The Future

Tooth alignment significant for athletes

Some athletes wear mouth guards to protect their teeth because they often bite down hard in an effort to maximize their strength. Without one, it is not uncommon for athletes to damage their teeth.

However, not every athlete maximizes their power by biting down hard. Some open their mouths wide and yell with effort.

Shin Kobe Dental Office chief dentist Yoshiro Fujii, an occlusion expert, has been studying athletes' performance and occlusion, or the appropriate fit of the upper and lower teeth when the jaws are closed.

Good occlusion enhances balance, and therefore improves performance in all kinds of sports.

He watched a video of powerlifters and the ratio of lifters with their mouths open or closed when lifting was 50:50.

"For some people, biting down can provide power. For others, opening their mouths widely can. However, the important thing is to find and fix poor occlusion, which dramatically harms athletic performance," he said.

Those who cannot reach the full capacity of their strength when biting down probably have bad occlusion, he said. Those who can reach maximum power by biting down despite poor occlusion could have better balance if their occlusion were fixed.

Poor occlusion, caused by irregular concavity and convexity of teeth and other such conditions, is considered one of the causes of bad posture and balance as well as stiffness in the shoulders and other muscles. Poor occlusion can even sometimes cause headaches and dizziness.

Shin Kobe Dental Office patients are mainly elderly people suffering such symptoms. These patients first go to chiropractors or other doctors because it is difficult to make the connection between poor occlusion and their symptoms.

Like many other dentists, Fujii graduated from a dental university and worked for various dental clinics. He opened the Shin Kobe Dental Office in Kobe in October 2000.

As with most dental clinics, his office treats cavities and other typical conditions, but he has focused mostly on occlusion. He has traveled across Japan and been overseas to give speeches on occlusion to young dentists and people in related fields.

He has given speeches at Columbia University in New York and other places across America and Asia.

Shin Kobe Dental Office chief dentist Yoshiro Fujii speaks during an interview with The Japan Times at the Enjin offices in Higashi-Ginza, Chuo Ward, Tokyo, in February. YOSHIAKI MIURA

During his talks, he provided demonstrations showing how fixing occlusion can enhance balance. He can tell by just looking at them which side – right, left, front or back – people will be weaker on when being pushed.

He then looks inside their months and has them bite a thin sheet of paper with their teeth for a short-term occlusion fix. This improves their balance, he said.

For a long term occlusion fix, he files teeth for "a few seconds" to improve occlusion. Fixing sumo wrestlers' occlusion, for example, may improve their performance dramatically.

"They stare at each other before they fight. They know which side they are weak on and they also know their opponents' weaknesses, so when they stare, they are thinking of how to beat their opponents. Yokozuna grand champions may be strong on both sides," he said.

Fujii urges athletes to have their occlusion checked to better enhance their performance.

"When they injure their necks or shoulders, they go to orthopedists and chiropractors. But they should also fix the possible root of the problems – poor occlusion," he said.

Fujii also writes books on occlusion, among other subjects, in an effort to raise public awareness of it.

Especially, orthopedists and chiropractors should know about occlusion, Fujii said, because patients with symptoms stemming from bad occlusion tend to go to those practitioners first.

Fujii also studies connections between cavity fillings, such as amalgam, and balance.

He has encountered occasional cases in which fixing poor occlusion did not completely cure patients of dizziness and shoulder stiffness.

He identified the cause as electromagnetic waves, realizing that some fillings in teeth function as antennae that receive the waves. People's exposure to electromagnetic waves has increased dramatically in recent years, especially as the use of mobile phones has spread rapidly.

Excessive and prolonged exposure to electromagnetic waves has been known to cause damage to the nervous system, causing various symptoms including poor balance and dizziness.

The negative health effects of electromagnetic waves from mobile phones have been noted by a number of health authorities worldwide. The World Health Organization says on its website that the electromagnetic fields generated by mobile phones are classified by the International Agency for Research on Cancer as possibly carcinogenic to humans.

But limiting the use of mobile phones is difficult because the devices play an important part in contemporary life as vital communication tools.

An example of one of the worst materials used in fillings is amalgam, a substance formed by the mixture of mercury with other metals. Amalgam is sensitive to electromagnetic waves and is classified as toxic but still used for fillings because it is easy to use and hardens quickly, making it easy to process.

For videos of Fujii's demonstrations, see http://www.holistic-dentistry.net.

This series has been prepared in collaboration with Enjin Co., which produces and operates a video website, http://www.kenja.tv, specializing in profiles of up-and-coming entrepreneurs in Asia.