he new face of braces

Highlands Today correspondent

Silver "railroad tracks" across the front of the teeth. A moratorium on crunchy foods like nuts and apples. Painful tightenings during trips to the orthodontist. These are common memories for adults who had braces in the 80s and early 90s.

But with new advances, the science of teeth straightening has changed in many ways for many people, although the modern techniques are not for everyone.

Invisalign, the brand name of a revolutionary new system of orthodontics, is paving the road of change. Instead of wired bands or brackets placed on teeth, Invisalign involves clear, flexible trays called aligners that are worn over the teeth. The aligners, customized to each patient's mouth, are switched out every two weeks and gradually shift the teeth over time.

The aligners are thin and don't generally affect speech once the patient gets used to them. Patients like Invisalign because the clear trays are invisible and more comfortable than braces. The company, founded in a garage in California by orthodontic patient Zia Chishti and his colleague Kelsey Wirth, recently improved the plastic used in the aligners, making them firm, but flexible and even more comfortable.

Sebring orthodontist Dr. Steven Guelff has been certified in Invisalign technology since 2000 and has been offering it to his patients within the last year.

"I'm really, really pleased with what I see now," Guelff said, who has incorporated the iTero 3-D imaging scanner to replace the goopy, gag-inducing molds that must be made of teeth in order to create the aligners. The scanner provides more accurate impressions of the patient's teeth and a quicker turnaround for manufacturing the trays. Specialized software also allows Guelff to map out the path to straight teeth, tooth by tooth. When patients switch out their trays every two weeks, the teeth are gently guided into their correct position.

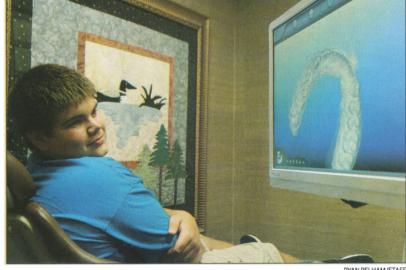
"I've had great success with very little pain," Guelff said. Because they can be taken out for brushing and flossing, they also promote better hygiene, Guelff said, and Invisalign may be an option for people with underlying medical issues like diabetes, who wouldn't be candidates for braces.

As with braces, the length of time necessary for Invisalign varies; Guelff said his patients typically need the trays from between nine months to correct minor issues to 30 months for more severe cases.

But the clear tray option is not a panacea for orthodontic issues. In fact, Guelff doesn't recommend them for children or young teenagers, people with significant issues with bite (underbite or overbite), tipped teeth or severe overcrowding.

"I save the Invisalign for mild to moderate cases non-extraction cases," Guelff said. Another deal-breaker is patients who can't commit to keeping the aligners in their mouth 22 hours a day. Invisalign success relies on compliance.

Avon Park dentist Dr. William Chen has been certified in Invisalign for the past year and a half. His associate, Dr. Jere Seralde, has been certified for five years.



Louie Canevari looks at a 3-D model of his teeth on the iTero machine after being scanned for his Invisalign braces at Dr. Steven Guelff's Sebring office in August. The machine creates a simulation of what the patient's teeth will look like after braces.

"I think the overall experience has been awesome," Chen said. The cases he takes on typically take between six and 12 months to correct, and he refers more difficult cases to an orthodontist.

Chen said he decided to get certified in Invisalign because his patients were asking for it. "They said to me, 'I heard this is quicker, clearer, more comfortable and removable.' All of those things are true, as long as they are compliant," Chen said.

In general, compliance hasn't been a problem for Chen's Invisalign patients, who must be over 12 years old. Sometimes the aligners work even faster than he expected. "I've got a case right now I guessed would have taken a year," Chen explained, but he was surprised to discover that the aligners had corrected the problem in nine months.

For those who aren't a candidate for Invisalign but who shun the silver tracks, Guelff said clear braces are another option. While they've been around a long time, Guelff said earlier iterations were made of plastic and were easily stained by food. The ones used today are clear ceramic and guaranteed not to stain.

While not as tough as their metal counterparts, they are definitely less visible and are bonded to the front of the teeth. Guelff recommends clear braces for all ages and said the teens love to choose a colored rather than a silver wire. "A lot of the boys want the hot pink," he shared.

Another option is lingual or "invisible" braces. These braces are placed on the back of the teeth, where they can't be seen, and work similar to traditional braces.

For issues with how the teeth line up when the patient bites down, new strategies have been developed to cope with this orthodontic issue as well.

The carriere appliance replaces the dreaded headgear. Using elastics bonded to teeth, it pushes front teeth back to correct bite problems, such as overbite. A forsus appliance uses spring modules attached to the molars to accomplish the same feat in severe cases of overbite.

Guelff said advances in the field over the

last few decades have allowed orthodontists to help more people. "In 1974, when I had braces, the only kids getting treated were teenagers between 14 and 18 years. We would have loved to have treated children and adults, but the kids under 13 couldn't take the pain, and the older people thought that braces were too ugly," Guelff said.

Now, Guelff said about 50 percent of his patients are teens and a third are between seven and eleven years old, coming in for what he calls "early treatment." The rest are adults.

"Another thing that has really, really helped, especially with adult orthodontics, is the temporary anchorage devices," Guelff said. While most people think of dental implants as permanent, these removable micro-implants are screwed into the bone and hooked with elastics. Once the teeth have been moved to their proper place, the implants are removed.

When comparing options for orthodontic care, cost is a concern for many patients. Invisalign can be comparable to, or cost a little more than, traditional braces.

According to Dustin S. Burleson, D.D.S and author of "The Consumer's Guide to Invisalign," the average cost of Invisalign is around \$6,000 but can range from \$5,000 to \$10,000 depending on geographic area. Bracesinfo.com reports average costs of orthodontic care in Miami as follows: consultation fee: \$275; metal braces \$5,700; ceramic braces add \$600; Invisalign \$6,500; retainers are included in the price.

Of course, in cases where dental appliances or extractions are necessary, costs can increase. Chen said his Invisalign patients pay about \$5,000 on average, and he often runs specials to lower the cost further. Dental insurance plans generally cover a portion of both braces and Invisalign treatments, and many orthodontists, including Guelff, offer payment plans.

Sources: www.murrayorthodontics.com; www.bracesinfo.com