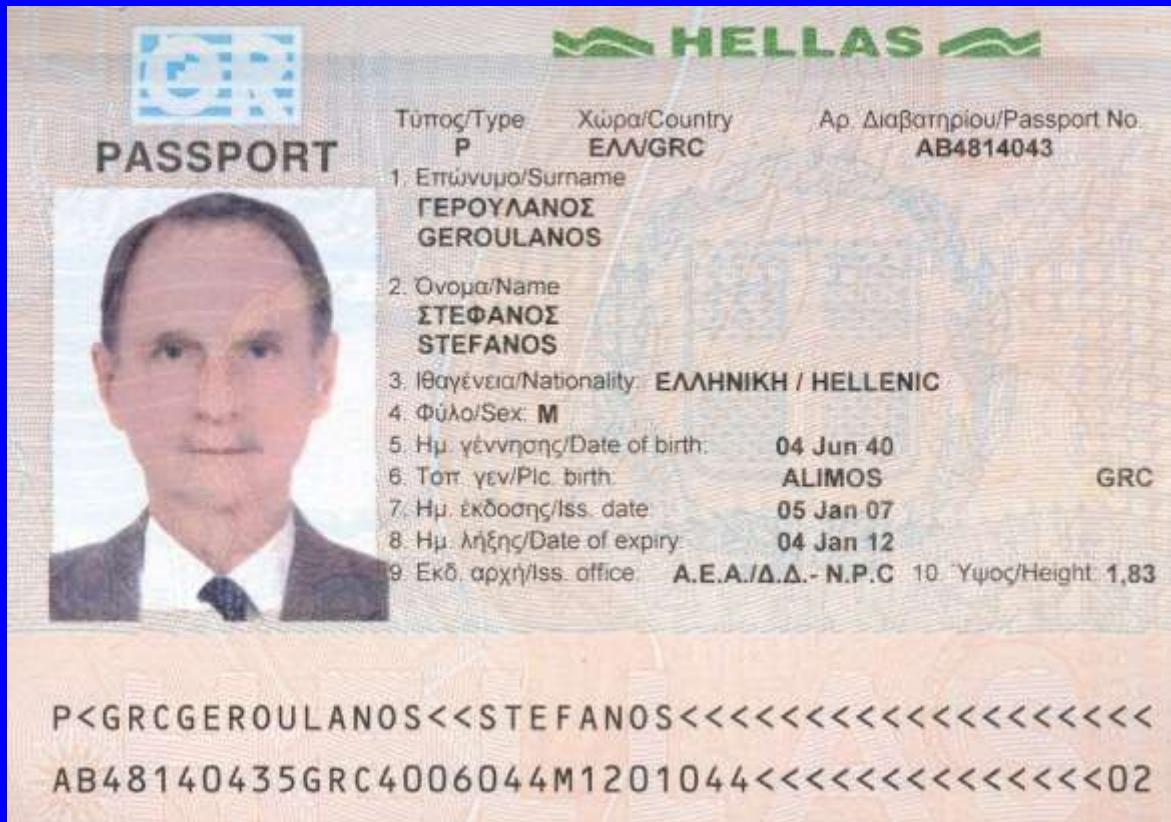




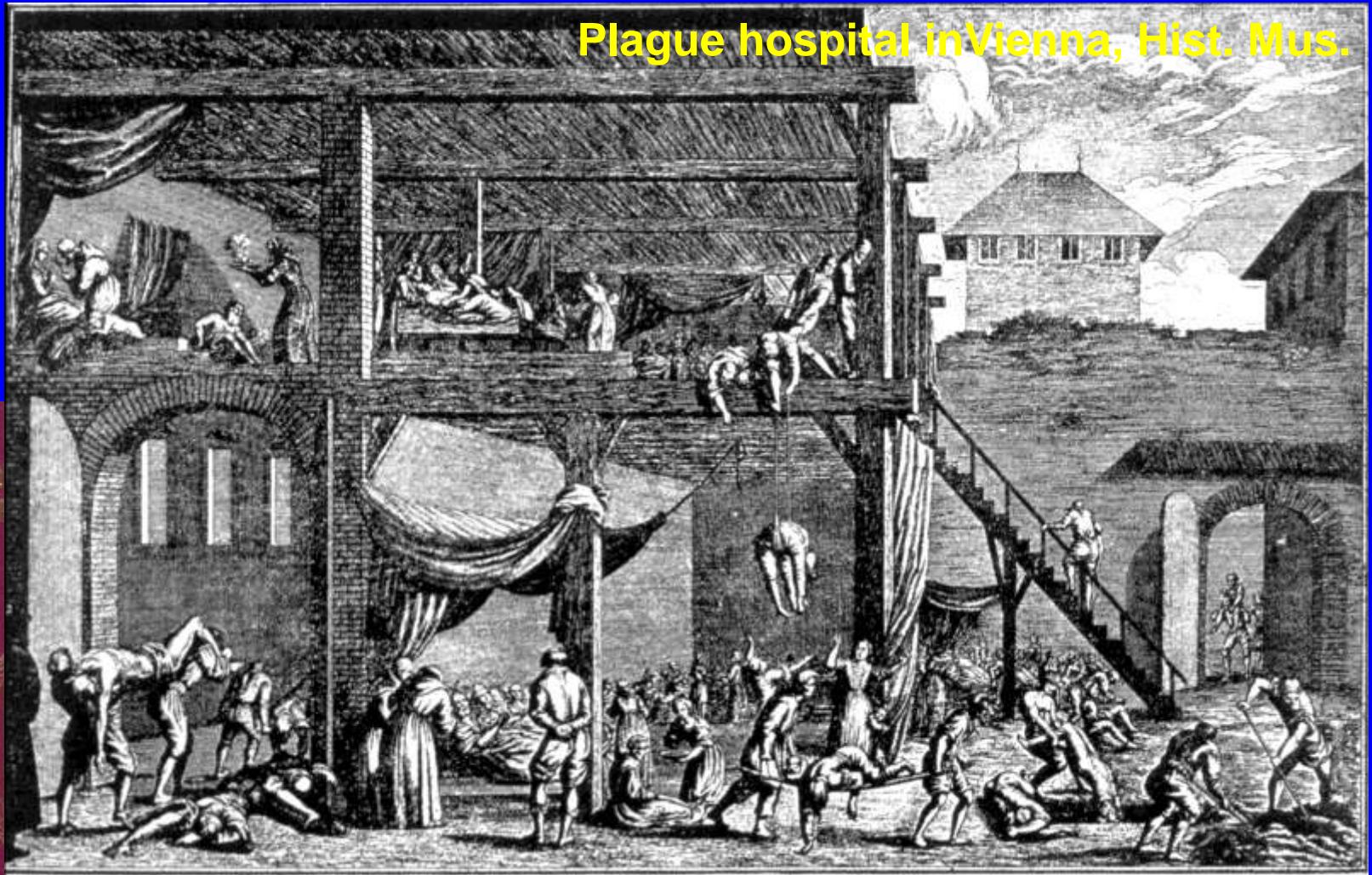
CASERMA DEL MEZZO DEL CORTELE DEL LATERNETTO D'ANTONA E SPACCATO DEL MEDESIMO
Architetto di Luigi Poerattelli

In Roma sotto il nome di Giacomo della Porta edito da me.

ΔΙΑΒΑΘΡΙΟ
PASSEPORT - PASSPORT - CESTOVNI PAS - REISEPASS - PAS - PASS -
PASAPORTE - PASSI - ÚTLEVÉL - PAS - PASSAPORTO - PASO - PASE -
PASSAPORT - PASPOORT - PASZPORT - PASSAPORTE - PASS -
POTNI LIST - CESTOVNÝ PAS



Plague hospital in Vienna, Hist. Mus.



ΔΙΑΒΑΤΗΡΙΟ

ΕΦΕ

Διαβατήριο / Pass-port





On a single day in 1349, 2000 Jews were burned to death by a mob in Strassbourg.

- As had happened before and since, Jews were the targets of choice (even though they died of Plague at the same rate as others). Rumors of their having poisoned wells ran rampant. There were pogroms and massacres. The rabble was loose.
- Zurich expelled all its Jews and closed its gates to them. On a single day in 1349, 2000 Jews were burned to death by a mob in Strausborg.
- Even officialdom entered the fray. The canton of Basel gathered all 4500 of its Jews in a specially built structure on an island in the Rhine and burned them to death, after which the town fathers passed a law forbidding Jewish residence in the canton for 200 years.

