

Dental Crowns

Canonical: <https://directory.collinsstreetspecialistcentre.com.au/procedures/prosthodontics/dental-crowns/>

Description:

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Details:

Collins Street Specialist Centre Dental Crowns

What is a dental crown?

A dental crown is a custom-made restoration that fits over the entire visible surface of a tooth, from the gum line up. Rather than patching a portion of damaged or decayed structure, a crown encases the tooth completely, restoring its shape, size, strength, and appearance in a single durable unit.

Crowns have been the go-to solution for seriously compromised teeth across many generations of dental practice. What has changed is the precision of the process, the quality of available materials, and how quickly restorations can be designed and made. At Collins Street Specialist Centre, crowns are planned and produced using advanced digital workflows, including the option of same-day CEREC CAD/CAM technology. In suitable cases, patients can leave with a permanent crown completed within a single appointment.

Crown materials

Choosing the right material is a clinical decision that weighs the tooth's position in the mouth, the forces it needs to withstand, the condition of the surrounding gum tissue, and what the patient wants aesthetically. No single material suits every situation, and matching the restoration to the individual is a core part of specialist care.

****All-ceramic and full-ceramic crowns**** are the preferred option for front teeth and are now used with confidence throughout the mouth. Modern ceramics, including lithium disilicate (e-max) and feldspathic porcelain, replicate the light transmission of natural enamel with a high degree of fidelity. Containing no metal substructure, they eliminate the grey shadow at the gum margin that can affect older metal-based restorations, particularly as gum tissue changes over time.

****Zirconia crowns**** combine mechanical strength with natural-looking aesthetics. Zirconia is the hardest ceramic material used in restorative dentistry, making it well suited to high-load areas such as the posterior molars. Monolithic zirconia crowns, milled from a single block of material, show outstanding resistance to fracture under occlusal loading. Newer translucent zirconia formulations have also narrowed the aesthetic gap considerably, achieving results that compare favourably with traditional porcelain in many clinical situations.

****Porcelain-fused-to-metal (PFM) crowns**** incorporate a cast metal substructure bonded with a porcelain facing. This combination has served patients reliably for several decades and remains clinically appropriate in certain situations. The main limitation is the visible metal margin that may appear at the gum line as gingival tissue recedes over time, which is weighed carefully when planning restorations in visible areas of the mouth.

When might you need a dental crown?

A general dentist or specialist may recommend a crown when less extensive treatment would not provide adequate long-term protection or function. Common presentations include:

- **Extensive tooth decay** where insufficient natural tooth structure remains for a large direct filling to hold reliably over time - **Tooth fracture**, whether at the cusp level or involving a crack that puts the structural integrity of the whole tooth at risk - **Completion of root canal treatment**, as root-treated teeth lose moisture progressively and become considerably more brittle; a crown restores fracture resistance and seals the access point against reinfection - **Failure of an existing restoration**, including worn, leaking, or fractured fillings and older crowns that no longer adequately protect the underlying tooth - **Severe tooth wear** from bruxism (habitual teeth grinding), acid erosion, or long-term mechanical abrasion - **Implant restoration**, where the crown forms the visible, functional component of a dental implant, and its design matters for both aesthetics and long-term implant health - **Aesthetic rehabilitation** for a tooth that is severely discoloured, stained, or structurally compromised in a way that cannot be addressed through less invasive means

What to expect: step by step

Conventional crown, two-visit pathway

First appointment: assessment and tooth preparation

Treatment begins with a thorough clinical assessment. Existing radiographs are reviewed and, where needed, new digital or three-dimensional imaging is obtained. The tooth is examined carefully for fracture lines, pulp health, and the condition of the surrounding bone and gingival tissue, all of which influence the design and timing of the final restoration.

Where preparation proceeds, local anaesthetic is administered and the tooth is reshaped to create the necessary clearance for the crown material, typically 1–2 mm on all surfaces, though this varies by material and clinical situation. A digital impression is then recorded using the 3Shape TRIOS 3 intraoral scanner, which captures precise three-dimensional data without the discomfort of traditional impression putty. A well-fitted temporary crown is placed to protect the prepared tooth and maintain function and appearance while the final restoration is being made.

The digital file goes to the in-house dental laboratory, which works exclusively for Collins Street Specialist Centre patients. Laboratory technicians design and fabricate the final crown using Exocad DentalCAD software, with close communication between the clinical and laboratory teams throughout.

Second appointment: fit and cementation

When the finished crown arrives, it is assessed carefully for marginal fit, interproximal contacts, occlusal relationship, and aesthetics before any permanent cementation takes place. Adjustments are made chairside as needed. Once the specialist is satisfied that all criteria are met, the crown is bonded using a high-strength dental cement appropriate to the material and clinical situation.

Same-day crown: CEREC CAD/CAM

For clinically suitable cases, the CEREC system, comprising the Primescan intraoral scanner and Primemill milling unit, allows a crown to be digitally designed and milled in-house within a single appointment. Following tooth preparation and scanning, the crown data is sent directly to the milling unit. Patients take a short break while the restoration is being manufactured, then return for fitting and cementation, a process that typically adds around 60–90 minutes to the appointment.

Same-day fabrication is not appropriate for every clinical situation. Your specialist will advise clearly on which pathway suits your particular case and why.

