

Preparing your child for a CBCT scan

- Before the scan, you can help your child practise keeping still at home. CBCT scans are quick, but, if your child moves, it can blur the images so that a scan may need to be repeated.
- For younger children, bringing along a favourite toy can help, particularly if your child is anxious about the appointment.

If you still have questions, who should you talk to?

- If possible, you should first talk to the dentist or specialist who requested the CBCT scan. They can help you with any questions you may have about the right test for your child.
- You can also ask questions of the person doing the scan, if it is not being performed by your child's dentist.

Keeping a record of CT and CBCT scans

- Keep a record of the CBCT scans and other imaging your child has, so you can show the dentist or specialist each time they suggest a new test or scan.
- If your child was born in Australia, you may have been given a health record book that is taken to the child health clinic for immunisations or health checks. A book such as this can help you, and your child's dentist and doctor keep track of the tests and scans that your child receives. Most state and territory health departments provide these books in hard copy or electronically.

More information

- Further information on CT scans for children, including CBCT scans, is available at www.safetyandquality.gov.au/ctscansforkids.



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This information is of a general nature only and is not intended as a substitute for medical or dental advice. If you have any questions or concerns, please ask your doctor, dentist or imaging staff.

Photos are courtesy of Western Sydney Local Health District.

References

- 1 Mathews JD et al. Cancer risk in 680,000 people exposed to computed tomography scans in childhood or adolescence: data linkage study of 11 million Australians. *BMJ* 2013;346:2360.

Cone beam CT scans in oral health care for children and young people

A resource for parents and carers



AUSTRALIAN COMMISSION
ON SAFETY AND QUALITY IN HEALTH CARE



Australian and New Zealand Association of
ORAL & MAXILLOFACIAL SURGEONS



AUSTRALIAN DENTAL
ASSOCIATION INC.



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In Australia, as part of their oral health care, children and young people may undergo a cone beam computed tomography (CBCT) scan. CBCT is also known as cone beam volumetric tomography (CBVT). CBCT scans can provide dentists and specialists (such as orthodontists and surgeons) with important information to help them with decisions regarding oral health care. This brochure provides you with information about CBCT scans for children and young people.

What is a CBCT scan?

- A CBCT scan uses X-rays, which are taken by a machine that moves around the head, usually while the young person is standing or sitting. A computer can then turn the X-ray images into three-dimensional (3-D) images.
- Dentists and specialists use these 3-D images to assist in the examination and assessment of the mouth, including the teeth and jaws.
- The CBCT scan may be taken at the dental practice or at an imaging service.

Benefits of CBCT scans

- The 3-D aspect of CBCT scans provides more information than other dental X-rays. This allows improved examination, diagnosis and identification of the best treatment options. A CBCT scan may be the best test for your child.
- CBCT scans are particularly useful when the teeth and jaws have been damaged, when preparing for an operation (such as removing teeth that have not grown in properly), to place dental implants, or to investigate other complex problems.

Risks of radiation

- The radiation dose from a CBCT (or CBVT) machine is typically much less than from a conventional CT scan because of the way the radiation beam is generated. However, it is higher than from other types of dental X-rays.
- Children and young people are more sensitive to the effects of radiation because their bodies are still developing.
- The low dose of radiation used in CBCT scans in childhood presents a minimal increase in the risk of cancer in later life.¹
- Although typical radiation doses in CBCT are low, use of radiation in oral health care should be kept as low as possible.
- Your dentist or specialist will explain the clinical reasons for a CBCT scan to be recommended instead of other imaging procedures.

Benefits versus risks

- After considering and discussing the benefits and risks with you, the dentist or specialist may recommend that your child has a CBCT scan.
- CBCT should only be used when 3-D imaging is considered necessary for more specific diagnosis and planning of treatment. It is not required as part of routine oral health care.

What can be done to reduce radiation exposure from CBCT scanning?

- Let the dentist or specialist know if your child has had a CBCT or another type of scan before, because the results of these earlier tests may be helpful. This is particularly important if your child needs regular CBCT scans for an ongoing oral health problem.
- Take previous scans and X-rays to your child's oral healthcare appointments.
- It is always okay to ask the dentist or the specialist if a CBCT scan is necessary, or if there are other ways to obtain the information that use less, or no, radiation. The dentist or specialist can explain why a CBCT scan has been chosen for your child.
- Before your appointment, ask the dentist or person doing the scan how they will keep your child's radiation dose as low as possible.