Η Τρίτη Πανδημία Πανώλης Κίνα 1850

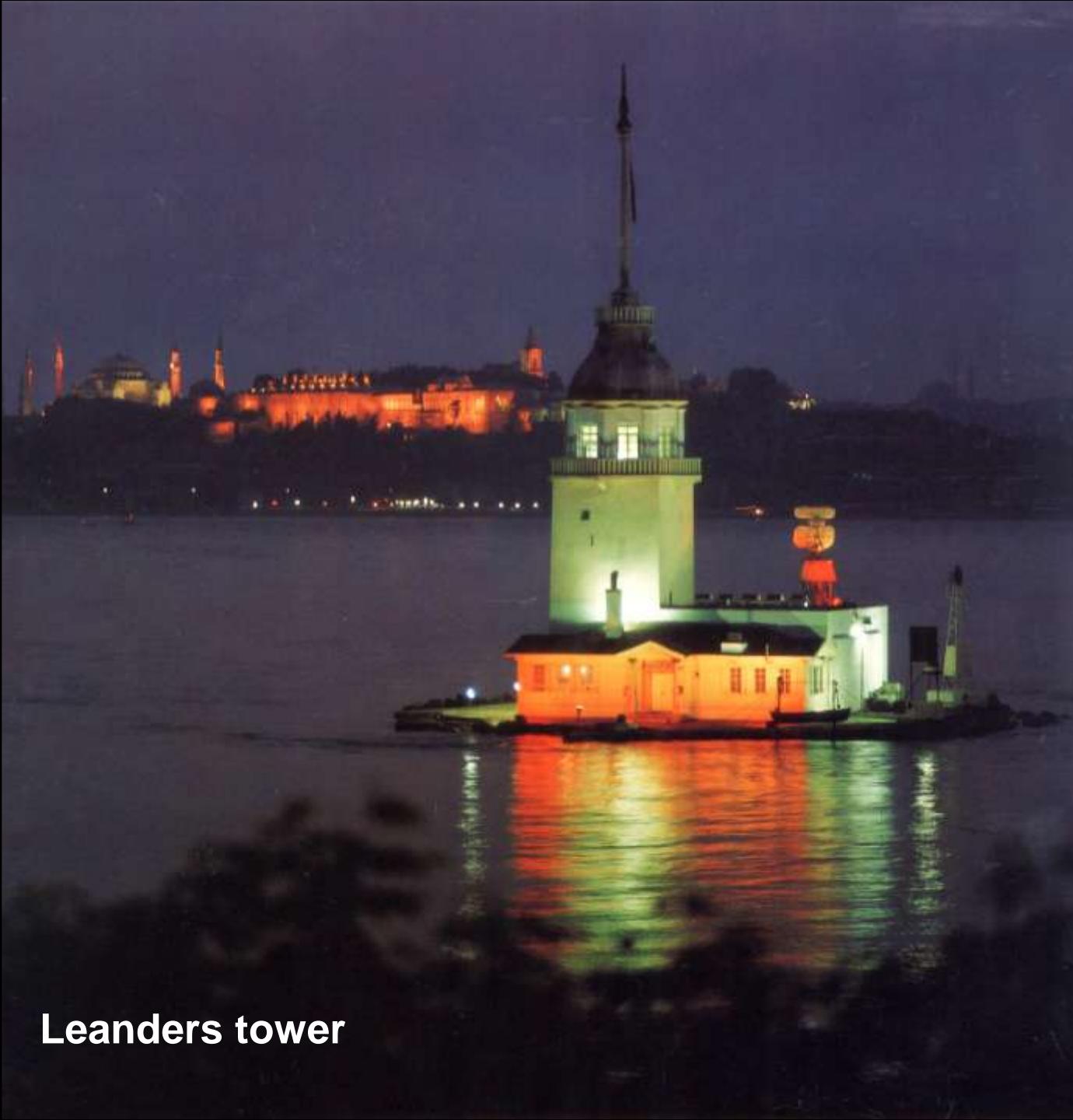


Στη δεκαετία του 1850, η επαρχία Υυνναν της Κίνας έμελλε να γίνει το ζοφερό σκηνικό πάνω στο οποίο θα στηνόταν η τρίτη (και τελευταία) πανδημία πανούκλας που γνώρισε ο κόσμος.





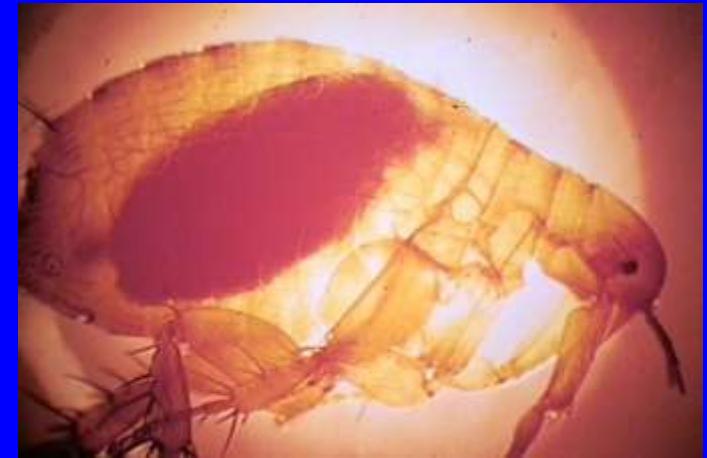
Constantin Caratheodory



Leanders tower



Alexander Yersin
1863-1943



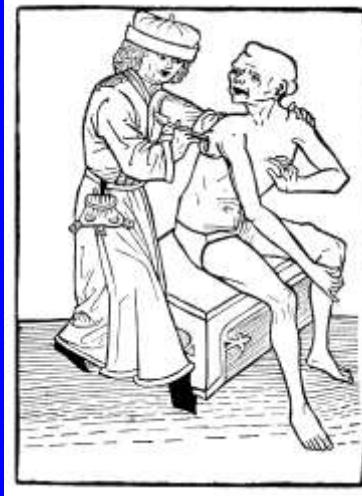
Discovered
1894

Yersinia pestis





Plague

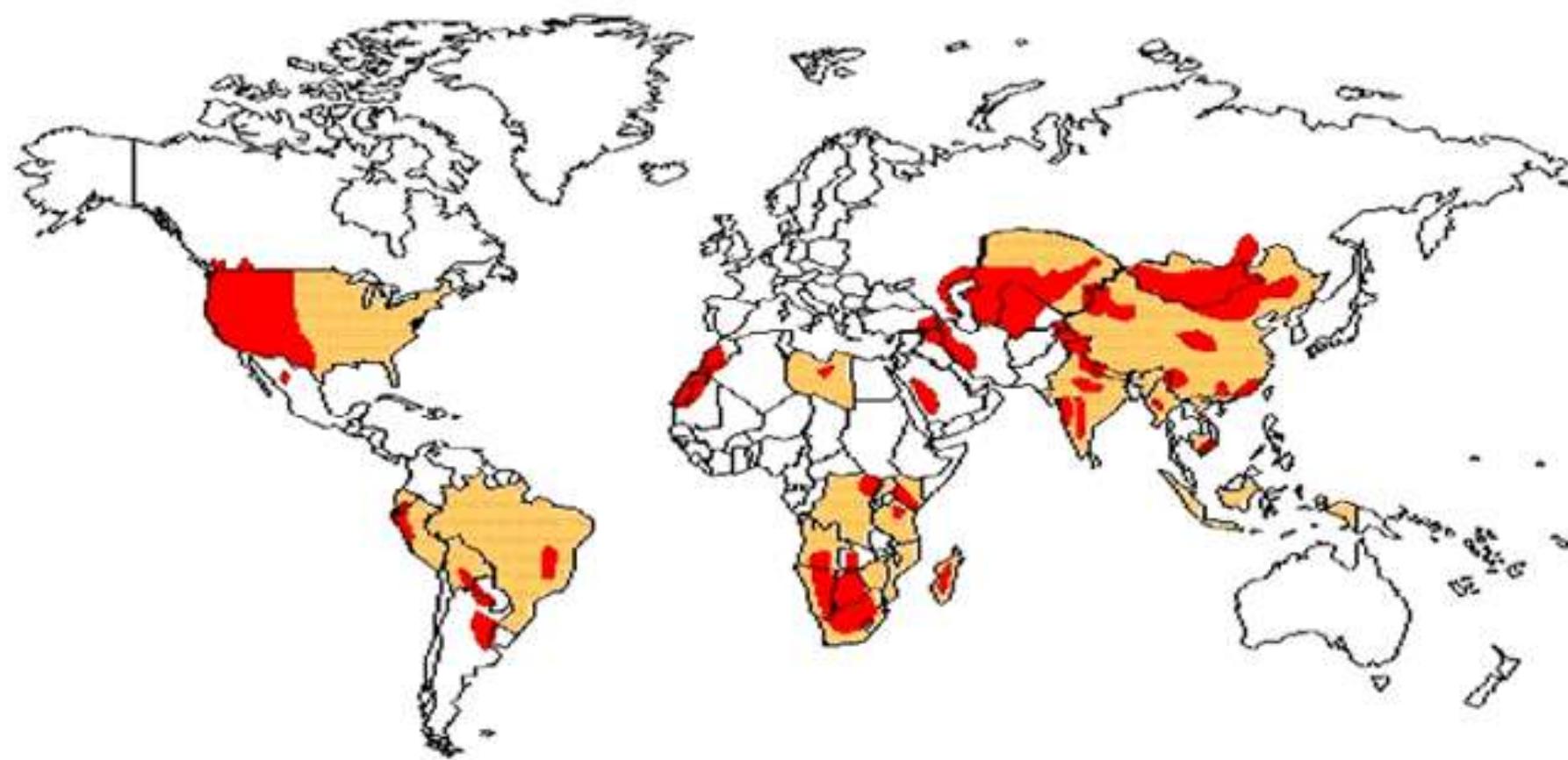


A zoonosis
that is transmitted to human
beings
by bits of flees of the rats
or other rodens

St. Rochus
“Frankfurter Meister” 1460

Wallraf-Richartz Museum, Cologne

World Distribution of Plague, 1998



■ Countries reported plague, 1970-1998.

■ Regions where plague occurs in animals.

ΕΛΛΑΣ

Υγειονομικοί Νόμοι

NOMOEEIA

1. Εργα Επενδύσης της Ελλάδος
1. Φύλλο αρ. 4/17. 10.1825, Νόμος ΜΘ (49), «Επί νομοσχε-
2. σιά» λα. αν. 32/30.01.1826, Νόμος ΝΒ (52), «Επί νομοσχε-

II. Lernwerk zur Kulturgeschichte

四

Amer.

