



GREECE (GRE)

Population: 10.5 million (1998)

Area: 131 944 km²



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1. General information

The Centre for Surveillance and Intervention (CSI) of the Hellenic Centre for Infectious Diseases Control is the centre for the surveillance and control of foodborne infections and intoxications in Greece.

NCSI collects, processes and analyses the data provided by the following Centres: (see also flowchart on the next page)

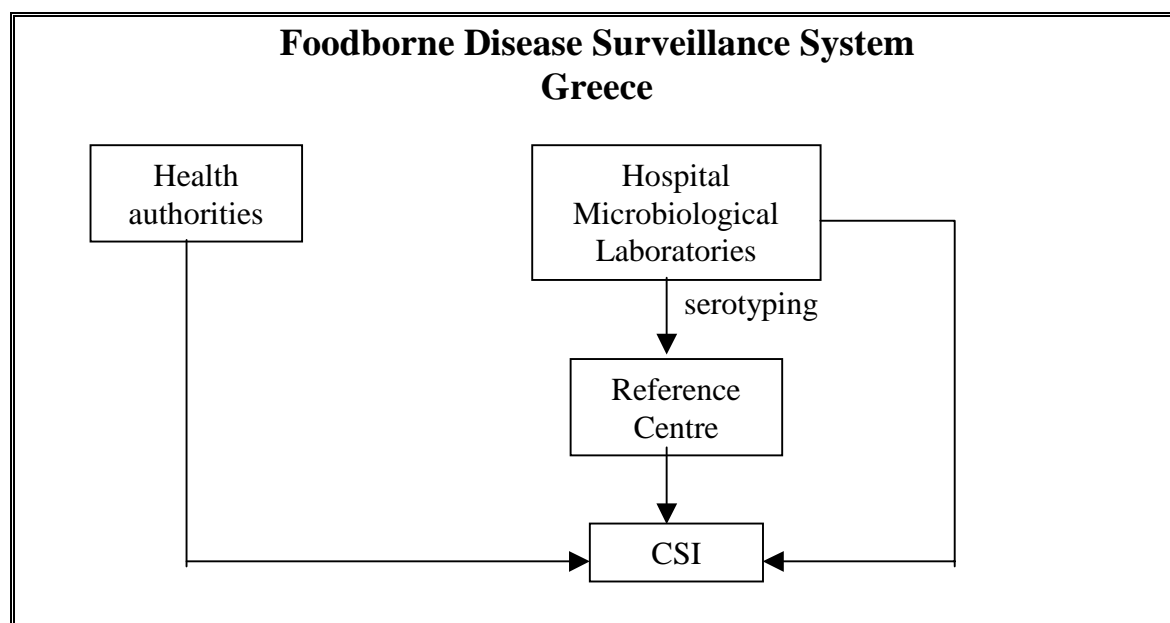
1. The 57 district health authorities in the country
2. The Hospital Microbiological Laboratories
3. The Reference Centres:
 - The National Salmonella and Shigella Reference Centre (National School of Public Health, Athens)
 - The Salmonella Reference Centre for Macedonia – Thrace (Infectious Diseases Hospital – Thessaloniki)
 - The National Reference Centre of Parasitology, Zoonoses and Geographical Medicine (University of Crete, Heraklion)

Individual epidemiological forms are provided to the Centre by the District Health Authorities on a monthly basis. Aggregated data is collected from the Hospital Laboratories on a weekly basis and from the Reference Centres on a monthly basis. However, in case of Hepatitis A or Brucellosis epidemics, epidemiological forms are sent daily.

The Centre is responsible for the dissemination of information to the Ministry of Health and the immediate intervention if necessary.

Note: CSI was established in 1998. Data provided for 1998 is more complete and therefore the observed increase in cases for this year may be attributed to the better reporting system.

