

## WINTER 2000 EDITION – DR. DOI'S TALKING STORY

*As I think of the new millennium and all that has happened in the past 1,000 years, I realize that in the framework of structural changes of the human body, the passing of a thousand years is but an instant in time. One such example is the phenomenon of shrinking teeth.*

### THE INCREDIBLE SHRINKING TEETH

Today, teeth are approximately half the size of Neanderthal teeth, which once were used to grip and tear raw animal flesh, the main staple of the Neanderthal's diet.

In the last 100,000 years, decreases in the size of teeth may be a result of changes in diet and food preparation.

During the Ice Age, before the invention of tools, teeth were crucial to survival – used to tear, mill and grind. The increased use of tools rather than teeth contributed to the evolution of smaller teeth.

After the Ice Age ended 10,000 years ago, cooking and pottery were introduced, making large teeth even less essential to survival. Man started using earth ovens to thaw and cook food, and pottery to stew foods to a liquid consistency.

In the last 1,000 years, agricultural developments significantly changed food preparation and diet, resulting in a decrease in meat consumption and an increase in carbohydrate consumption.

American Indians dined on grass seeds, raw corn and acorns. These foods are high in carbohydrates and can wear down the teeth due to their abrasive texture.

Local recipes also contributed to the downsizing of teeth. In India, stones were used to grind grain, which added abrasive particles to the already coarse grain.

Australian aborigines pounded the bodies of small animals and ate the meat, which included bone particles that wore down teeth. American Indians prepared food in hot sands and ashes, which added to the abrasiveness of the food.

Today, food is more refined, but eating hard fruits and vegetables, apples, carrots and celery is necessary and beneficial to the teeth. Chewing on these foods exercises strengthens ligaments that hold teeth in the bone, causing an increase in blood supply to the ligaments. Here is just one more reason to eat a high-fiber diet.

### CONTINUING EDUCATION

On a recent Friday afternoon, my staff and I went to Queen's Medical Center to see what the latest recommendations are in the event we are exposed to possibly contaminated body fluids from our patients. We became the first office on the Big Island to contract Queen's Medical Center to provide emergency medical advice 24 hours a day. We feel fortunate their service is available to us at the touch of some buttons.

The whole office attended the 140th ADA annual session that was held in Honolulu from October 9 through October 12, 1999. We were part of the mass to put the new convention center to its first test.

On Saturday, I attended a one-and-a-half day course by Clifford Ruddle, one of the foremost authorities on root canals. Endodontic concepts, technology and treatment techniques have dramatically advanced in recent years, leaving clinicians in the gap between where they are and what is possible. Especially interesting to me was reviewing the root canal system and hearing new ideas on diagnosing teeth that are infected.

On Sunday afternoon, I took a course on dental devices for snoring and sleep apnea. This presentation covered how snoring occurs and why a medical diagnosis is important. Dental devices were reviewed and the presenter's personal experience using these devices was especially valuable. Other methods used to treat snoring and obstructive sleep apnea were also shared.

On Monday, I helped the ADA host five experts on risk management, the title of their presentation being "From the Age of Amalgam to the Age of Technology." This program helped me to assess my practice, my patients, and the changes in dentistry in making prudent choices to enhance patient care and satisfaction with our service.

The afternoon was spent listening to orthodontist, Vincent Kokich, and prosthodontist (reconstruction specialist), Frank Spear, who are famous in their respective fields. As a team, they presented how aesthetic challenges could be overcome by using a combination of treatments. I was impressed with their beautiful results.

On Tuesday, the last day of lectures, I attended a session by Terry Tanaka, a clinical professor in the Department of Graduate Prosthodontics at USC. With the onset of new dental materials, especially the non-metallics, Dr. Tanaka evaluated how they perform and whether they would hold up in the posterior teeth.

The staff attended many other lectures. We learned a lot and had fun. There were almost 2,000 vendors at the convention. Many innovations were demonstrated. Some of the new products that we acquired are a digital x-ray system, handpieces, impression materials, and anesthetics. We also picked up literature on other products we are considering using. On your next visit, you may see evidence of the profitable learning experience the ADA convention provided us.

#### **FDA WEIGHS IN ON MERCURY**

The United States Food and Drug Administration (FDA) has ruled that mercury and its compounds are NOT "Generally Recognized As Safe" (GRAS), and are to be eliminated from products sold "Over The Counter" (OTC). [FR 63(77):19799-19802, 22 April 1998] These products are: 1) First aid antiseptic drug products; 2) Vaginal contraceptive drug products; and 3) Antimicrobial diaper rash drug products. I applaud the FDA for this position.

I find it interesting that the above products contain a small percentage of mercury and are usually used for a short period of time. Dental amalgam, which contains about 50% mercury, and is permanently implanted in the teeth, is considered safe.