

# A Century of Service

## Optimal Oral Health for Canadians

(Part Seven of a Series)

The very first item of business at the founding meeting of the Canadian Dental Association in Montreal in September 1902 was consideration of a Code of Ethics. **Dr. Stanley McInnis** (right) of Manitoba made the motion to approve the code, and seconded by Dr. Albert Webster of Ontario, the motion carried unanimously. The Code set the stage for what has been fundamental to the Canadian Dental Association for 100 years. Article I, Section 2, of the Code placed preventive dentistry at the forefront:



*The dentist, without being obtrusive or pedantic, should impart such information to his patrons as his opportunities afford him, in regard to the causes and nature of the disease in the teeth or adjacent parts, which he may be called upon to treat, and should explain to them the importance of availing themselves of such timely preventatives or remedies as he may deem necessary to their welfare.*

Although toothpicks were known in ancient times and the toothbrush and various concoctions of tooth powders and pastes — with extravagant claims of effectiveness — have been around since the Middle Ages, very little if any science was ever associated with their use.

### Dr. Willoughby D. Miller

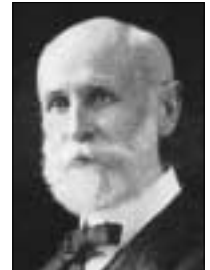
It was not until the publication in 1890 of the monumental work, *Microorganisms of the Human Mouth*, by **Dr. W.D. Miller** (right), that the basic knowledge of the nature of decay was fully understood. Dr. Miller showed that certain organisms pro-



duced lactic acid from fermenting food particles around the teeth and that this acid dissolves the enamel and starts tooth decay.

Miller's research lent a whole new meaning to prevention. By the time of the second meeting of the Canadian Dental Association in Toronto in 1904, the Association's second president, Dr. J.B. Willmott, was to say: *"The great and almost untouched field still before the intelligent and progressive dentist is prophylaxis."*

The Father of Scientific Dentistry, the great **Dr. G.V. Black** (right), picked up on Miller's thesis and promulgated his principle of "extension for prevention" where the margins of the filling could be reached by the toothbrush.



### Dental Public Health

The Canadian Dental Association's concern with dental public health has been a priority throughout its history. At its third meeting in Montreal in 1906, the Association listed its public health objectives — all with a familiar ring 100 years later:

1. An Act requiring the periodical examination of the teeth of school children and providing for the appointment of dentists for that purpose.
2. Revision of school books with regard to hygiene of the mouth and the teeth.
3. Distribution of suitable booklets in the public and private schools and large military camps.
4. Special papers on subject of dental hygiene in examination for teacher's licences.
5. Special instructions in this subject in normal schools.



Procter & Gamble, Maker of Crest Products

A Premier Partner

6. Lectures before teachers' associations and school children in public and private schools

### Canadian Oral Prophylaxis Association

With Willoughby Miller's entirely new concept of the causes and ravages of dental decay and the CDA's 1906 public health objectives, it appears that Dr. Willmott's 1904



call for action on dental "prophylaxis" was indeed heard by "intelligent and progressive dentists." One particular individual was Toronto dentist **Dr. Andrew McDonagh** (left), an 1887 graduate of the Royal College of Dental Surgeons. He was the first dentist in Canada to limit his dental practice to treatment of the tissues surrounding the teeth and he was also responsible for establishing a chair in periodontology at the University of Toronto in 1915.

In 1906 McDonagh, with the help of some of the leading Canadian dentists of the day — Drs. A.E. Webster, George Grieve, Frank Adams, Frank Price and W. Cecil Trottier — founded the Canadian Oral Prophylaxis Association, the prime purpose of which was to sell to the public safe, efficient tooth-cleansing preparations and toothbrushes. All royalties were to be devoted to work in oral health education. Over the next 30 years the Canadian Oral Prophylaxis Association, through its Hutax products (from the Greek: for mouth and health), raised over \$70,000, a very large sum in those days, to finance public education and dental research. Eventually the Association ran into some disfavour because it was engaged in both commercial activities and professional pursuits. But it left a legacy as the first dental organization in Canada to embrace dental public health as its mandate.