1863

ΕΛΛΑΣ

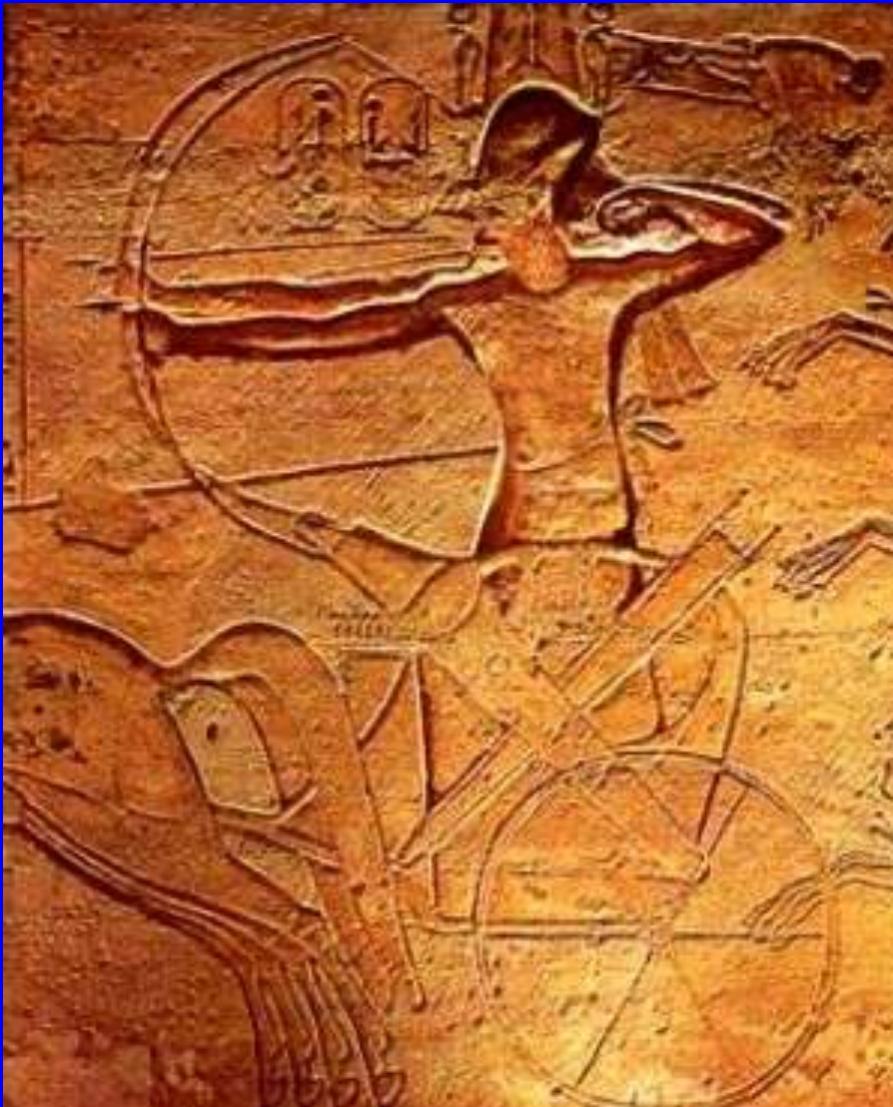
Υγειονομικοί Νόμοι

Γενική Εφημερίς της Ελλάδος

17.10.1825	Περί νοσοκομείων
30.1.1826	Περί υγειονομείων

Εφημερίς της Κυβερνήσεως

18.10.1835	Ορισμός καθάρσεως
31.12.1836	Παρεμπόδιση μετάδοσης μολυσματικών νόσων
23.7.1837	Καθορισμός ποίοι καθαίρονται
28.5.1840	Επικήρυξη ποντικών
15.11.1842	Λειτουργεία υγειονομείων
25.11.1845	Κανονισμός υγειονομείων & Λοιμοκαθαρτηρίων



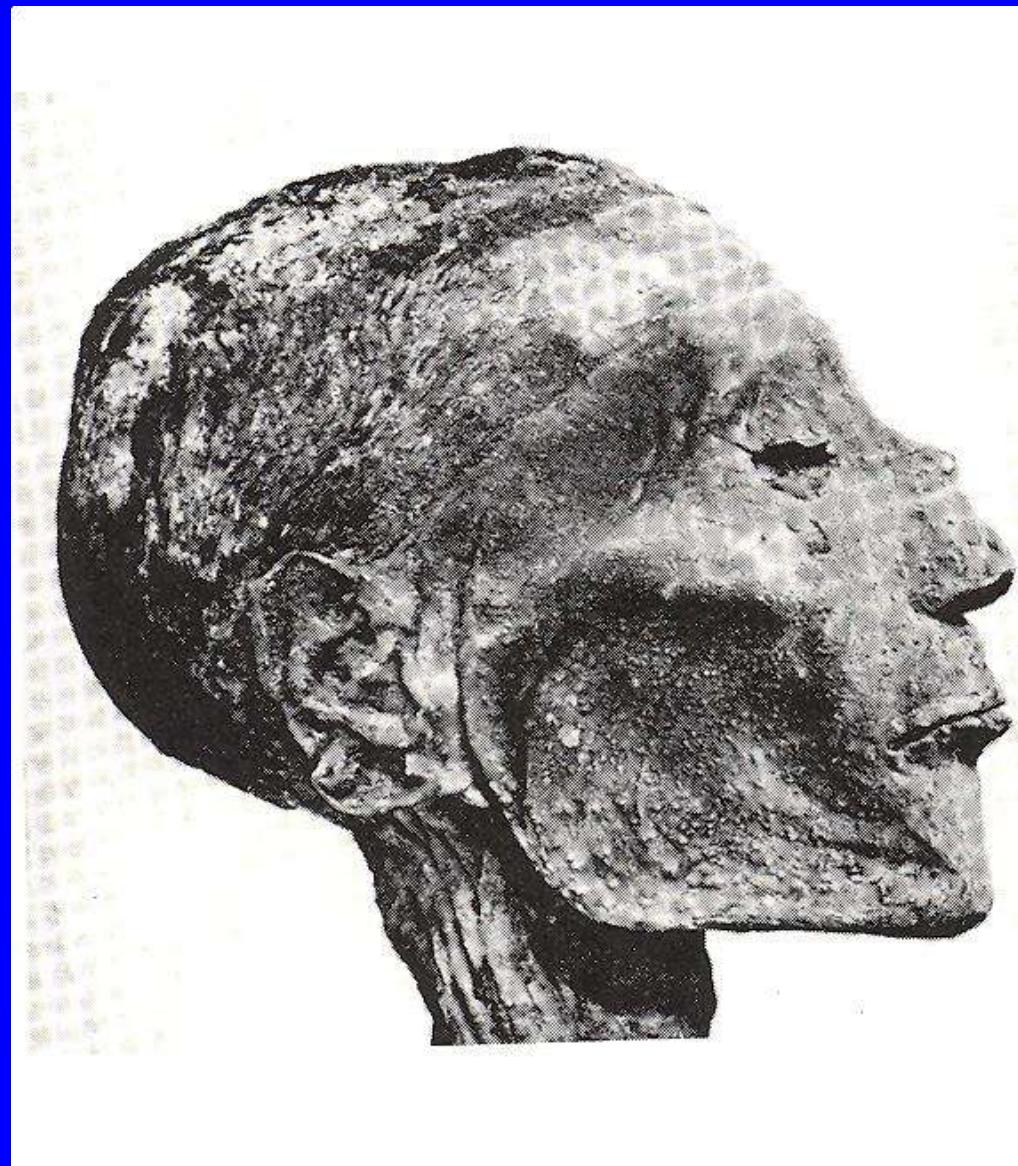
Ramesses II atop chariot,
at the battle of Kadesh, 1274 BC.
Relief inside his Abu Simbel temple.

The first recorded smallpox epidemic was in 1350 BC during the Egyptian-Hittite war

**Hittite warriors caught the disease from
Egyptian prisoners.**

**The king and heir were fatally infected and
the empire fell apart.**

The earliest evidence of smallpox skin lesions has been found on the faces of mummies from the eighteenth and twentieth Egyptian dynasties, and in the well-preserved mummy of Pharaoh Ramses V, who died in 1157 B.C.



**Pharao Rhamses V
1157 B.C.**

**Smallpox reached Europe
between the 5th and 7th
centuries and was present in
major European cities by the
18th century.**

Variolation

- The first written account of variolation describes a Buddhist nun practicing around 1022 to 1063 AD.
- She would grind up scabs taken from a person infected with smallpox into a powder, and then blow it into the nostrils of a non-immune person.
- By the 1700's, this method of variolation was common practice in China, India, and Turkey.

(39)

**II. Nova & tuta Variolas excitandi per Transplantationem Methodus, nuper inventa & in usum tradita :
Per Jacobum Pylarinum, Venetum, M. D. &
Reipublicæ Venetæ apud Smyrnenses nuper Consulē.**

Operationem Medicam inventu non minus quam c-
ventu mirandam Orbi literario pandimus ; Non
à Physice cultoribus, aut à doctis in Apollinea arte viris,
sed à plebea rudique gente in humani generis adjumentum,
in ſeviffimi morbi ſolamen detectam, vetuſtis Scholarum
Lucubrationibus, ſedulis recentiorum investigationibus
ignotam ; ſed quæ ex innocentioris & ἀφιλοσόφῳ fa-
miliz penu defluxit. Verus ignoratur ejus adinventor :
in Græcia tamen, præcise in Theſſalia, primò invaluiffe
certifimum eſt ; hinc in propinqua ſucceſſivè ſerpendo
loca & civitates, in Byzantinam tandem irrepſit urbem ;
ubi latuit quidem initio per aliquot annos, raro quoque,
& inter humiliores dumtaxat recepta : Immaniter autem
graſſante nuper Variolarum epidemia, latius inhotescere
ceperit ; Numquam tamen ſublimiores aua eſt ingredi au-
las ; donec Nobilis quidam nec obscurus inter præſtantio-
res Græcos, & ex antiquo Caryophyllorum ſtipite cla-
rus, mihi verò intimiori amicitiæ titulo notus, anno ſalutis
1701. ſub hyemis fine, ſerio mè quidnam de hac in-
fitione ſentirem, consuluit ; & an ad eandem in qua-
tuor propriis filiis celebrandam præſtarem affenſum : Nam
tum temporis lethaliter totam ferè civitatem morbus hic
inueniatur, qui ſumrum ei de poterum ſalute metum in-

A byzantine method

Inoculation
against small pox

J. Pylarinos, 1714

f. 33

NOVA ET TUTA
VARIOLAS

Excitandi per Transplan-
tationem Methodus;

Nuper inventa & in usum
tracta:

DON.

Qua rite peracta, immunia in po-
sterum prae servantur ab hujus-
modi contagio Corpora.

Jacobo Pylarino



VENETIIS , MDCCXV.

Apud Jo. Gabrielem Hertz.

Superiorum Permissu.

In a reprinting of Traité à la Haye
fou ce Titre: Bini Traité de Nova
Variolas per transplant. excitandi methodo
quam prius ex Veneto exemplari, altero vero
ex transfectionib. Philosoph. anglican. Han-
sard. Batav. 1721. p. 93. 8°
Op. Traité sur une Relacion d'una Tomania
a la Sociedad Royal de Medicina.

Photocopié
à titre
Centre natio-
nale
Grande Ecurie
Référence pos-
VERSAILLE

Jacobo Pylarino

Nova et tuta Variolas excitandi per
transplantationen methodus
Nuper inventa & in usum tracta:

Qua rite peracta, immunia in
posterum prae servantur...

