



YUGOSLAVIA (YUG)

PROVISIONAL DATA

Population: 10.8 million

Area: 102 350 km²



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1. General information

Surveillance of communicable diseases in Yugoslavia is regulated by:

- *Federal Law on Control and Prevention of Communicable Diseases threatening the whole Country ("Official Journal of FR Yugoslavia, No 46/1996)*
- *Federal Regulation on Notification of Communicable Diseases ("Official Journal of FR Yugoslavia, No 27/1997)*

A new National Contact Point in Yugoslavia has been just appointed (December 2000) and will provide more general information soon.

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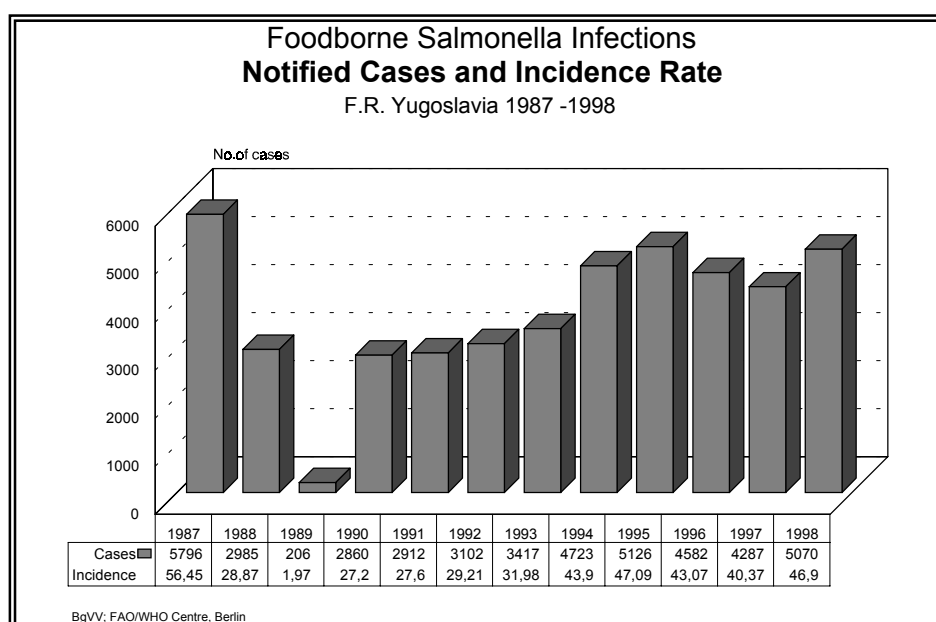
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2. Statutory notification

Table YU 1

Disease	1993	1994	1995	1996	1997	1998
	Number of cases					
Salmonellosis	3419	4796	5215	4582	4282	5070
Incidence rate	31.7	44.4	48.3	42.4	39.6	46.9
Botulism	11	20	11	8	18	33
Incidence rate	0.1	0.2	0.1	0.1	0.2	0.3
Shigellosis	2847	2666	1283	758	621	1038
Incidence rate	0.1	0.2	0.1	0.1	0.2	0.3
Cholera	-	2	-	-	-	-
Incidence rate	-	0.0	-	-	-	-
Brucellosis	135	72	115	87	92	76
Incidence rate	1.3	0.7	1.1	0.8	0.9	0.7
Other bacterial foodborne infections and intoxications	19855	39409	33381	28529	23340	23696
Incidence rate	183.8	364.9	309.1	264.2	216.1	219.4
Hepatitis A	1546	3245	2224	1132	1660	2256
Incidence rate	14.3	30.0	20.6	10.5	15.4	20.9
Echinococcosis	11	13	24	20	21	40
Incidence rate	0.1	0.1	0.2	0.2	0.2	0.4
Trichinellosis	210	493	803	598	804	471
Incidence rate	1.9	4.6	7.4	5.5	7.4	4.4
Giardiasis	-	-	-	-	-	2
Incidence rate	-	-	-	-	-	0.0
Amoebiasis	-	-	-	66	94	103
Incidence rate	-	-	-	0.6	0.9	1.0

Figure YU 1



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3. Epidemiologically investigated incidents