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### Canadian Dental Hygiene Council

In the mid-1920s a new lay organization took form, the Canadian Dental Hygiene Council. Under the leadership of Dr. Harry S. Thomson of New Brunswick, a former director of the Canadian Oral Prophylaxis Association, the Dental Hygiene Council pioneered dental public health across the nation. With a 1924 charter and financial assistance from the Dominion government, the Canadian Red Cross and the Canadian Life Insurance Medical Officers Association and endorsement from dental societies in every province as well as the Canadian Dental Association, the Canadian Dental Hygiene Council had, by 1948, achieved its prime objective — the establishment of a division of

dental health in each government health department with a properly qualified director in charge.

In 1924 Ontario was the first province in Canada to appoint a director of dental service within its Department of Health. The honour went to Dr. Frederick J. Conboy who had a distinguished career as president of both the Ontario and Canadian Dental Associations, as lecturer at the University of Toronto and as mayor of Toronto.

It was not until 1945 that the federal government of Canada — after repeated requests from the national and provincial dental associations — finally established a dental health division within the Department of National Health and Welfare. Dr. L.V. Janes, OBE, was appointed head of the division. Dr. Janes, as a lieutenant colonel, had commanded No. 3 Dental Company overseas during World War II.

### Dr. Joseph Nolin: Quebec Commission on Hygiene

The mid-1920s was an active time for the promotion of dental public health. Much of the credit for this belongs to a dental hygiene commission supported by the Quebec government. **Dr. Joseph Nolin** (right), vice-dean of dentistry at the Université de Montréal and past president of the Canadian Dental Association, led the investigations.



Following a thorough study in Canada and the United States of public education by the dental profession, Dr. Nolin presented an informed and frank report. It emphasized that the average dentist took little personal interest in public education and was willing to relegate the responsibility to a few individuals while remaining in the background as a critical spectator. Dr. Nolin's report and similar assessments by Harry S. Thomson had much to do with the success of the Canadian Dental Hygiene Council and the future of dental public health throughout Canada.

### Dr. John Adams: Father of Dental Public Health



Long before the creation of the Canadian Oral Prophylaxis Association, the Canadian Dental Hygiene Council or the Quebec commission, a solitary dedicated individual rightfully earned the title Father of Dental Public Health in Canada.

**Dr. John Adams** (left) obtained his training through indentureship with

his brother in 1874 in Toronto. He dedicated the rest of his professional career to the prevention of dental disease. A man ahead of his time, with little support from the profession or governments, he opened a free dental clinic in downtown Toronto. Over a period of 25 years it was said that there wasn't a poor child in Toronto who went without dental care.

Dr. Adams was the first to publish and distribute pamphlets on the care of children's teeth and the effect of diseased teeth on the health of adults. His 152-page book, *School Children's Teeth: Their Universally Unhealthy and Neglected Condition*, was the first publication of its kind in Canada.

### The Six-Month Check-Up

In the 1920s, at a time when dental public health was finding new favour in Canada and the United States — and incidentally, when the new public medium of radio was rapidly gaining popularity — an event took place in Chicago that was to markedly influence dentistry to this very day.

On August 19, 1929, at 11:00 pm EST the "Amos 'n' Andy" radio program, sponsored by Pepsodent, aired for the first time. The creation of two Chicago entertainers, Freeman Gosden and Charles Correll, mimicking so-called Negro dialect, the half-hour radio performance featured two hapless characters from Atlanta who have come to Chicago to find their fortunes. It was an instant hit. It was the first program to be nationally broadcast and the first to be rebroadcast for the convenience of west-coast listeners, and it went on to become the longest running radio show in history.

A 1930 full-page advertisement in the *Dominion Dental Journal*, featuring Gosden and Correll in theatrical black-face, states boldly that "*six nights a week twenty million people are listening to the famous radio pair — Amos 'n' Andy*" and a boxed portion of the advertisement states the Pepsodent case for dental health.

#### PEPSODENT

A decaying tooth is not always painful. Usually the decayed part is sensitive to heat and cold, to sweet or sour and salty things. Often there is no sensation at all. Some of the most serious bodily ills in later life result when tooth decay is not detected. That is why we say,

*"Use Pepsodent tooth paste twice a day;  
see your dentist at least twice a year."*

### Fluoride

The recognition that fluorine has a preventive effect on the development of dental caries was known as early as 1874, but it was the observations of Dr. Fredrick McKay of Colorado Springs, Colorado, between 1908 and 1925 that "caries [were] inhibited by the same water which produced mottled enamel" that influenced further investigations.

