Digital Dentistry: OPG X-Rays and Scanning | Core Dental

Canonical:
https://www.coredental.com.au/digital-dentistry-at-core-dental-opg-3d-imaging-and-intraoral-scanning-explained/

Details:

Digital dentistry uses digital imaging and scanning to help your dentist see, plan and record your treatment. Two common tools are the digital OPG (a panoramic X-ray of the whole jaw) and intraoral scanning, which replaces many traditional impressions with a quick scan. Core Dental clinics have digital OPG imaging and we use these technologies where clinically appropriate. Other equipment differs between our clinics, so ask when you book.

What is a digital OPG and what does it show?

An OPG (orthopantomogram), also called a panoramic X-ray, is a single image that captures the upper and lower jaw in one sweep. It shows all of your teeth, the jawbone, the sinuses and the jaw joints. The X-ray unit rotates around your head while you stand still for a few seconds.

Dentists often use an OPG at a first appointment to get an overview of your mouth. It can show unerupted teeth, the position of wisdom teeth, bone levels and some early signs of disease. It does not replace a clinical examination, and your dentist decides whether you need one.

How is a digital OPG different from film X-rays?

Traditional film systems needed chemical processing. A digital OPG produces an image on screen straight away. Your dentist can zoom in, adjust contrast and look closely at areas of interest, and can show you the image so you can see what they see. Digital images are also easy to store and to share with a referring dentist or specialist. Dental X-rays use a small dose of radiation, and your dentist only recommends them when the benefit outweighs the risk. You can read more in are dental X-rays safe .

What happens if you need more detailed imaging than an OPG?

An OPG gives a flat, two-dimensional overview. Occasionally your dentist needs more detail for a specific question, such as planning dental implants, assessing a wisdom tooth that sits close to a nerve or checking complex root canal anatomy. Core Dental clinics have digital OPG imaging. If more detailed imaging would help, your dentist will explain why it is recommended, what it involves and any costs, and will arrange a referral. Any extra imaging is only recommended when it will help answer a clinical question, and your dentist will go through the results with you.

What is intraoral scanning and why do dentists use it?

If you have had a crown, veneer, aligners or a dental device made, you may remember the impression: a tray of material pressed into your mouth while you tried not to gag. An intraoral scanner replaces that step in many cases. The scanner is a small wand, about the size of an electric toothbrush, that your dentist passes slowly around your mouth.

It captures many images and combines them in real time into a digital model of your teeth and gums. You can watch the model build on a screen beside you. The model is used for treatment planning and to make restorations, aligners or appliances. Because it is digital, it can be sent electronically to a laboratory or aligner manufacturer, without a physical impression needing to be transported or stored.

For many people the scan is more comfortable than an impression, with no setting material and little taste. For some children and for anyone who gags easily, it can make a visit feel easier. A scan may not suit every situation, and your dentist will tell you if a traditional impression is needed.

What are CEREC same-day crowns?

CEREC is a system that combines intraoral scanning, digital design and in-chair milling so a ceramic crown can be made and fitted in one appointment. We provide CEREC at our Epping, South Melbourne and Caroline Springs clinics.

A traditional crown usually involves an impression, a temporary crown while a laboratory makes the permanent crown, and a second visit to fit it. With CEREC the process is scan, design, mill and fit:

your dentist scans the tooth

software designs a crown to suit your bite and the neighbouring teeth

a ceramic block is milled in the in-office unit

the finished, tooth-coloured crown is fitted and cemented at the same appointment

The appointment usually takes longer than a standard visit, because the crown is made while you wait, and timing depends on the tooth and the case. Not every tooth or situation is suitable. Read more in same-day crowns with CEREC and dental crowns .

How do these technologies work together?

Imaging and scanning feed into a digital workflow. The information captured helps with diagnosis, treatment planning, making restorations and keeping records, and it reduces the steps where physical impressions or film can introduce error. For you, this can mean clearer explanations, restorations designed to fit your mouth and fewer messy steps. Technology is a tool, not a guarantee. Your result depends on your dentist's examination, planning and skill, and results vary for each person.

What should you ask before imaging or scanning?