J. Gabriele Hertz ,Venetia, 1715

This book was translated in 15 languages

Inoculation

Up to 1768

317 papers
were published
on Inoculation

Krunitz, Leipzig, 1768



**Lady Mary
Wortley-Montague
1717**

**writes about the
inoculation
to Miss Sarah Chiswell**

**1721 inoculates her
daughter in
Constantinople**



1721

King George I

1714 – 1727

**Orders 6 criminals condemned to death
to try the inoculation**

Orders that 11 orphans are inoculated

G. Washington's army

1776

Killed in war	1 000
Wounded	1 200
Died from smallpox	10 000
Deserted	25 000

THE SURGEON'S LIBRARY

IMMUNIZATION SAVES WASHINGTON'S ARMY

Richard B. Stark, M.D., F.A.C.S., *New York, New York*

GEORGE WASHINGTON stared at General Horatio Gates' note: "The very great desertion from this army has, I believe, been principally occasioned by the dread of the smallpox." Was the whole dream of independence to be turned into a nightmarish failure because of this ubiquitous pestilence? True, now at winter camp in Morristown, the up-to-date battle record of that January 1777 had not been great; indeed, until the last nine days of heady victory at Trenton and Princeton, it had been a depressing chronicle of retreat, but it was not the cause of wholesale desertion, it was not threatening to dry up enlistments.

Immediately upon arrival in Morristown on 6 January 1777, Washington wrote to Doctor William Shippen, Jr., who was in charge of the hospitals west of the Hudson River:

Finding the smallpox to be spreading much, and fearing that no precaution can prevent it from running through the whole of our army, I have determined that the troops shall be inoculated. Should the disease rage with its usual virulence, we should have more to dread from it than the sword of the enemy. . . .

How true. During the past year of 1776, Washington's army had sustained 1,200 men wounded and 1,000 killed in action, while those dying of disease—mostly from smallpox—totaled 10,000. The order went on:

If the [inoculation] business is immediately begun and favored with the common success . . . in a short space of time we shall have an army no longer subject to . . . the greatest of all calamities that can befall it. . . .

But what of this inoculation business? What could be expected from its common success? This was 1777, not two decades later, when Edward Jenner was to present his report upon the vaccination of 23 patients before the Royal Society in 1798, a report that was to be received with worldwide acceptance and acclaim, since it promised to rid the world forever of the dread of this virulent disease.

Smallpox had come out of central Africa, India and China. The time of its genesis is not known, although the great Arabic physician Rhazes first described it in 910 A.D.

Medically, the disease termed variola is caused by a filterable virus and is extremely contagious upon personal contact. Indeed, in 1774, William Buchin refers to the contagious element of a virus in the blood stream. It was the most ubiquitous, the most deforming and the most lethal of the plague-like epidemics of the 17th and 18th centuries.

In the 18th century, smallpox was endemic in most major cities in the British Isles and intermittently epidemic in the port cities of the American colonies. Since smallpox was endemic or continuously prevalent in urban England, a large immune population existed; on the contrary, the intermittent appearance of the disease in the American colonies was particularly devastating to the nonimmune inhabitants who comprised the majority of persons.

In the epidemic of 1723, this disease accounted for 9 per cent of all deaths in London, and in those persons who were infected, the mortality was 18 per cent.

To many, disfigurement as a result of smallpox loomed as large as did death. Not only was the skin grotesquely pitted, but also ocular keratitis could supervene, leading to blindness; scar tissue could form, sealing up the nostrils, and the eyebrows and eyelashes could be permanently shed.

But, by the time an especially virulent epidemic struck Boston in 1721, the usual passive acceptance of the disease as the will of God was giving way to a means of prevention that had been recently introduced into the western world, the practice of variolation, commonly called inoculation.

The actual origin of this ounce of prevention is not known. The method took several forms, but its success depended upon electively infecting the per-

6th January 1777

Washington fell with a
immunised army into
Philadelphia in the middle of
a disastrous epidemic of
smallpox thus being able to
liberate the USA.

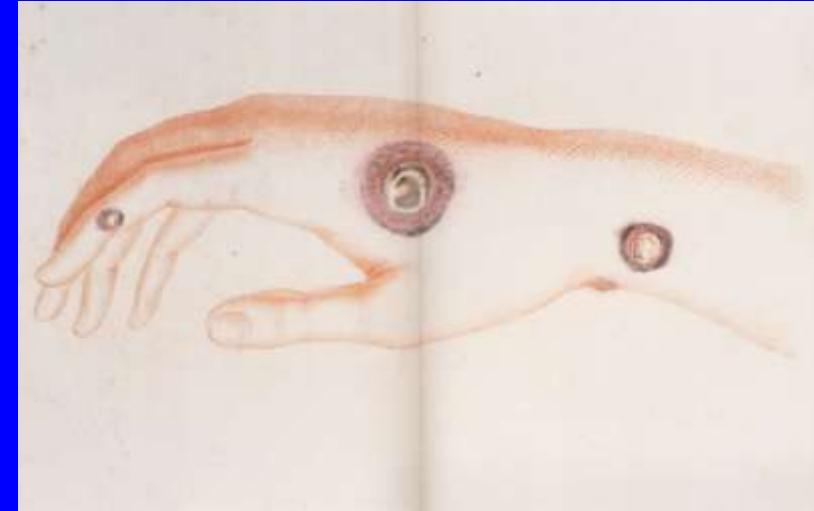


George Washington
on his death bed

**On a letter to the Congress he states in 1777 :
“Immunization of the army was a big success”.**



Smallpox continued to ravage Europe, Asia, and Africa for centuries. In Europe, near the end of the eighteenth century, the disease accounted for nearly 400,000 deaths each year, including five kings. Of those surviving, one-third were blinded.



1798
Vaccination
by Edward Jenner

1749 – 1823



The Cow-Pock — or — the Wonderful Effects of the New Inoculation! — Vide, the Publications of y^e Anti-Vaccine Society.

Pub'd June 12th 1802, by H. Humphrey, 3, James's Street.



Ιωάννης Καποδίστριας

1776-1831

Η φήμη του ως χειρουργού, που εξασκούσε τη δυτική ιατρική και χειρουργική, γρήγορα ξεπέρασε τα σύνορα της Κέρκυρας, ενώ η δωρεάν θεραπεία που προσέφερε στους ποπολάρους ασθενείς του, είχε ως αποτέλεσμα να συρρέουν δυστυχείς και πονεμένοι όνθρωποι απ' όλα τα Επτάνησα για να τον συναντήσουν.

Υπήρξε εμπνευστής και ιδρυτής του Ιατρικού Κολεγίου (Collegio Medico) της Κέρκυρας το 1802, της πρώτης ελληνικής επιστημονικής ιατρικής εταιρείας, που αποτέλεσε συμβουλευτικό όργανο της κυβέρνησης (ένα είδος Κεντρικού Συμβουλίου Υγείας της εποχής).



Padova

Ιωάννης Καπτοδίστριας 1776-1831

Οι αρμοδιότητες του πρώτου αυτού ιατρικού οργάνου περιελάμβαναν τον έλεγχο του ιατρικού επαγγέλματος (έλεγχος των διπλωμάτων και διενέργεια εξετάσεων για τη χορήγηση νόμιμης άδεις ασκήσεως στους ιατρούς και χειρουργούς), τις ιατροδικαστικές γνωματεύσεις, την επιδημιολογική παρακολούθηση της νοσηρότητας και τη λήψη προφυλακτικών μέτρων κατά των επιδημιών, την προστασία της παιδικής υγείας και των εγκύων, τον έλεγχο των φαρμακείων, την εκπαίδευση των μαιών και τη γενική υγειονομική κατάσταση του νησιού.



Ιωάννης Καποδίστριας

1776-1831

Έχοντας στέρεα άποψη για τα θέματα της ιατρικής επιστήμης, ο Ιωάννης Καποδίστριας φανέρωσε νωρίς και το διοικητικό του ταλέντο, με τις πολιτικές του ενέργειες για την ανάπτυξη της υγειονομικής μέριμνας στα Επτάνησα.

Ως Γραμματέας της Επικρατείας, εστηγήθηκε το θεσμό των «Υγειοδημικών Κομιτάτων», παραρτημάτων του Ιατρικού Κολεγίου σε κάθε νησί, με σκοπό την έγκαιρη λήψη υγειονομικών μέτρων, μεταξύ των οποίων **τα σημαντικότερα ήταν αυτά που σχετίζονταν με το δαμαλισμό κατά της ευλογιάς, τον έλεγχο των αφροδισίων, των μαιών, τον «ιατρό των ττωχών» κ.λπ.** Ο Ιωάννης Καποδίστριας θεράπευσε και διακόνησε το ιατρικό λειτούργημα, αναπτύσσοντας παράλληλα και αξιοζήλευτη πολιτική δράση μέχρι το τέλος του 1808, οπότε και έφυγε για την Ρωσία, αναλαμβάνοντας υπηρεσία ως διπλωμάτης στο Υπουργείο Εξωτερικών της Ρωσίας.

- In the United States, more than 100,000 cases of smallpox were recorded in 1921.
- Strong declines occurred after that because of the widespread use of preventive vaccines.
- By 1939, fewer than 50 Americans per year died of smallpox.

In 1969, the US and the Soviet Union signed a treaty banning biological weapons.

The US has adhered to the treaty while it has been reported that Russia has not.

Russia is alleged to currently have several metric tons of freeze-dried genetically engineered hemorrhagic smallpox virus.

- There are only two stores of smallpox virus in the world today, the CDC BSL-4 lab in Atlanta and the Russian State Research Center of Virology and Biotechnology in Koltsovo, Novosibirsk.
- The stores were scheduled to be destroyed on December 31, 1996, but the US has decided against destruction because of the possibility of the virus's use in bio-warfare.

- The United States stopped vaccinating the general population in 1972, but continued to vaccinate military personnel.
- It was recommended that vaccination of military personnel stop in 1986, and vaccination was officially stopped in military recruits in 1990.

1988

Ευλογιά 1713-1988 = 275 χρόνια

WHO

Δεν χρειάζεται πέον ο εμβολιασμός

Poliomyelitis

The History of Polio

1789 - British physician Michael Underwood provides the first clinical description of polio, referring to it as "debility of the lower extremities."

1840 - German physician Jacob von Heine publishes a 78-page monograph in 1840 which not only describes the clinical features of the disease, but also notes that its symptoms suggest the involvement of the spinal cord.

1894 - The first major polio epidemic reported in the United States occurs in Vermont, consisting of 132 total cases, including some adults.