In 1942 a US public health team headed by Dr. H. Tredley Dean demonstrated that one part per million (1 ppm) of fluoride in drinking water reduced caries without mottling. Incidentally, it was Dr. Dean who developed the DMF index to carry out his fluoride experiments. Dean's work led to the large-scale communal water experiments in Grand Rapids, Michigan, in 1945.

Also in 1945, due in great part to the foresight and determination of Dr. William L. Hutton, the local medical officer of health for Brant County, Ontario, a fluoride investigation was started by the Canadian Department of National Health in cooperation with the Ontario government. The study began with the addition of 1 ppm sodium fluoride to the Brantford water supply. It was later extended to Stratford, which already had some fluoride in its water supply, and to Sarnia, which had none. By 1953 repeated studies had firmly established that the addition of fluoride to the water supply in Brantford had reduced the occurrence of dental decay among children by over 60%. A new era in combatting dental decay was ushered in.

### "C.D.A. Endorses Fluoridation"

Such was the *Journal of the Canadian Dental Association* headline in a December 1953 report on the proceedings of the CDA meeting held in Montreal in October 1953. With the Brantford fluoride studies in hand, it did not take the Association long to resolve:

*THAT the Canadian Dental Association recommends to the people of Canada that communities having a public water supply adopt a procedure for water fluoridation best suited to their local needs and for the purpose seek competent dental, medical and engineering advice.*

The decision by plebiscite to introduce fluoride into communal water was not without controversy. Of 37 plebiscites held in 1961 only 15 were successful. No controversy drew more attention than Toronto's. Although the Toronto Metro Council passed a fluoride bylaw in 1955, it took numerous legal battles and a Supreme Court ruling before a December 1962 referendum carried the day with a narrow 51.7% margin of the votes cast.



The success in Toronto was a personal victory for **Lloyd Bowen** 1904–1991 (left), the “Father of Fluoridation” in Canada. Starting in 1959, Mr. Bowen spent seven years on the Health League of Canada’s fluoridation committee and 17 years as the Canadian Dental Association’s fluoridation officer. Throughout those years

he conducted eight national surveys on the status of fluoridation.

### Accepted, Recognized and Acclaimed

Proven effective in reducing dental decay, fluoride was soon recognized by public health agencies and acclaimed by commercial enterprise.

In 1960 the American Dental Association authorized Procter & Gamble to use the following statement in advertising: “Crest has been shown to be an effective anti-caries dentifrice that can be of a significant value when used in a conscientiously applied program of oral hygiene and regular professional care.” In 1971, when the Canadian Dental Association began its Seal of Recognition program, the first two dentifrices recognized were Crest and Colgate with MFP.

Fluoride has from the outset been a controversial topic and is under constant review. In 1992 a Canadian fluoride conference resulted in the Canadian Dental Association recommending a more conservative fluoride supplement schedule. A follow-up conference in 1997 further modified the 1992 schedule that was subsequently approved by the CDA Board of Governors in 1998.

### The Dental Awareness Program



Mindful of its mandate of optimal oral health for all Canadians, the CDA in 1985 launched the National Dental Awareness Program (DAP) with the slogan “Dental Health, Good for Life.” With cooperation from its provincial corporate members and support from industry and government agencies, the DAP in one year raised a million dollars in media and publicity sponsorship. “Bob” the Keep Smiling DAP mascot was introduced during Dental Health Month in 1988 and carried his five-point prevention program across Canada until 1992.

***The Canadian Dental Association: 1902-2002 — A Century of Service*** is a Centenary project of the Canadian Dental Association in collaboration with the Dentistry Canada Fund, the charitable foundation for the dental profession in Canada. The 11-part series is written by Dr. Ralph Crawford, Historian and Past President of CDA, with sincere thanks and appreciation to all who have so richly preserved our dental heritage.



*(All statements of opinion or supposed fact are published on the authority of the author and do not necessarily express the views of the CDA or the DCF.)*



Little did newly arrived emigrants William Procter and James Gamble, married to sisters, ever dream that the soap- and candle-making company they began in Cincinnati in 1839 would develop into a business that today markets 250 brands to five billion consumers in 130 countries. Always the innovators, they pioneered one of the world’s first profit-sharing programs for factory employees and were among the first American industries to invest in a research laboratory. The innovation and research came to the forefront in 1955 with the introduction of **Crest**, the first toothpaste to be clinically proven to fight cavities. **Crest** is recognized by both the American and Canadian Dental Associations.

**Grateful thanks to ALL sponsors of the series,  
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