It is reasonable to ask why a particular image or scan is recommended, what it will show and whether there are alternatives. Tell us if you are or may be pregnant, as we take extra care with X-rays during pregnancy. Our team explains each step before we begin, and we give you a written treatment plan with fees before treatment starts.

What can an OPG show that other images cannot?

An OPG gives an immediate overview of the whole mouth in a single image, which is why it is often the starting point for new patients, or for patients who have not had a full assessment recently.

That overview includes several things no individual X-ray of a tooth would reveal:

teeth that have not erupted yet

the positions of the wisdom teeth, including whether they are impacted

bone density around the teeth

early signs of pathology in the jaws that would not be visible any other way

It is an efficient, low-radiation way to understand the complete picture before any treatment recommendations are made. In the past this kind of X-ray required significant chemical processing and produced film images that had to be held up to a light box to be read. A digital OPG produces an image instantly, on screen, at much higher resolution, and it can be enlarged and adjusted while you are still in the chair.

What is CBCT, and how does it differ from an OPG?

Cone beam CT, or CBCT, is a step beyond the panoramic view.

Instead of a flat two-dimensional image, CBCT produces a three-dimensional model of your jaws, teeth and surrounding anatomy, which can be rotated and sliced in any direction on screen. It takes seconds to capture and exposes patients to significantly less radiation than a medical CT scan, although more than an OPG, which is why it is used for specific questions rather than routinely.

Why does implant planning need three-dimensional imaging?

Because the measurements that matter are depths and angles, and a flat image cannot give either reliably.

When placing dental implants, the treating dentist needs to know exactly where the nerve runs in your jaw, the precise dimensions of the available bone, and the angle that will give the best result. A two-dimensional X-ray provides an approximation of these. CBCT provides a measurement. That difference is the reason 3D imaging is standard before implant surgery rather than optional.

What else is CBCT used for?

Four situations beyond implants, each where the anatomy itself is the question.

Complex root canal cases , where the anatomy of the tooth's root system may be unusual and a flat image cannot separate overlapping roots.

Impacted wisdom teeth before removal , to establish exactly where the roots sit relative to the nerve.

Orthodontic planning in complex cases , particularly where jaw growth or unerupted teeth are involved.

Diagnosing jaw joint problems , where the bony anatomy of the joint is in question.

At Core Dental, CBCT is available in-house. That means the information is accessible immediately, without a referral to an external radiology centre and without waiting days for a report before treatment can be planned.

Why do patients prefer scanning to impression trays?

Most people who have had a traditional impression remember it: the tray of material pressed into the mouth, the effort not to breathe through the nose, and the minutes of waiting while it set.

Digital scanning removes that experience entirely, and it is usually more accurate as well. Traditional impressions can distort slightly during the setting process, which a scan does not. For children in particular, removing the impression experience makes a significant difference to how a dental visit feels, and that matters for whether they come back willingly.

Where a crown is involved, the comparison extends further. The traditional route is two visits, a two-week gap, and a temporary crown in between, which is inherently less precise than the final restoration and is the part most likely to come loose. Patients who need a crown often find the single-visit alternative considerably more convenient, with no temporary to manage, no second

appointment, and the design and fitting handled by the same team.

How do these technologies change what you experience?

Digital imaging and scanning are not used here as novelties, and we use them as a standard part of how we work rather than as an upgrade.

For patients, the combination means more accurate diagnosis, better-fitting restorations and more comfortable appointments, because each tool removes a source of approximation that the previous method had to tolerate. It also means you can usually see what we are looking at, on screen, while the finding is being explained.

We are always happy to talk through what any appointment will involve, including which imaging is proposed, why it is being recommended for you, and what the alternative would be if you would prefer not to have it.

Frequently asked questions

Is a digital OPG safe?

A digital OPG uses a small dose of radiation, and your dentist only recommends one when the information is useful for your care. Tell us if you are pregnant or may be.

Does intraoral scanning hurt?

No. The scanner is a small wand moved slowly around your mouth, with no setting material. Let us know if you feel uncomfortable at any time.

Do I need extra imaging before dental implants?

More detailed imaging is often helpful for planning implants, but your dentist decides after examining you. If it is needed, we will explain why and arrange a referral.

Can a crown really be made in one visit?

