

Dental Advances

Though the dental profession has changed a great deal since then, it has changed even more through the ages. Here is a look at the history of dentistry's most common tools, and how they came to be vital components of our oral health care needs.

Where did toothbrushes and toothpaste come from? The first toothbrushes were small sticks or twigs mashed at one end to create a broader cleaning surface. The Chinese lay claim to the first bristle toothbrush. The first electric tooth- brush was marketed in 1880, though the Swiss developed the first effective electric tooth- brush just after World War II. It was introduced in the United States around 1960. Toothpaste also saw its earliest form in ancient civilizations. Early toothpaste ingredients included powdered fruit, burnt or ground shells, talc, honey and dried flowers. Toothpaste as we know it emerged in the 1800s, with ingredients that included soap and chalk. In 1892, the first collapsible tube was marketed and reigned supreme until 1984 when the pump-dispenser was introduced. In 1956, Procter & Gamble introduced Crest brand tooth- paste with fluoride.

When was drinking water- fluoridated? In 1945, two cities- Newburgh, N.Y., and Grand Rapids, Mich.-introduced sodium fluoride into their public water systems to help fight tooth decay. At the same time, a group of Wisconsin- based dentists succeeded in getting the state's water system fluoridated. After substantial testing showed that fluoride reduced incidents of cavities by as much as two-thirds, the u.s. Public Health Service in 1951 urged the entire country to fluoridate public drinking water. The idea for water fluoridation resulted from an observation made by a Colorado Springs dentist in the early 1900s. He reported that the locals had a reduced incident of tooth decay. In 1940, another dentist revealed that one part fluoride per one million parts water was the ideal ratio for reducing decay. Today more than 60 percent of Americans have fluoridated water.

What's the history behind false teeth? Thanks to modern technology, today's false teeth are largely indistinguishable from real teeth. This wasn't always the case. Perhaps the most famous false-toothed American was the first president, George Washington. Popular history gave Mr. Washington wooden teeth, though this was not the case. The first president's false teeth came from a variety of sources, including teeth extracted from human and animal corpses. Despite this seemingly gruesome practice, dental practitioners preceding President Washington's time attempted aesthetic restorations. Ancient civilizations used ivory and bone to create new teeth. Unfortunately, this craft was lost until the mid-1800s. Rotten or damaged dentin was simply extracted, and gaps became a way of life. It wasn't until 1774 that two Frenchmen, a pharmacist and a dentist, designed a set of porcelain teeth. These teeth came to America in 1822, and for the rest of the century dentists and technicians tinkered with the design, fit and feel of the teeth. A break through occurred in 1839 with the discovery of vulcanized rubber, which was used to hold false teeth. Today's dentures are made of either plastic or ceramic.

How long have we had anesthesia? Though dentistry has been around in one form or another since the days of primitive man, painless extraction wasn't available until the 1830s. In the beginning, teeth were removed with a well placed chisel and a hard swing of a mallet. Thousands of years later, during peaks of the great Greek and Roman civilizations, the chisel and mallet method was abandoned in favor of forceps. In the 1790s, a British chemist began to experiment with the use of nitrous oxide as a pain-inhibitor and noted that its most famous side effect, laughing. *He* coined the anesthetic's popular nickname, laughing gas. During the next 50 years, the gas became very popular. In 1863 the gas was combined with oxygen, becoming a staple of surgical procedures. Soon after the adoption of nitrous oxide, local anesthetics were developed. Just prior to the 1900s, cocaine was used, but once its addictive qualities were identified, the search began for a suitable alternative. Many of the alternatives were forms of synthetic cocaine, but none were successful until 1905 when a German chemist discovered procaine, which he named Novocain. The anesthetic proved extremely popular with dental professionals, as well as a public relived at the sound of "pain- less dentistry."