Franklin Roosevelt

1882-1945



1921 - Franklin Delano Roosevelt (39y) contracts polio and is left with severe paralysis.

1938 - Founder of the National Foundation for Infantile Paralysis, leading to the development of polio vaccines.

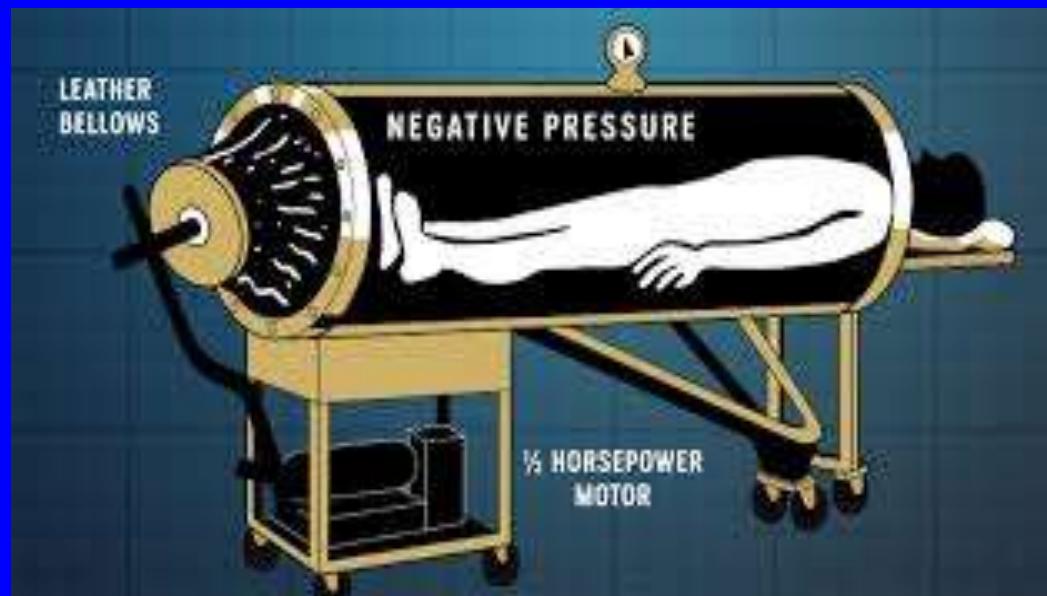
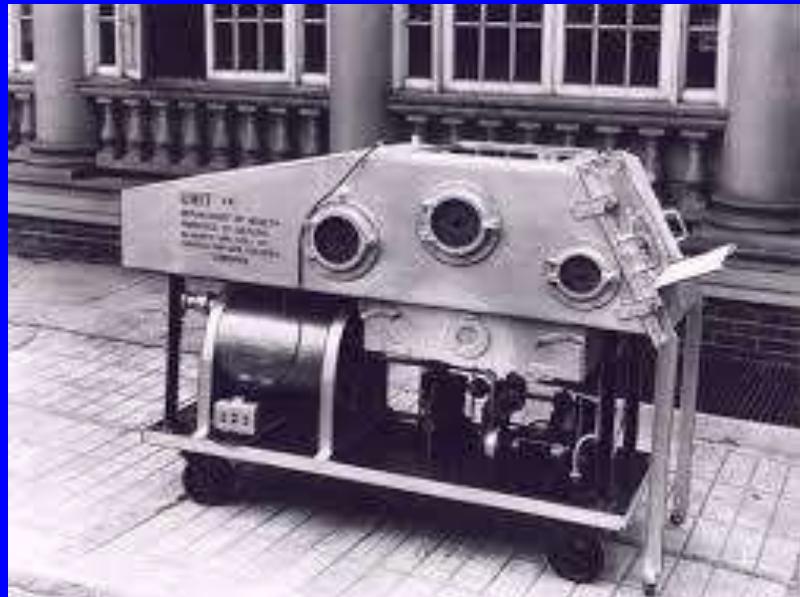
1941 - The United States enters World War II. Most of the best medical researchers, including Jonas Salk , either enter the military or work on military-related projects.

Σιδηρούς Πνεύμων 1928/31

Philip Drinker and Louis Shaw

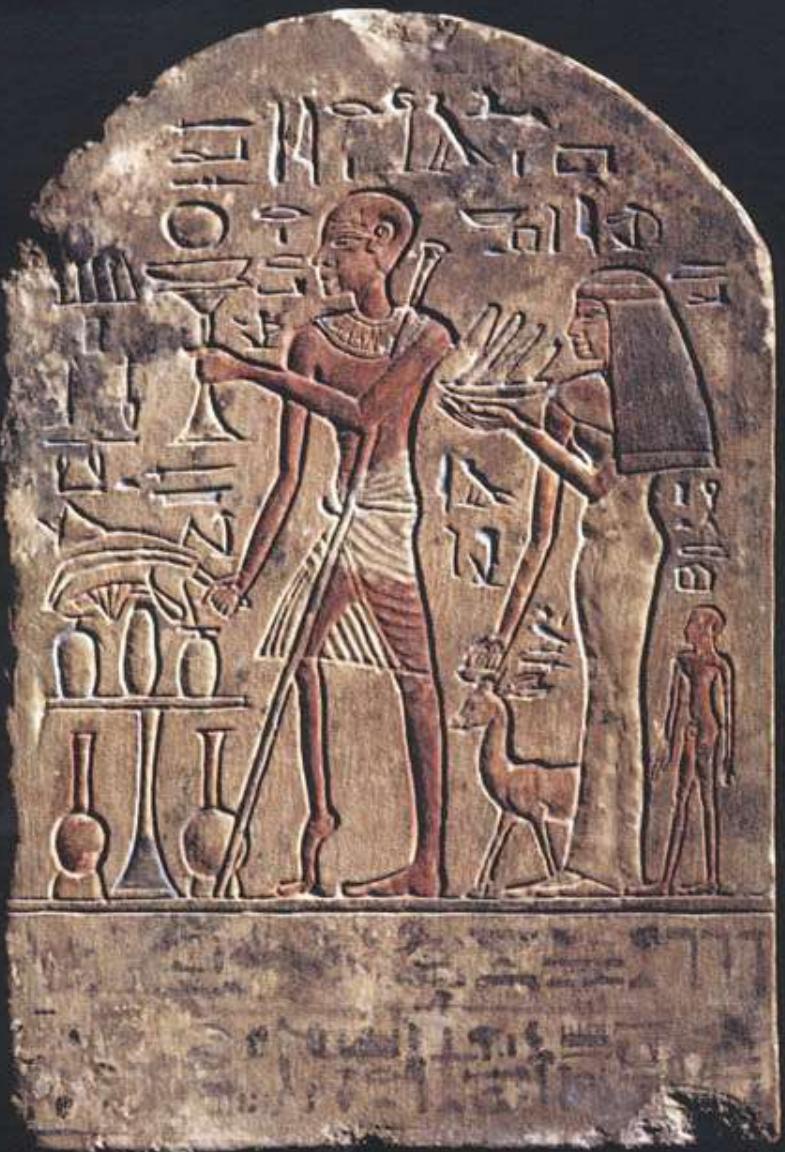


Iron lung



60 χρόνια μέσα σε σιδηρό πνεύμονα





18η δυναστεία: 1403–1365 π.Χ.



Ατροφία δεξ. ποδιού



Poliomyelitis epidemic, 1952

Εμβολιασμοί Πολυομυελίτιδας

Πολιορκείτιδα 1947-2010 = 63 χρόνια

1988 – 350.000 παιδιά παγκοσμίως

1000 παιδιά αρρώσταιναν από Πολιορκητικό ΗΠΑ. Σχέδιο ΟΗΕ για εξολοθρεύση 2000

2001 -- 575 εκατομμύρια παιδιά εμβολιάσθηκαν σε 94 χώρες.

2004 – 80 εκ. παιδιά σε 6 αφρικανικές χώρες



Reported polio cases in 2017

Country	Wild cases	Circulating vaccine-derived cases	Transmission status	Type(s)
Afghanistan	14	0	endemic	WPV1
Pakistan	8	0	endemic	WPV1
DRC	0	17	cVDPV only	cVDPV2
Syria	0	74	cVDPV only	cVDPV2
Total	22	91		



23.3.2017

**More than 190 000 polio vaccinators
in 13 countries
across west and central Africa
will immunize more than
116 million children
over the next week,
to tackle the last remaining stronghold of polio
on the continent**

Ιστανική Γρίπη

Επιδημία γρίπης σε Ελλάδα και Ευρώπη

1918 flu pandemic

Nicknamed Spanish flu

January 1918 – December 1920

This was an unusually deadly influenza pandemic, the first of the two pandemics involving H1N1 influenza virus.

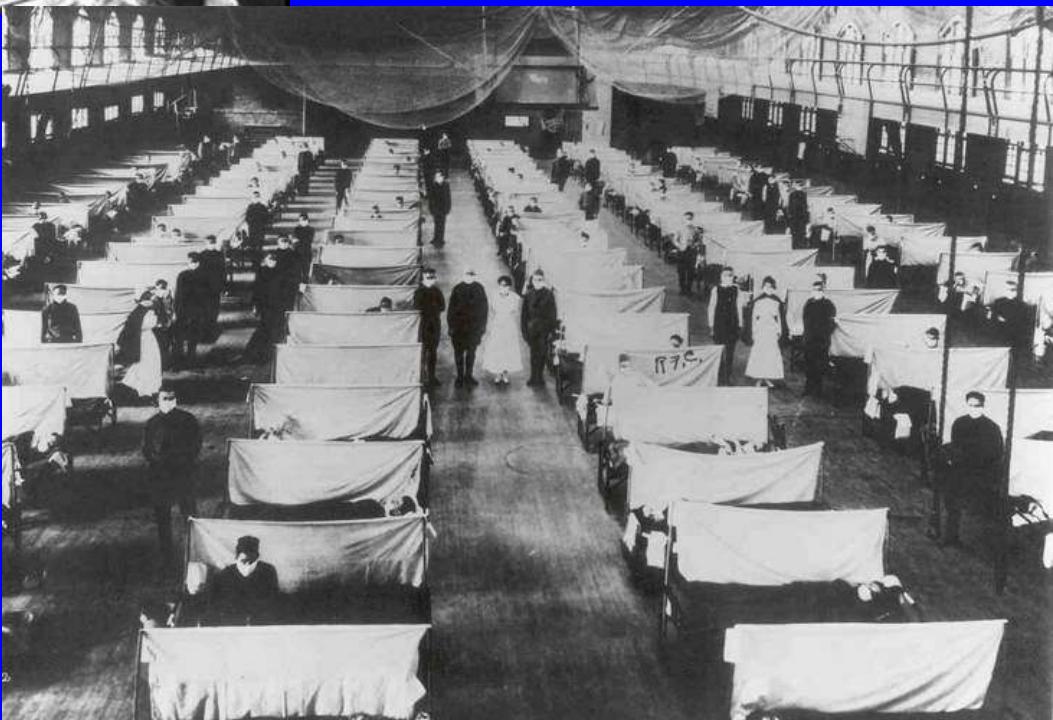
It infected 500 million people across the world, and resulted in the deaths of 50 to 100 million (3-5% of the world's population), making it one of the deadliest natural disasters in human history.