3.1 Salmonellosis

Table YU 2

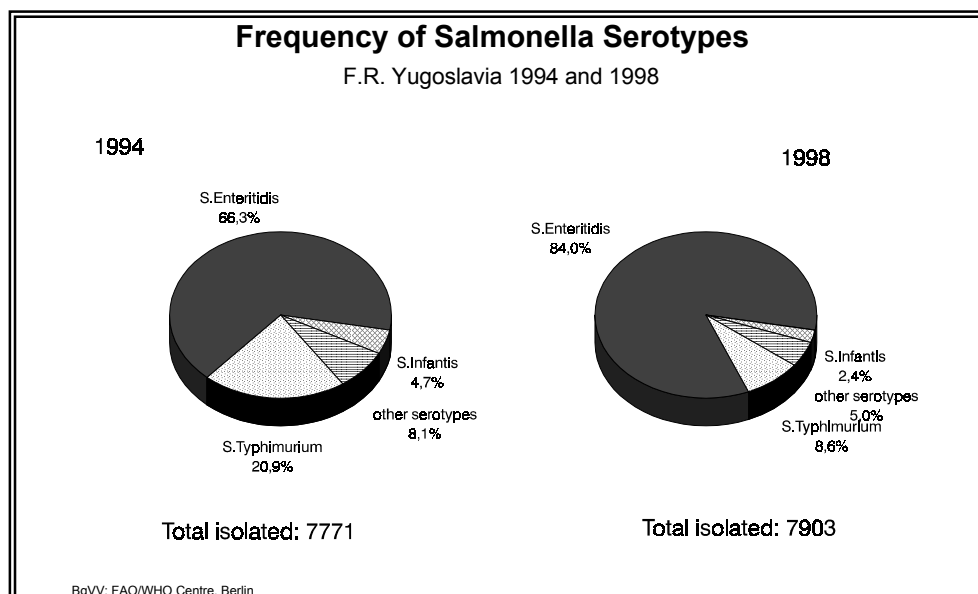
Most commonly isolated Salmonella serotypes
FR YUGOSLAVIA 1994-1998

Salmonella serotype	Year				
	1994	1995	1996	1997	1998
<i>S. Enteritidis</i>	5151	5502	6346	6063	6635
<i>S. Typhimurium</i>	1626	1561	1075	906	679
<i>S. Virchow</i>	119	71	39	19	19
<i>S. Hadar</i>	122	341	118	122	124
<i>S. Infantis</i>	367	330	281	166	191
<i>S. Thompson</i>	0	0	0	5	12
<i>S. Heidelberg</i>	25	17	0	5	6
<i>S. Derby</i>	12	0	38	20	32
<i>S. Paratyphi</i>	11	0	37	8	31
<i>S. Agona</i>	20	0	34	27	41
<i>S. Wien</i>	36	0	17	5	18
<i>S. Bovismorbificans</i>	20	0	15	11	12
<i>S. Typhi</i>	100	0	11	19	16
<i>S. Group C</i>	31	0	9	0	8
<i>S. Stanleyville</i>	0	0	8	1	7
<i>S. Haifa</i>	0	0	5	0	0
<i>S. Anatum</i>	0	0	5	14	0
<i>S. Lomita</i>	0	0	4	1	2
<i>S. Senftenberg</i>	10	0	4	6	3
<i>S. Montevideo</i>	0	0	3	1	0
<i>S. Newport</i>	0	0	3	3	1
<i>S. Group C₁</i>	0	0	3	1	3
Other serotypes	121	272	30	57	63

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Figure YU 2



4. Epidemiologically investigated outbreaks

4.1 Causative agents

Table YU 3

Recorded foodborne outbreaks by agents
 FR YUGOSLAVIA 1993 - 1998

Agent	Year						Total	
	1993	1994	1995	1996	1997	1998	No.	%
<i>Salmonella Facultative pathogenic bacteria</i>	57	78	194	134	111	168	742	47.9
<i>Shigella</i>	17	7	10	4	2	6	46	3.0
<i>Staphylococcus aureus</i>	6	8	-	-	-	14	28	1.8
<i>Cl. botulinum</i>	5	3	4	7	7	-	26	1.7
<i>B. cereus</i>	2	4	2	2	1	5	16	1.0
<i>Klebsiella</i>	-	-	2	2	-	-	4	0.3
Unknown	1	-	-	-	-	-	1	0.1
Other	-	28	86	80	80	14	288	18.6
Total	31	24	51	121	121	49	397	25.6
Total	119	152	349	350	322	256	1548	100.0

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Table YU 4

***Salmonella* serotypes isolated during outbreaks**
F.R. YUGOSLAVIA 1993 - 1998

Serotype	Year						Total	
	1993	1994	1995	1996	1997	1998	No.	%
S. Enteritidis	52	66	153	102	103	151	627	67.1
<i>S. Typhimurium</i>	2	5	12	9	8	2	38	4.1
<i>S. Infantis</i>	-	3	4	4	-	2	13	1.4
<i>S. Braenderup</i>	-	-	-	1	-	-	1	0.1
<i>S. Heidelberg</i>	-	-	-	1	-	-	1	0.1
<i>S. Hadar</i>	-	-	3	1	1	3	8	0.9
Other	3	4	183	-	-	-	190	20.3
Not identified		-	11	16	20	10	57	6.1
Total	57	78	366	134	132	168	935	100.0

