

# Status of Controlled Fluoridation in the United States, 1945-57

**O**F THE approximately 118 million people in the United States provided water by community water supplies in 1957, 40.3 million (or about 1 in every 3 persons) in 3,534 communities drank water containing the minimum or higher level of fluoride recommended for optimum dental benefits.

Of these 40.3 million persons, 33.3 million in 1,631 communities are supplied water in which the fluoride level is controlled, and 7 million in 1,903 places use water naturally containing 0.7 ppm or more fluoride. Since 1950, the number of persons using water with a controlled fluoride content has increased by about 32 million (table 1 and fig. 1).

## Controlled Fluoridation

Fluoridated water is provided for a greater proportion of people living in large cities than in smaller communities (table 2). A majority of the Nation's cities having populations of a half million or more (12 of the 18) provide fluoridated water. These cities are:

Chicago, Ill.	San Francisco, Calif.
Philadelphia, Pa.	Pittsburgh, Pa.
Baltimore, Md.	Milwaukee, Wis.
Cleveland, Ohio	Houston, Tex.
St. Louis, Mo.	Buffalo, N. Y.
Washington, D. C.	Minneapolis, Minn.

Two of the five cities with populations exceeding 1 million (Chicago and Philadelphia), and 9 of the 13 cities with populations ranging between a half million and a million have in-

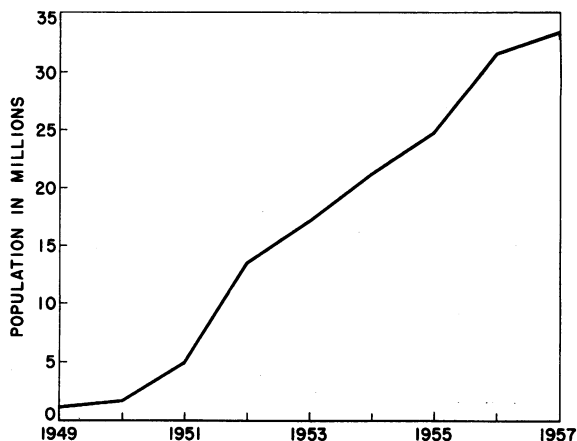
stituted fluoridation. Of these 13 cities, only one, Houston, Tex., provides water which naturally contains fluoride at a level of 0.7 ppm.

Of places with less than a half million population, 32 percent of those with a population between 10,000 and 500,000, 17 percent between 2,500 and 10,000, and 5 percent under 2,500 have fluoridation programs (fig. 2).

The authority by which fluoridation is instituted is of interest. In 82 percent of the cities fluoridating, the governing body of the community authorized adoption of the measure. In 5 percent authority to fluoridate was obtained by referendums, and in 4 percent the utilities commission authorized the measure. Nine percent of the communities did not specify authority or used other procedures in adopting fluoridation.

Fluoridation was discontinued in 13 communities providing water to 192,000 people

**Figure 1. Population served with water to which fluoride has been added, 1949-57.**



*Prepared by the Division of Dental Public Health,  
Bureau of State Services, Public Health Service.*

**Table 1. Cumulative changes in status of fluoridation, by year, 1945-57**

Year	Fluoridation status at end of each year			Fluoridation discontinued <sup>1</sup>			Fluoridation reinstated after discontinuance		
	Number communities	Number water supply systems	Population <sup>2</sup>	Number communities	Number water supply systems	Population <sup>2</sup>	Number communities	Number water supply systems	Population <sup>2</sup>
1945.....	6	3	231, 920						
1946.....	12	8	332, 467						
1947.....	16	11	458, 748						
1948.....	24	13	581, 683						
1949.....	46	29	1, 062, 779						
1950.....	96	62	1, 578, 578	1	1	16, 550			
1951.....	339	171	4, 948, 259	2	2	29, 450			
1952.....	717	353	13, 552, 501	7	7	202, 122			
1953.....	965	482	17, 080, 930	14	14	253, 738	2	2	166, 466
1954.....	1, 147	571	21, 208, 304	36	34	1, 323, 613	4	4	170, 400
1955.....	1, 300	668	24, 796, 043	64	52	1, 717, 653	6	6	184, 372
1956.....	1, 521	765	31, 584, 408	81	65	1, 905, 735	10	10	222, 741
1957.....	1, 631	870	33, 294, 899	94	69	2, 097, 955	13	13	289, 081

<sup>1</sup> Total whether or not reinstated.

<sup>2</sup> Most recently available population figures were used regardless of the year that fluoridation was instituted.

during 1957. During the same year, 3 communities, providing water to 66,000 people, reinstated the measure after having previously discontinued it. During the years 1945 to 1957, a total of 94 communities discontinued fluoridation; of these, 13 reinstated the measure (table 3).

Water supply systems are publicly owned in 84 percent of the communities in which the fluoride content is controlled. In cities with more than 500,000 people, 100 percent of the water systems are under public ownership. Eighty-eight percent of the systems are publicly owned in cities of from 25,000 to 500,000 population, 90 percent in places from 10,000 to 25,000, and 82 percent in places under 10,000.