Figure GR 1



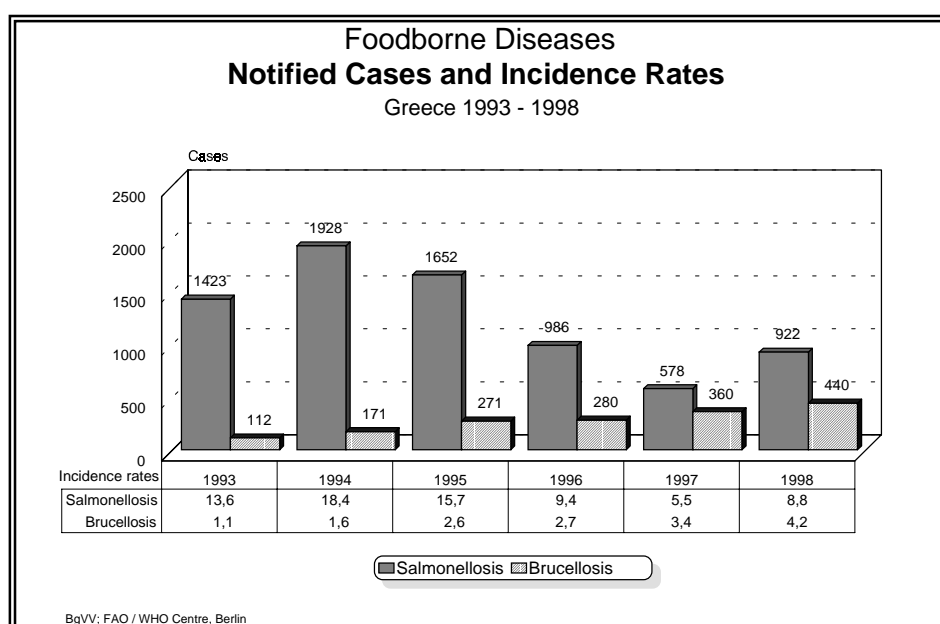
2. Statutory notification

Table GR 1

Notified cases of foodborne diseases
GREECE 1993 – 1998

Disease	1993	1994	1995	1996	1997	1998
Salmonellosis	1423	1928	1652	986	578	922
<i>Incidence rate</i>	13.6	18.4	15.7	9.4	5.5	8.8
Campylobacteriosis	-	-	-	-	-	136
<i>Incidence rate</i>	-	-	-	-	-	1.3
Shigellosis	33	88	24	346	21	92
<i>Incidence rate</i>	0.3	0.8	0.2	3.3	0.2	0.9
Listeriosis	-	-	-	-	-	1
<i>Incidence rate</i>	-	-	-	-	-	0.0
Cholera	1	-	-	-	-	-
<i>Incidence rate</i>	0.0	-	-	-	-	-
Brucellosis	112	171	271	280	360	440
<i>Incidence rate</i>	1.1	1.6	2.6	2.7	3.4	4.2
Hepatitis A	123	259	295	107	131	261
<i>Incidence rate</i>	1.2	2.5	2.8	1.0	1.2	2.5
Echinococcosis	326	326	213	164	101	-
<i>Incidence rate</i>	3.1	3.1	2.0	1.6	1.0	-
Giardiasis	-	-	-	-	-	42
<i>Incidence rate</i>	-	-	-	-	-	0.4

Figure GR 2



3. Epidemiologically investigated incidents**3.1 Salmonellosis**

Table GR 2

**Salmonella cases by serotypes
GREECE 1993- 1998**

Serotype	1993	1994	1995	1996	1997	1998
<i>S. Enteritidis</i>	1083	1569	1251	691	400	392
<i>S. Typhimurium</i>	193	204	237	178	100	141
<i>S. Infantis</i>	45	15	14	7	2	3
<i>S. Agona</i>	2	1	4	4	-	4
<i>S. Bredeney</i>	1	4	2	1	4	2
<i>S. Derby</i>	2	1	1	1	-	2
<i>S. Virchow</i>	11	19	23	25	4	5
<i>S. Hadar</i>	5	7	13	-	3	7
<i>S. Tennessee</i>	-	-	-	-	1	-
<i>S. Panama</i>	-	-	1	2	-	-
<i>S. Saintpaul</i>	1	-	-	-	1	-
<i>S. Montevideo</i>	10	5	3	2	1	2
<i>S. Newport</i>	10	6	13	7	3	8
<i>S. Anatum</i>	2	5	1	2	1	2
<i>S. London</i>	-	1	1	-	2	-
<i>S. Ohio</i>	-	1	-	-	-	-
<i>S. Muenchen</i>	1	-	1	-	-	-
<i>S. Oranienburg</i>	2	4	7	4	2	3

Table GR 3

**Salmonellosis - Age distribution
GREECE 1998**

Age	Number of cases
Total	922
< 1 year	77
1 – 4 years	217
5 - 14 years	182
15-24 years	64
25-44 years	105
45-64 years	98
> = 65 years	73
unknown	-

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4. Epidemiologically investigated outbreaks

4.1 Causative Agents

Table GR 4

Foodborne disease outbreaks by causative agents
GREECE 1993 – 1998

Causative Agents	1993		1994		1995		1996		1997		1998		Total	
	o.*	c.**	o.*	c.**	o.*	c.**	o.*	c.**	o.*	c.**	o.*	c.**	o.*	c.**
<i>S. Enteritidis</i>	1	3	-	-	1	35	1	20	2	20	-	-	5	78
<i>Shigella Sonnei</i>	-	-	-	-	-	-	-	-	1	n.r.	1	n.r.	2	n.r.

n.r. not reported

* outbreaks

** cases in outbreaks

Table GR 5

Investigated outbreaks
GREECE 1993-1998

Year	Causative agent	No. cases in outbreak	Incriminated food	Place of consumption
1993	<i>S. Enteritidis</i>	3	-	Camping
1995	<i>S. Enteritidis</i>	35	n.r.	Cruiser
1996	<i>S. Enteritidis</i>	20	n.r.	Hotel
1997	<i>S. Enteritidis</i>	20	n.r.	Restaurant
	<i>S. Enteritidis</i>	n.r.	n.r.	Hospital
	<i>Shig. Sonnei</i>	n.r.	Shrimp	Cruiser
1998	<i>Shig. Sonnei</i>	n.r.	n.r.	Village*

* water supply system

n.r. not reported

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5. Additional Information from Crete

Table GR 6

Isolated strains of Salmonella, Shigella, Campylobacter and Yersinia
CRETE/GREECE 1992 - 1998

Strain/Serotype	Year						Total	
	1993	1994	1995	1996	1997	1998	1993-1998	
							No.	%
S.Enteritidis	176	208	104	121	78	69	756	56.4
S.Typhimurium	33	25	18	16	23	9	124	9.2
S. Newport	5	-	1	-	-	3	9	0.7
S.Virchow	3	4	2	1	-	2	12	0.9
S.Infantis	33	1	-	-	-	-	34	2.5
Other S.spp.	6	6	13	4	6	2	37	2.8
Shigella flexneri	8	5	4	-	1	-	18	1.3
Shigella sonnei	1	1	-	-	-	4	6	0.4
C. jejuni	27	53	35	64	26	27	232	17.3
C. coli	1	11	7	17	5	5	46	3.4
Y. enterocolitica	8	6	4	19	20	10	67	5.0