

"Intraoral Scanners: Why Digital Impressions Replaced the Goopy Mould"

By Joy of Dentistry Health Desk · 6 min read

If you have had dental work done over the years, you probably remember the mould. A tray loaded with cold, thick putty, pressed onto your teeth, held there while it set, with the gag reflex doing its best to make the minutes feel longer. For generations that tray was simply how dentistry captured the shape of your teeth. It is now, increasingly, a thing of the past.

In many offices the putty tray has been replaced by a small wand that is passed over the teeth, building a detailed three-dimensional model on a screen as it goes. The technology is called an intraoral scanner, and the result is a digital impression. It is one of the more visible ways modern dentistry has changed for patients.

How a digital impression works

An intraoral scanner is a hand-held device, roughly the size of an electric toothbrush with a camera at the tip. The clinician moves it slowly around the arch of your teeth, and it captures a rapid stream of images. Software stitches those images together in real time into an accurate 3-D model of your teeth and gums.

There is no tray, no putty, and nothing to bite into and hold still. You can usually watch the model appear on the monitor as the scan builds. If a section is missed or unclear, the clinician simply rescans that spot rather than starting the whole impression over.

What the mould used to be for

It helps to remember why impressions are taken at all. A dentist needs an exact replica of your teeth to design things that must fit precisely — a crown, a bridge, a night guard, a set of clear aligners, or a record of your bite. Traditionally that meant the physical putty impression, which was then poured in plaster to create a model, often mailed to a laboratory. A digital scan does the same job as a data file instead of a plaster cast.

What the switch means for patients

From the chair, the differences are easy to appreciate. Most are about comfort and convenience, though there are practical benefits behind the scenes too.

- **More comfortable:** no tray of setting material, which many people found unpleasant, and a gentler experience for those with a strong gag reflex.
- **Often quicker:** scanning tends to take a matter of minutes, and a missed area can be touched up without redoing the whole impression.
- **Fewer retakes:** traditional impressions sometimes had to be repeated if the putty pulled or distorted. The scan can be checked on screen and corrected immediately.
- **Easy to share:** the digital file can be sent to a laboratory electronically, rather than physically shipping a model.
- **Useful for communication:** the on-screen model can help a clinician show you what they are seeing and explain a plan.

Accuracy is the other advantage often cited. A digital capture avoids some of the distortion that could creep into physical impressions and their plaster pours. That said, a good scan still depends on the operator's technique and a clean, dry field, so the technology is a tool rather than a guarantee of a perfect result.

There are quieter benefits too. A digital model can be stored and called up later, which makes it easier to compare how teeth have changed over time — useful for tracking wear from grinding, monitoring a tooth being watched, or simply keeping a record. Because the file is shared electronically rather than shipped, the back-and-forth with a laboratory can be shorter. And because nothing is physically poured or mailed, there is less that can be damaged or lost between the appointment and the finished result.

Where scanners fit into treatment

Digital impressions have become part of a wide range of everyday dentistry. They are used to design crowns and bridges, to plan and monitor orthodontic movement, to make night guards and retainers, and to keep a record of a patient's bite over time. In some setups, scans feed directly into design-and-milling workflows that can produce certain restorations in-house.

One of the most familiar uses is in clear aligner therapy. Instead of taking repeated putty impressions, a single scan can generate the precise model used to plan tooth movement and fabricate the aligners. If you are exploring [clear aligner treatment](#), a digital scan is often how the process begins, giving the dentist an accurate starting model and a way to map out the planned stages. Whether aligners are suitable for you is a separate clinical question that depends on an examination.

It is worth keeping expectations realistic. A scanner captures shape beautifully, but it does not replace the dentist's diagnosis. It does not decide whether a tooth needs a crown, whether aligners are appropriate, or how a case should be sequenced. Those judgements still rest on a clinical examination, X-rays where indicated, and the dentist's assessment of your particular situation.

Do dentists still use the old moulds?

Some do, in some situations. Not every practice has adopted scanners, and there remain cases where a conventional impression is still used or preferred. The traditional putty impression is not obsolete so much as increasingly the exception rather than the default. If you are curious whether a particular office uses digital impressions, it is a perfectly reasonable thing to ask when you book.

A couple of practical points round out the picture. The scan is a surface capture of the shapes in your mouth; it is not an X-ray and does not show what is happening inside a tooth or below the bone, so it complements rather than replaces the imaging a dentist may still need. And while the model on the screen can look striking, a clearer picture of your teeth does not by itself mean more treatment is needed — it simply gives the dentist and you a better shared view to discuss.

For patients, the headline is simple: the part of dental visits many people disliked most has, in a lot of offices, become a brief pass with a wand and a model on a screen. As with any technology, the value lies in how it is used — but the experience of having your teeth "captured" has genuinely become easier.

Frequently asked questions

What is a digital dental impression?

It is a three-dimensional model of your teeth and gums created by an intraoral scanner — a small hand-held wand with a camera — instead of a tray of putty. The scanner captures a stream of images that software assembles into an accurate on-screen model, which can be used to design crowns, aligners, night guards, and more.

Do dentists still use moulds?

Some still do, in certain cases or offices that have not switched to scanners, but digital impressions have become common for many procedures. The traditional putty impression is increasingly the exception rather than the standard approach. You can ask a specific office which method they use.

Is scanning more comfortable than the putty tray?

Most people find it so. There is no tray to bite into and no setting material to hold in place, which tends to be easier for those with a strong gag reflex. Scanning is also often quicker, and a missed area can be rescanned without repeating the whole impression.

Are digital impressions more accurate?

Digital capture avoids some distortion that could affect physical impressions and plaster models, and the scan can be checked and corrected on screen. Accuracy still depends on good technique and a clean, dry field, so results depend on how the tool is used rather than the technology alone.

Sources & further reading

- [Canadian Dental Association — Dental Procedures](#) — overviews of common treatments that rely on impressions, such as crowns and orthodontics.
- [Canadian Dental Association — Oral Health resources](#) — general patient information on dental care and treatment planning.
- [Royal College of Dental Surgeons of Ontario](#) — the regulator for dentists in Ontario, with patient-facing information and standards.