



Peninsula Dental Social Enterprise (PDSE)

Cone Beam CT (CBCT) Patient Information

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Policy will be updated as required in response to a change in national policy or evidence-based guideline.

Patient Information Leaflet

CBCT Scan

What is a Dental Cone Beam CT Scan?

Dental cone beam computed tomography (CBCT) is a special type of x-ray equipment used when regular dental or facial x-rays are not sufficient. Your Dentist/student may use this technology to produce three dimensional (3-D) images of your teeth, soft tissues, nerve pathways and bone in a single scan.

It is a smaller, faster and safer version of the regular CT scanner that uses a cone shaped X-ray beam, meaning that the radiation dosage is lower, and the time needed for scanning is reduced.

Why have you been referred for a CBCT?

Dental cone beam CT scans are used to provide a more detailed image of your jaws and teeth. The image is then used to create your treatment plan. There are many reasons why a CBCT scan can be required and your Dentist/student/Clinical Supervisor will explain the individual reasons why it has been identified as being required.

When it has been identified that a CBCT scan may be appropriate, you will be referred for an assessment with our Consultant who will determine if it is suitable for you to have a CBCT scan and if so, you will be referred to have the CBCT scan taken at the Derriford Dental Education Facility. If at this assessment it is deemed not to be suitable, the reasons for this will be explained to you.

What can I expect during the procedure?

Having a CBCT scan is very similar to having an X-ray. You will be asked to remove glasses, dentures, hearing aids, earrings, tongue and nose studs, necklaces, hair clips and any other metal accessories that may affect the scan. Your head will be carefully positioned and lined up with the machine. You will be asked to keep absolutely still while the scan is taken. We will ask you not to talk or move your jaw during the exposure. The positioning can take a few minutes, but the scan takes less than a minute to perform. You might need more than one scan depending on the reason for your examination. The whole procedure should not take more than 30 minutes.

The machine moves around your head in a circular motion, like the panoramic dental radiography unit, which is commonly used in dental surgeries and hospitals, you may have already experienced this type of X-Ray.

There is no pain associated with this procedure but you will need to remain still. If you are claustrophobic, please mention this to the radiographer, so they can offer you support and advice.

What are the benefits of CBCT?

The scan will give us detailed information, which cannot be obtained from normal X-rays. For example, if you are being considered for dental implants or other special procedures, it allows us to assess the exact shape of the bone and plan your treatment precisely.

The radiation dose of the CBCT is much lower than a standard CT scan or regular X-ray.

What are the risks?

The risks associated with a CBCT scan is much lower than a normal CT scan, which gives a radiation dose equivalent to about 63-154 days of background radiation (the X-radiation constantly present in the environment).

A CBCT scan of the jaws would be comparable to approximately 6-30 days of normal background radiation. Therefore, a CBCT scan of the jaws will give less than one tenth of the dose of a conventional CT scan of the same area.

As with any X-ray examination, please tell the radiographer if you might be pregnant.

Are there other options?

Yes - a medical CT is the alternative, but this delivers a greater radiation dose. Another alternative is not to have the CBCT scan, however it might not be possible using traditional dental X-ray pictures to gain a detailed or accurate enough image required to complete further treatment.

If you have any concerns or queries regarding the CBCT scan please discuss them with the Dentist/student/Clinical Supervisor responsible for your dental treatment.

Do I need to prepare for the dental CBCT?

No, you do not need to prepare anything before having the scan.

What happens after the dental CBCT scan?

After the scan you will be able to leave the facility straightaway. The images will then be reviewed by our Consultant who will report the findings back to the Dentist/student/Clinical Supervisor who requested the scan. In some circumstances, it may be necessary to send your scan to an external provider for an opinion, if so this is deemed necessary it will be discussed with you prior to sending the scan.