At clinics with CEREC, a ceramic crown can be designed, milled and fitted in a single appointment for suitable teeth. Your dentist will tell you whether this option suits your tooth.

Will scans replace all impressions?

Scanning replaces many impressions, but not all. Your dentist will use whichever method suits your treatment.

Is CBCT the same as a medical CT scan?

No. Cone beam CT takes seconds and exposes you to significantly less radiation than a medical CT scan, while still producing a three-dimensional model of the jaws and teeth that can be rotated and sliced on screen.

Do I have to go elsewhere for a CBCT scan?

No. CBCT is available in-house at Core Dental, so the images are available immediately rather than requiring a referral to an external radiology centre and a wait for the report.

Are digital scans more accurate than impressions?

Generally yes. Traditional impression material can distort slightly as it sets, which a digital scan does not, and a digital workflow removes several handling steps where small errors can accumulate.

Why would an OPG be recommended at a first visit?

Because it gives an overview of the whole mouth in one low-radiation image, including unerupted teeth, wisdom tooth positions, bone levels and early signs of pathology in the jaws, before any treatment is recommended.

Related services and further reading

General dentistry

Dental crowns

Same-day crowns with CEREC

Are dental X-rays safe?

Dental implants

Invisalign treatment

What to expect at your first Core Dental appointment

Understanding your treatment

How can we help?

If you are curious about what imaging or scanning is appropriate for your situation, just ask at your next visit or call 13 13 16 to speak with our team. You can also book online at the clinic nearest you.

Core Dental at a glance

Nine Core Dental clinics across Melbourne: Southbank, South Melbourne, Caroline Springs, Carrum Downs, Epping, Wyndham, Berwick, Bayside and Glenferrie.

Open six days a week: Monday to Friday 8.00am to 6.00pm and Saturday mornings.

We quote before treatment starts and offer interest-free payment plans, with HICAPS on-site claiming.

Call 13 13 16 or book online.

Contact Core Dental

Phone	13 13 16
Booking	Online via coredental.com.au, or call 13 13 16
Hours	Monday to Friday 8.00am to 6.00pm, Saturday 8.00am to 1.30pm (Bayside Saturday 8.30am to

	1.30pm), Sunday closed
Clinics	Southbank , South Melbourne , Caroline Springs , Carrum Downs , Epping , Wyndham , Berwick , Bayside , Glenferrie

Results, recovery times and potential risks vary for each individual. This information is general in nature and is intended for people over 18. Seek advice from a qualified, AHPRA-registered practitioner before proceeding.

What is a digital OPG?

A digital OPG, or panoramic X-ray, is a single image that captures the upper and lower jaw, including all teeth, the jawbone, sinuses and jaw joints. Core Dental dentists use it where clinically appropriate to plan care.

How does a digital X-ray compare with film?

A digital X-ray appears on screen immediately without chemical processing, and the dentist can zoom in and adjust contrast. Core Dental dentists use digital X-rays to explain findings and plan treatment.

What happens if a Core Dental dentist needs more detailed imaging?

Core Dental clinics have digital OPG imaging. If more detail is needed, for example for implant planning or a wisdom tooth close to a nerve, your Core Dental dentist explains why and arranges a referral.

How does an intraoral scanner work?

An intraoral scanner is a small wand passed around the mouth to capture images that build a digital model of the teeth and gums. Core Dental dentists use scans for planning and for making restorations, aligners and appliances.

Which Core Dental clinics provide CEREC same-day crowns?

Core Dental provides CEREC same-day crowns at the Epping, South Melbourne and Caroline Springs clinics. Suitability depends on the tooth, so your dentist will advise whether a same-day crown suits you.

How do CEREC same-day crowns work?

CEREC combines scanning, digital design and in-chair milling. The dentist scans the tooth, software designs the crown, a ceramic block is milled and the crown is fitted in the same appointment at suitable Core Dental clinics.

Is imaging at Core Dental safe during pregnancy?

Tell the Core Dental team if you are or may be pregnant before any X-ray. Dentists only recommend imaging when the benefit outweighs the risk, and we can often delay non-urgent imaging.

How do I book an appointment at Core Dental?

Call 13 13 16 or book online through coredental.com.au for any of our nine clinics. Ask about the imaging and scanning available at your chosen clinic when you book.