Recovery and aftercare

Knowing what to expect during and after the crown process helps patients manage the transition comfortably and protect the restoration over time.

****During the temporary crown phase:**** - Avoid sticky or hard foods on the side of the temporary, as temporary cements are designed to be removable and are less retentive than permanent ones - Chewing on the opposite side reduces the risk of dislodging or fracturing the temporary - Some sensitivity to temperature or pressure is normal at this stage and generally settles as the tooth adjusts

****After final crown placement:**** - Mild temperature sensitivity may persist for one to two weeks as the tooth and surrounding tissues settle around the new restoration - Normal eating can resume promptly, though some care with very hard foods is sensible in the first few days - Daily flossing at the crown margin matters, as the junction between the crown and the natural tooth remains susceptible to decay if oral hygiene slips - Regular dental reviews allow the crown, its margins, and the surrounding gum tissue to be monitored over time

A well-designed and carefully placed crown, maintained with consistent home care and regular professional monitoring, can reasonably be expected to last 15–25 years or beyond.

Why see a specialist prosthodontist?

Crown placement can look straightforward from the outside, but the clinical reality is rarely simple. The difference between a crown that performs reliably for decades and one that fails prematurely comes down to the precision of tooth preparation, the accuracy of the digital scan, the quality of laboratory fabrication, and the care taken at cementation. Each step requires both skill and experience to execute consistently well.

A specialist prosthodontist has completed a Dental Board-registered three-year postgraduate clinical degree specifically focused on the restoration and replacement of teeth, undertaken on top of an undergraduate dental qualification. That advanced training covers occlusion (how teeth meet and function under load), dental material science, aesthetic colour matching and characterisation, and the management of complex cases where multiple teeth or the entire dentition requires rehabilitation.

When a crown forms part of a broader reconstructive plan, following root canal treatment, dental implant placement, or full-arch rehabilitation, specialist oversight ensures that each restoration is designed to function within the patient's complete bite rather than being planned in isolation. Restorative work that does not account for the broader occlusal picture is a recognised contributor to premature restoration failure. At Collins Street Specialist Centre, every crown is treatment-planned within the full context of the patient's oral health, so individual restorations are built not only to look right, but to last within a functional, healthy system.

Referring dentists are welcome to discuss complex cases with our specialist team prior to or alongside any referral. We aim to support coordinated care that serves patients' long-term interests and keeps referring practitioners well informed throughout treatment.

Our specialists

****Dr Fotios Angelis**** BDS (Hons)(Melb), DClinDent (Melb) Specialist Prosthodontist with expertise in complex reconstructive dental care, including crowns, bridges, veneers, and implant-supported restorations.

****Prof Vasileios Chronopoulos**** DDS, MS, PhD (Pros) Specialist Prosthodontist with over thirty years of clinical and academic experience, internationally recognised for his work in aesthetic full-mouth reconstruction and all-ceramic restorations.

****Dr Jamie Foong**** BDSc (Melb), DClinDent (Melb) Specialist Prosthodontist with a particular clinical interest in crown and bridge work and occlusal rehabilitation.

****Dr Simon Hinckfuss**** BDSc, DCD (Pros), Cert.Perio MS (Minn) The only clinician currently registered in Australia as both a Specialist Prosthodontist and a Specialist Periodontist. This dual registration is particularly valuable in cases where gum health and restorative planning need to be considered together from the outset, a clinical combination that is otherwise difficult to access within a single practice.

All specialists at Collins Street Specialist Centre hold current registration with the Dental Board of Australia. Patients and referring practitioners are encouraged to verify specialist registration independently through the Australian Health Practitioner Regulation Agency (AHPRA) website.

Related treatments

A crown is frequently one component within a broader treatment pathway rather than a standalone procedure. At Collins Street Specialist Centre, the prosthodontic, endodontic, and periodontic specialist teams work in close clinical coordination, ensuring that treatment sequencing and restoration design are considered together.

- ****[Dental Bridges](/procedures/prosthodontics/dental-bridges/)**** — When adjacent teeth require crowns and a missing tooth needs replacing as part of the same treatment plan - ****[Dental Implants (Prosthodontic Restoration)](/procedures/prosthodontics/dental-implants-prosthetic-restoration/)**** — Implant-supported crowns designed and placed to restore both function and appearance following tooth loss - ****[Veneers](/procedures/prosthodontics/porcelain-veneers/)**** — A less invasive alternative when the underlying tooth structure is largely intact and the primary concern is aesthetic - ****[Full Mouth Rehabilitation](/procedures/prosthodontics/full-mouth-rehabilitation/)**** — Comprehensive reconstructive planning when multiple teeth require restoration simultaneously, often involving the re-establishment of the patient's occlusal relationship - ****[Root Canal Treatment](/procedures/endodontics/root-canal-treatment/)**** — Root-treated teeth almost universally require crown placement to restore fracture resistance and provide a coronal seal; CSSC endodontists and prosthodontists collaborate directly on treatment sequencing to ensure continuity of care - ****[Gum Lift / Crown Lengthening](/procedures/periodontics/aesthetic-gum-lift-crown-lengthening/)**** — Where insufficient tooth structure is exposed above the gum line to support a well-fitting crown, the periodontist can surgically recontour the gingival and bony architecture to create the necessary clinical crown length before the prosthodontist proceeds with restoration
