

INNOVATION |



BITE TO IT

The Singapore firm's method involves installing a permanent clip on the brackets (enlarged model on the right) that can be opened and closed as needed when the wire is affixed.

Cut treatment time, dentist visits with these braces

Innobrace Orthodontics' non-ligating bracket system is first of its kind in the world

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ANYONE who has ever had orthodontic work done will be familiar with monthly visits to the orthodontist and spending up to two years with braces in the mouth.

These trade-offs for straight teeth will now be reduced with the introduction of a new kind of orthodontic appliance by local firm Innobrace Orthodontics known as a non-ligating bracket system, the first of its kind in the world.

The new type of braces shorten total treatment time by at least 10-20 per cent with patients only needing to make visits to the dentist every three to four months, said its creator and Innobrace founder Dr Tan Kok Liang.

In orthodontic treatment, individual brackets are glued to a patient's teeth, to which a wire that runs across the teeth is then threaded through.

Where Dr Tan's new system is different is in how the wire is affixed to the teeth.

Traditionally, the wire is tied to the brackets with elastic or metal bands known as ligatures.

A newer method known as self-ligation involves installing a permanent clip on the brackets that can be opened and

closed as needed when the wire is affixed.

Dr Tan's non-ligating system, as its name suggests, requires no additional measures to secure the wire.

All the dentist has to do is to slot the wire between the walls of brackets which is enough to hold the wire in place by virtue of it being made of a strong, yet flexible, titanium alloy.

"The interval between visits to the doctor is lengthened because the forces stored in the bracket walls dissipate across a longer period of time and still move the teeth well," said Dr Tan.

The bracket system's ease of use also reduces the time patients spend in the den-

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Dr Tan Kok Liang

tist's chair considerably – by about 50 per cent.

But the idea would have never gotten off the ground without some much needed expertise from the Singapore Institute of Manufacturing Technology (SIMTech), which is part of Singapore's Agency for Science, Technology and Research (A*Star).

"Conceptually I started working on this more than 10 years ago, because I wanted something that could reduce chair time for doctors," said Dr Tan, who is also a practising orthodontist.

"I tried a few other materials, such as stainless steel and nickel-titanium, but they were not flexible enough."

Finally, in 2006, he came to know about a new titanium alloy that had been developed by Danno Atsushi and his team at SIMTech.

A formal collaboration was set up about five years ago through A*Star's Growing Enterprises through Technology Upgrade scheme, with SIMTech research engineer Yap Wai Teng subsequently seconded to Innobrace.

The firm is looking to launch its new product early next year.

Taking Heart

S\$50,000 worth of groceries donated to needy families

NEEDY families under the Care Community Service Society in the North East District received S\$50,000 worth of basic essentials and healthier-choice groceries from Dairy Farm Singapore at its "Partners in Community" green event earlier this month. A new Singapore record was established at the same event for the largest Singapore map, assembled with 6,000 flowers made from defective plastic bags. The bags were provided by Cold Storage, Market Place, Giant and Guardian. The flowers will be donated to the People's Association towards their "We Love SG" flower programme for next year's Chingay event as part of SG 50 celebrations.

SIA charity run on Nov 2 for Community Chest

SINGAPORE Airlines (SIA) is organising a charity run on Nov 2 to raise funds for Community Chest. Various categories will be incorporated into the run, including a 10km competitive run, 5km fun run, 300m kids dash and a corporate challenge for teams of five runners who will be expected to complete 10km each. Registrants also have the option of making additional donations to Community Chest on the registration website.

Royal Plaza on Scotts GM raises S\$15,627 for fight against cancer

ROYAL Plaza on Scotts general manager Patrick Fiat has raised S\$15,627 for the fight against cancer. The 62-year-old hotelier will be taking part in a charity run on Aug 3 organised by the Singapore Cancer Society. Mr Fiat joined the race for his best friends – fellow hotelier Noel Hawkes and wife Nancy Hawkes, who are cancer survivors. They were diagnosed with cancer in 2012.

Retailers body to make donation for GSS Daily Rewards entries

AS part of the Great Singapore Sale 2014 (GSS 2014), the Singapore Retailers Association will donate S\$1 to Community Chest (up to a maximum of S\$10,000) for every eligible entry received for its GSS 2014 Daily Rewards. The contest is open to consumers who make a qualifying transaction of at least S\$20 in a single receipt and submit their entry to the GSS 2014 Daily Rewards.

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☞ Taking Heart is a regular BT column highlighting charitable causes