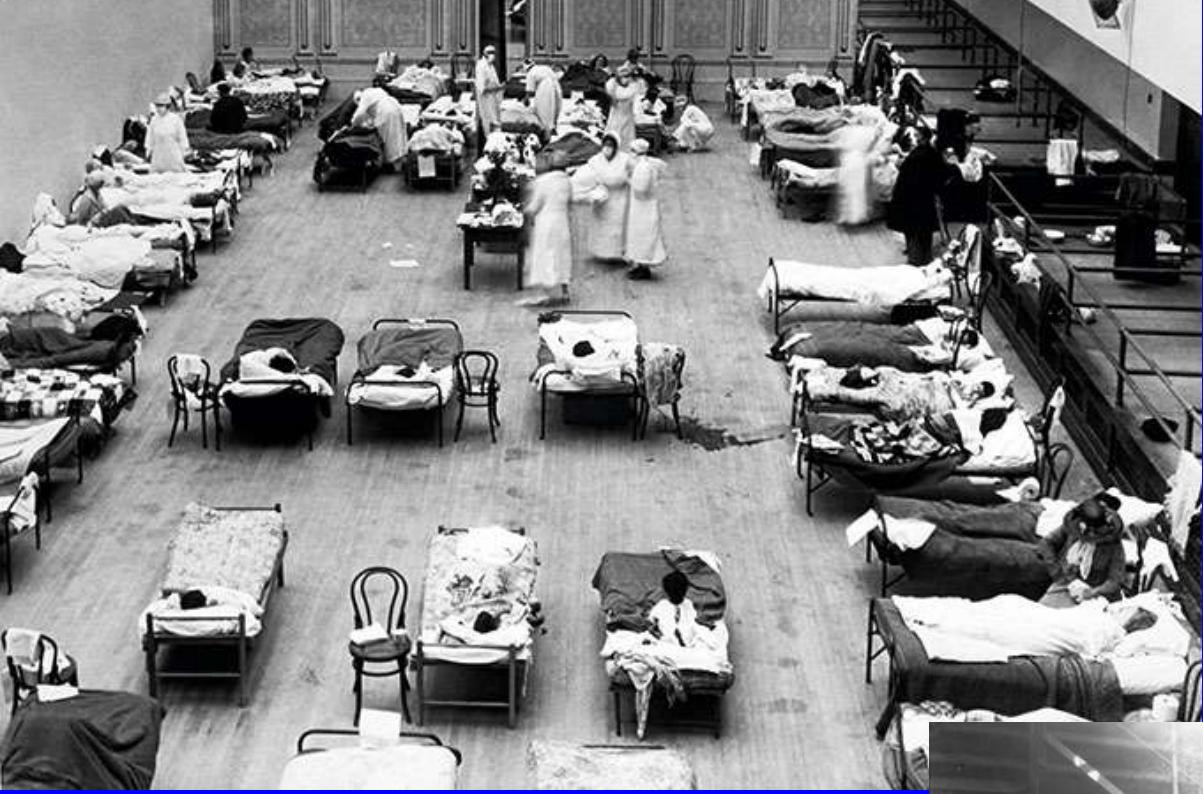


Hippocrates

- Hippocrates seems to have been the first observer to record an influenza pandemic in the year 412 B.C.
- Since 1580, there have been thirty-one additional flu pandemics recorded.

FLU PANDEMIC OF 1918





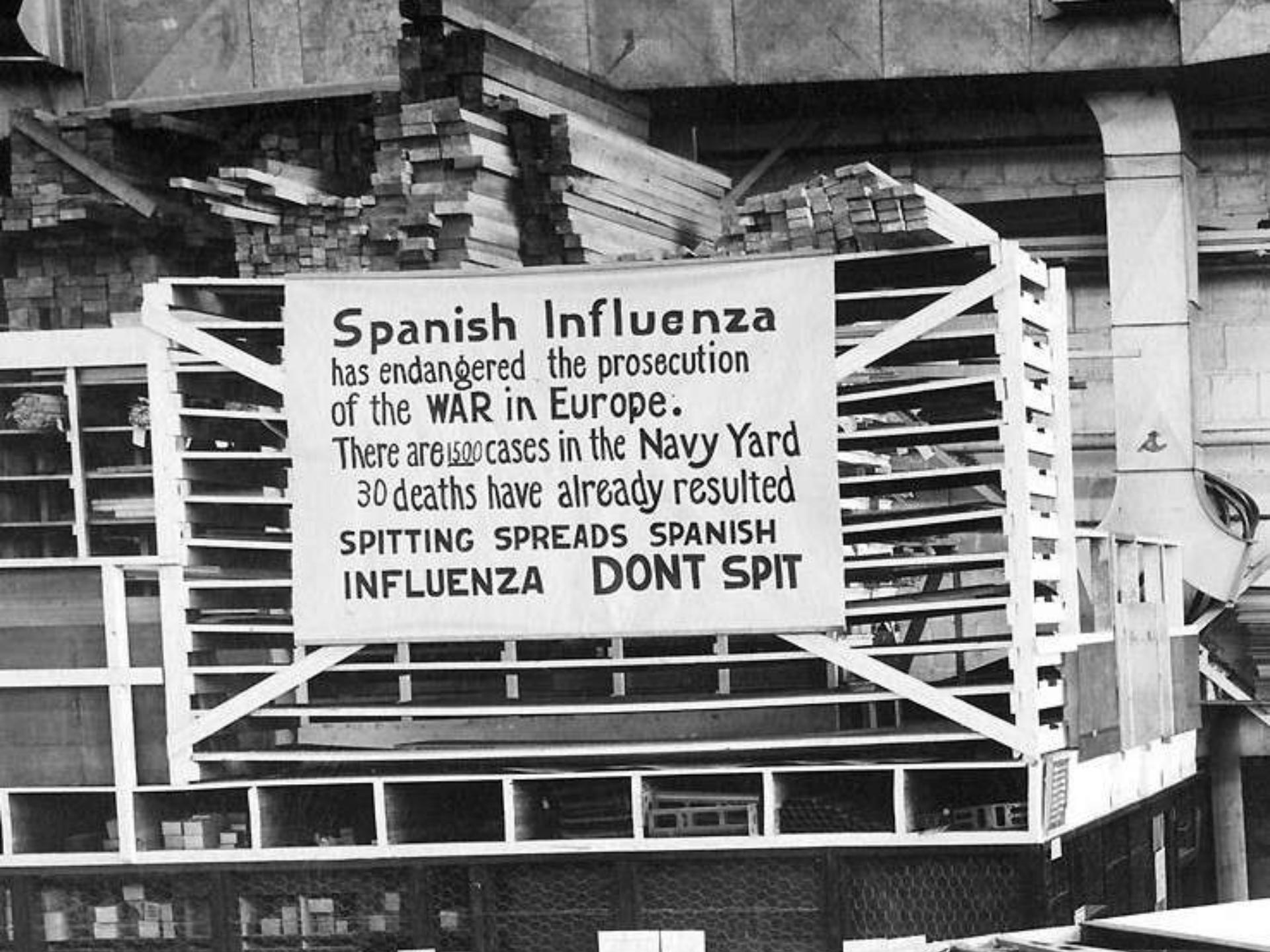
Ισπανική γρίπη



© Getty Images







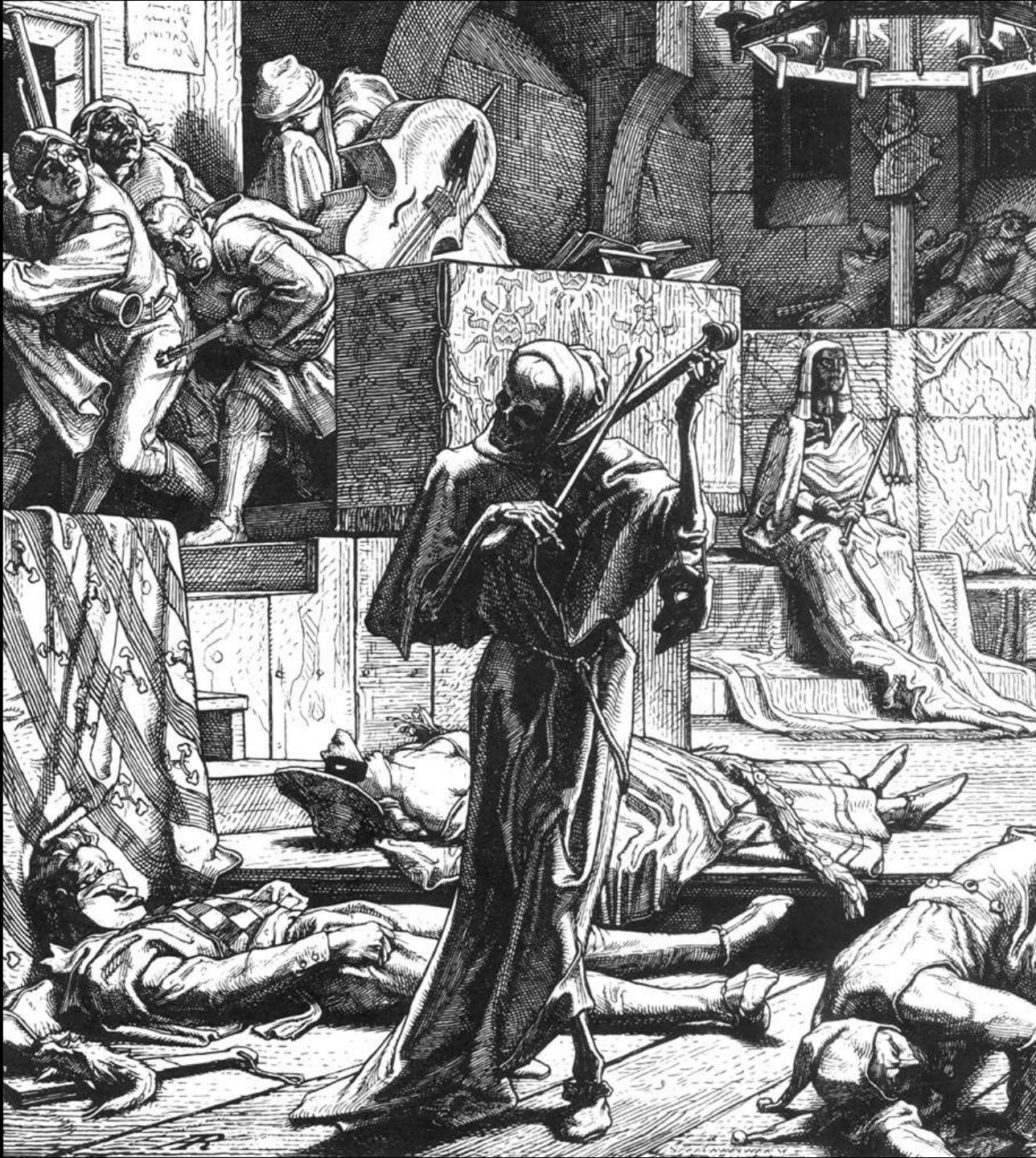
Spanish Influenza
has endangered the prosecution
of the WAR in Europe.
There are 1500 cases in the Navy Yard
30 deaths have already resulted
**SPITTING SPREADS SPANISH
INFLUENZA DONT SPIT**