**Future Growth**

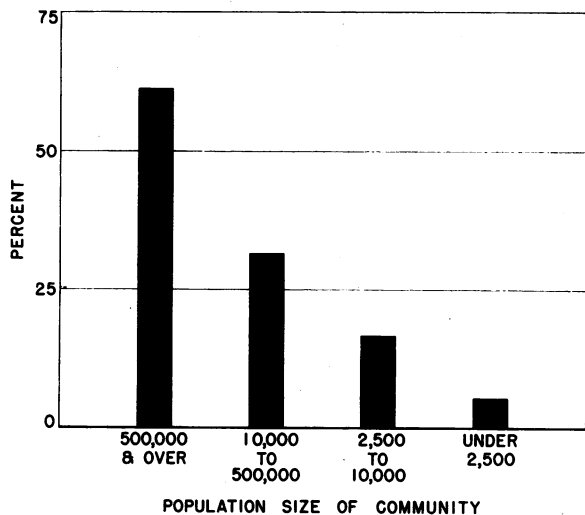
The major increases in the population provided with fluoridated water during the next few years is likely to be in the larger cities. However, in the more distant future the greatest increase will probably be in the smaller places where today only 5 percent have fluoridation programs. It is in towns of 2,500 or less that fluoridation will need to make its greatest advances.

Although fluoridation continues to be a mat-

ter of public discussion in certain parts of the country, there has been a decline in the number of communities discontinuing fluoridation over the past several years. The number of water supply systems discontinuing fluoridation in 1954 to 1956, for example, was 3 to 5 times greater than in 1957.

Interest in fluoridation programs in other countries is mirrored in the endorsements of re-

**Figure 2. Percentage of communities fluoridating their water supplies, by size, December 31, 1957.**



sponsible health officials the world over. Controlled fluoridation programs are in operation in one or more communities in the following countries: Australia, Brazil, Canada, Chile,

Colombia, Costa Rica, Egypt, England, Germany, Guatemala, Japan, the Netherlands, New Zealand, Panama, Panama Canal Zone, Peru, Philippines, Scotland, and Sweden.

**Table 2. Communities using controlled fluoridation, ownership, and authorization, by size of place, December 31, 1957**

Population size of community	Number of communities in urban and rural areas <sup>1</sup>	Communities using controlled fluoridation		Ownership			Authorization			
		Number	Percent of all communities of same size	Public	Private	Other and not specified	Governing body alone	Referendum	Utilities commission	Other and not specified
Total.....	18, 548	1, 631	8. 8	1, 373	196	62	1, 344	86	58	143
1,000,000 and over.....	5	2	40. 0	2			2			
500,000-999,999.....	13	9	69. 2	9				1		
250,000-499,999.....	23	7	30. 4	6	1		7			
100,000-249,999.....	65	21	32. 3	18	2	1	18			3
50,000-99,999.....	126	47	37. 3	40	6	1	41	3		3
25,000-49,999.....	252	82	32. 5	74	7	1	73	2	2	5
10,000-24,999.....	778	224	28. 8	202	15	7	187	19	5	13
5,000-9,999.....	1, 176	230	19. 6	194	31	5	192	13	4	21
2,500-4,999.....	1, 846	270	14. 6	226	28	16	220	11	5	34
1,000-2,499.....	4, 437	315	7. 1	262	35	18	259	10	10	36
Under 1,000.....	9, 827	<sup>2</sup> 424	<sup>2</sup> 4. 3	157	46	1	181	9	4	10
Not specified.....				183	25	12	156	18	28	18

<sup>1</sup> From U. S. Bureau of the Census: United States Census of Population: 1950, vol. I.

<sup>2</sup> Includes "Not specified."

**Table 3. Changes in status of fluoridation, by year, 1945-57**

Year	Net increase in fluoridation			Fluoridation discontinued <sup>1</sup>			Fluoridation reinstated after discontinuance		
	Number communities	Number water supply systems	Population <sup>2</sup>	Number communities	Number water supply systems	Population <sup>2</sup>	Number communities	Number water supply systems	Population <sup>2</sup>
Total.....	1, 631	870	33, 294, 899	94	69	2, 097, 955	13	13	289, 081
1945.....	6	3	231, 920						
1946.....	6	5	100, 547						
1947.....	4	3	126, 281						
1948.....	8	2	122, 935						
1949.....	22	16	481, 096						
1950.....	50	33	515, 799	1	1	16, 550			
1951.....	243	109	3, 369, 681	1	1	12, 900			
1952.....	378	182	8, 604, 242	5	5	172, 672			
1953.....	248	129	3, 528, 429	7	7	51, 616	2	2	166, 466
1954.....	182	89	4, 127, 374	22	20	1, 069, 875	2	2	3, 934
1955.....	153	97	3, 587, 739	28	18	394, 040	2	2	13, 972
1956.....	221	97	6, 788, 365	17	13	188, 082	4	4	38, 369
1957.....	110	105	1, 710, 491	13	4	192, 220	3	3	66, 340

<sup>1</sup> Total whether or not reinstated.

<sup>2</sup> Most recently available population figures were

used regardless of the year that fluoridation was instituted.