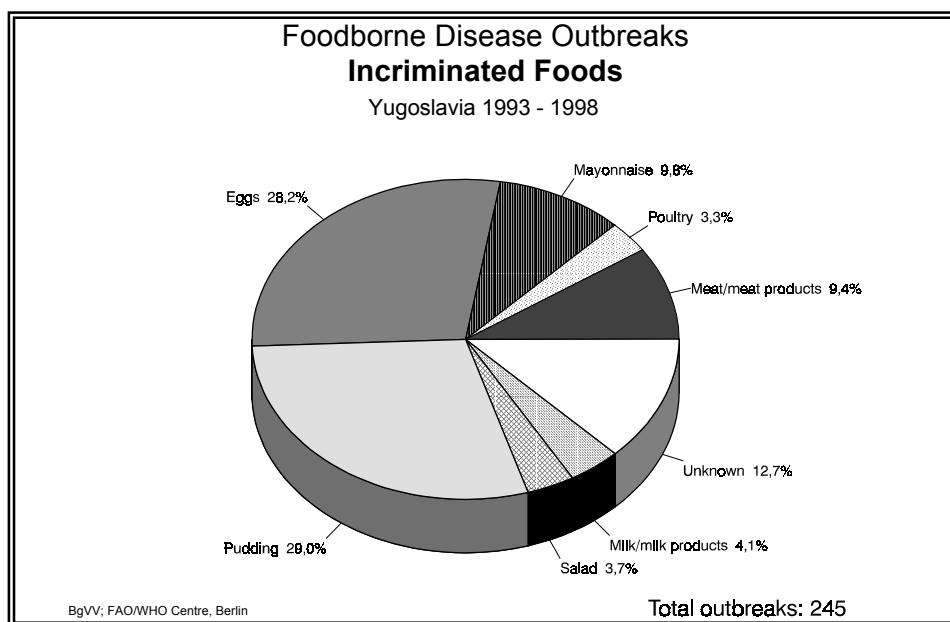
4.2 Incriminated food

Table YU 5

Outbreaks of food poisoning caused by salmonellas by type of food
F.R. YUGOSLAVIA 1996 and 1997

Type of food	No. of outbreaks	%
Pudding	71	29.0
Eggs	69	28.2
Mayonnaise	24	9.8
Poultry meat	8	3.3
Meat products	11	4.5
Pork	12	4.9
"Russian" salad	9	3.7
Cheese	9	3.7
Milk	1	0.4
Unknown	31	12.6
Total	245	100.0

Figure YU 3



4.3 Place where food was consumed

Table YU 6

Outbreaks caused by *Salmonella* by places of consumption
F.R. YUGOSLAVIA 1993 - 1998

Places	Year						Total	
	1993	1994	1995	1996	1997	1998	No.	%
Private home	42	56	98	113	103	206	618	74.5
Medical care facility	-	-	1	2	-	2	5	0.6
Restaurant	4	8	6	3	4	18	43	5.2
School/kindergarten	2	2	8	4	-	7	23	2.8
Canteen	2	5	8	3	4	12	34	4.1
Confectionery	1	3	4	2	-	5	15	1.8
Other	6	4	69	7	-	6	92	11.1
Unknown	-	-	-	-	-	-		
Total	57	78	194	134	111	256	830	100.0

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5. Additional information on trichinellosis

Table YU 7

Human cases and incidence rate of trichinellosis
YUGOSLAVIA 1995 - 1998

Republic/ Region	Year								Total	
	1995		1996		1997		1998		1995-1998	
	No of cases	Inci- dence	No of cases	Inci- dence	No of cases	Inci- dence	No of cases	Inci- dence	No of cases	Inci- dence
Federal Republic of Yugoslavia	803	7.42	598	5.62	804	7.57	471	4.44	2676	24.8
Republic of Montenegro	803	7.93	598	5.98	33	5.11	63	9.76	1497	13.9
Republic of Serbia	525	9.09	164	2.80	771	7.73	408	4.09	1868	17.3
Central Serbia	266	12.98	430	21.36	497	8.58	201	3.47	1394	12.9
Voivodina	12	0.62	4	0.19	269	13.63	207	10.49	492	4.6
Kosovo/ Metohija	n.a.	n.a.	n.a.	n.a.	5	0.23	n.a.	n.a.	5	0.23