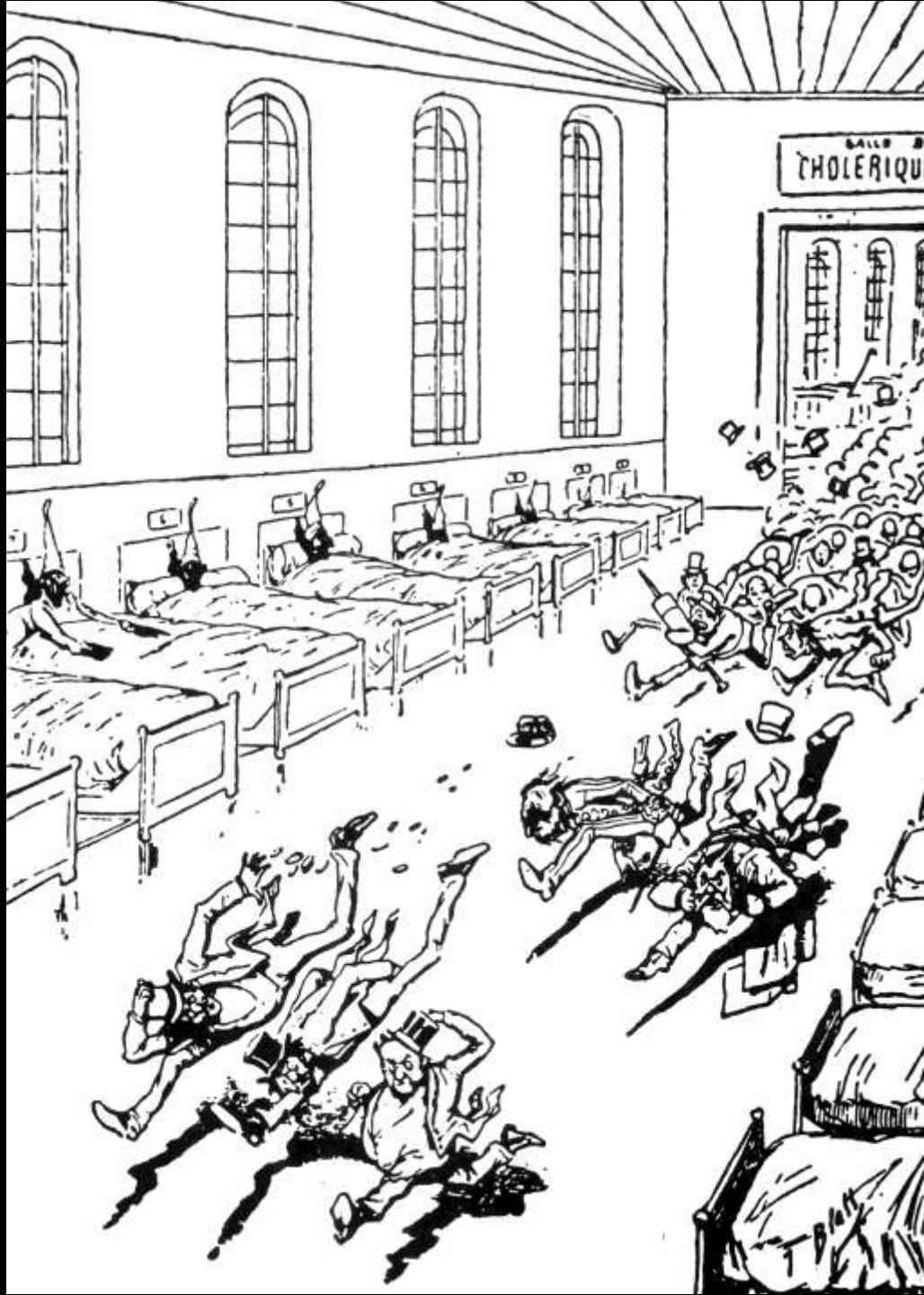
While a monovalent (H1N1)pdm09 vaccine was produced, it was not available in large quantities until late November, which was after the peak of illness during the second wave had come and gone in the United States.

From April 12, 2009 to April 10, 2010, CDC estimated that there were 60.8 million cases (range: 43.3-89.3 million), 274,304 hospitalizations (195,086-402,719), and 12,469 deaths (8868-18,306) in the United States due to the (H1N1)pdm09 virus.*

CDC estimated that between 151,700 and 575,400 people worldwide died from 2009 H1N1 virus infection during the first year the virus circulated.**

Χολέρα







H7N9 Avian Flu

Further information: Influenza A virus subtype H7N9

Influenza A virus subtype H7N9 is a novel avian influenza virus first reported to have infected humans in 2013 in China.[30] Most of the reported cases of human infection have resulted in severe respiratory illness.[31] In the month following the report of the first case, more than 100 people had been infected, an unusually high rate for a new infection; a fifth of those patients had died, a fifth had recovered, and the rest remained critically ill.[32] The World Health Organization (WHO) has identified H7N9 as "...an unusually dangerous virus for humans." [33] As of June 30, 133 cases have been reported, resulting in the deaths of 43.

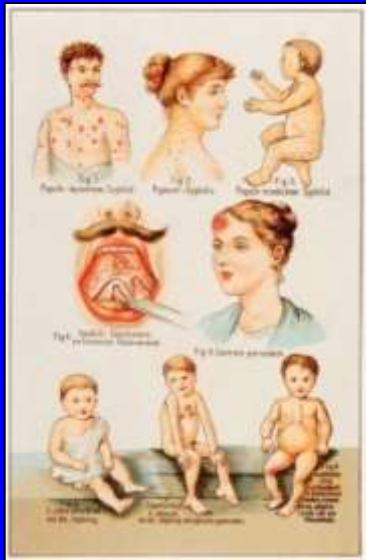
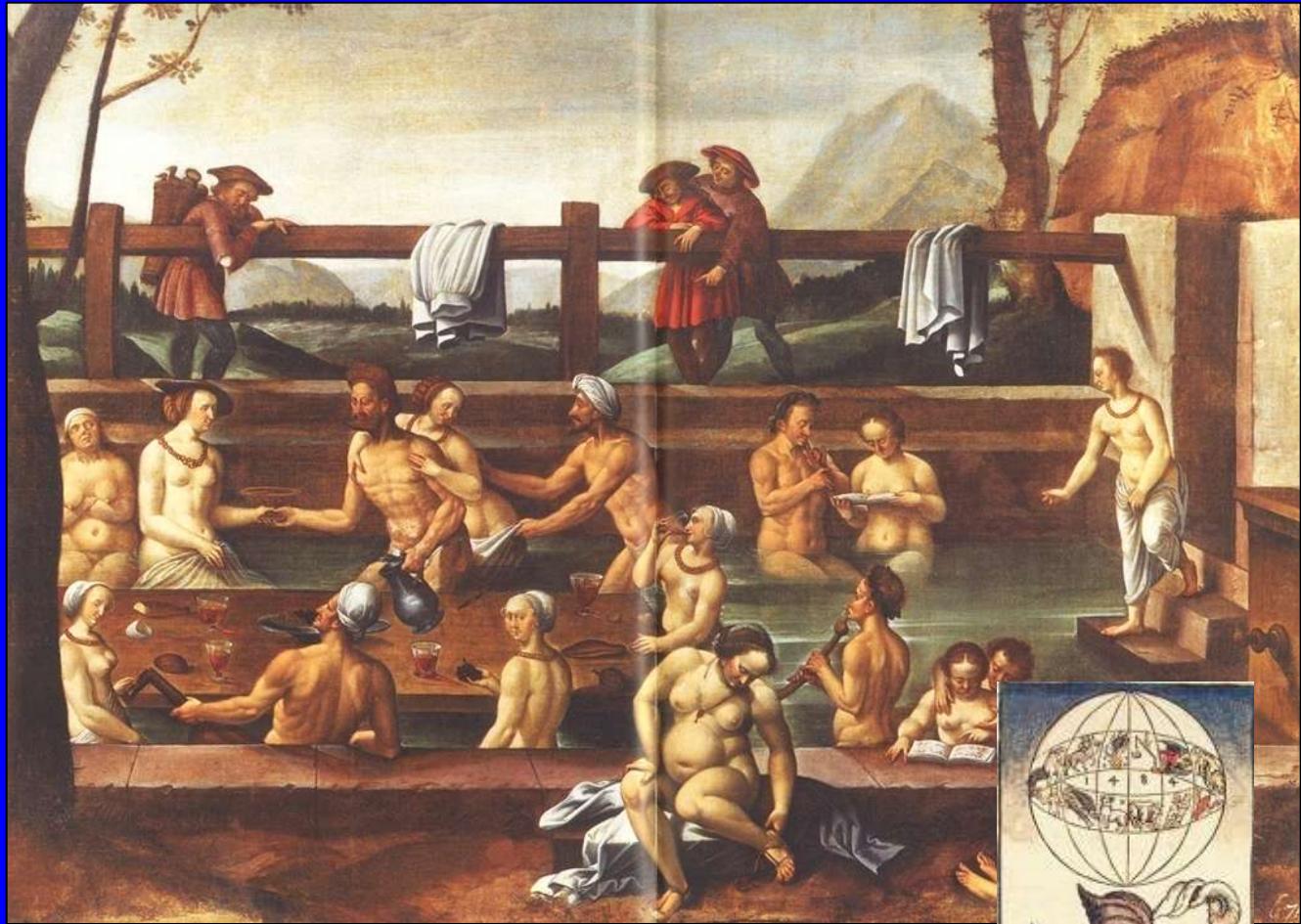
Research regarding background and transmission is ongoing.[34] It has been established that many of the human cases of H7N9 appear to have a link to live bird markets.[35] As of July 2013, there had been no evidence of sustained human-to-human transmission, however a study group headed by one of the world's leading experts on avian flu reported that several instances of human-to-human infection were suspected.[36] It has been reported that H7N9 virus does not kill poultry, which will make surveillance much more difficult. Researchers have commented on the unusual prevalence of older males among H7N9-infected patients.[37] While several environmental, behavioral, and biological explanations for this pattern have been proposed,[38] as yet, the reason is unknown.[39] Currently no vaccine exists, but the use of influenza antiviral drugs known as neuraminidase inhibitors in cases of early infection may be effective.[40]

The number of cases detected after April fell abruptly. The decrease in the number of new human H7N9 cases may have resulted from containment measures taken by Chinese authorities, including closing live bird markets, or from a change in seasons, or possibly a combination of both factors. Studies indicate that avian influenza viruses have a seasonal pattern, thus it is thought that infections may pick up again when the weather turns cooler in China.[41]

SARS



Εμβολιασμοί ενηλίκων > 65 ετών

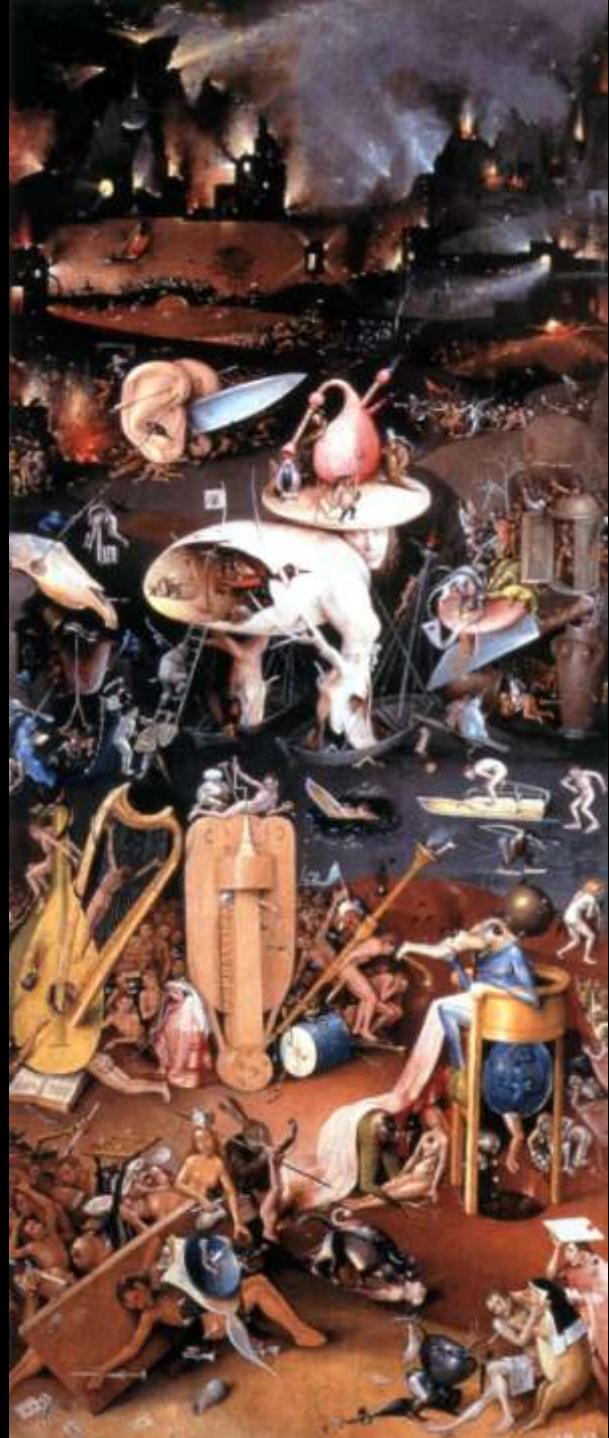


Syphilis



Bruegel Πανώλη



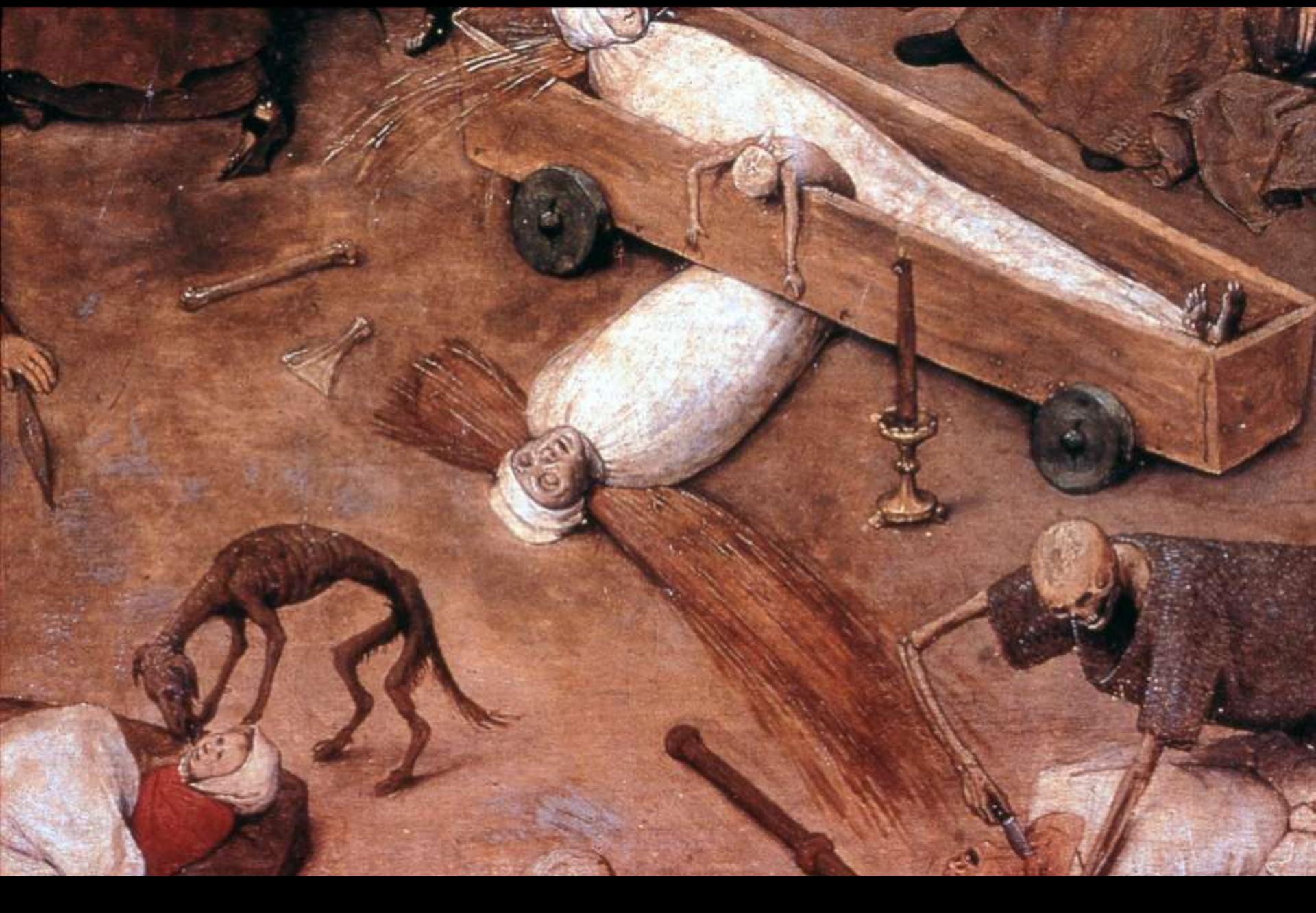




















Grandville (J.J.J. Gerard), : Caricature, The Cholera, 1831

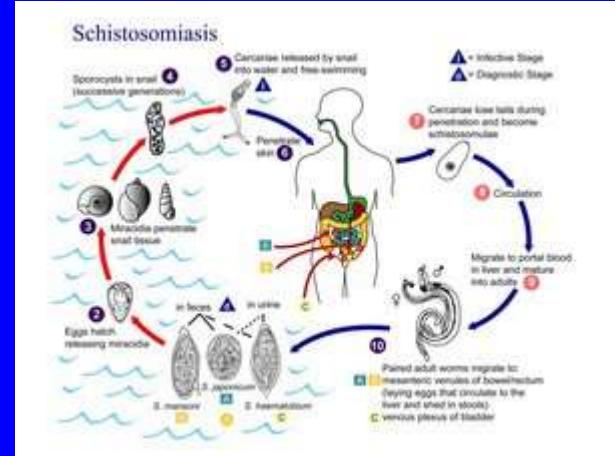
Cholera

Early blood-transfusion from a young horse for Tuberculosis



Tuberculosis: During 1990-1999, an estimated 30 million persons died from TB

Bilharziosis



**Bilharziosis
(Schistosomiasis) and many
other illnesses can be
followed back
to the prehistoric Aera**

**Theodor Maximilian Bilharz
1825-1862**