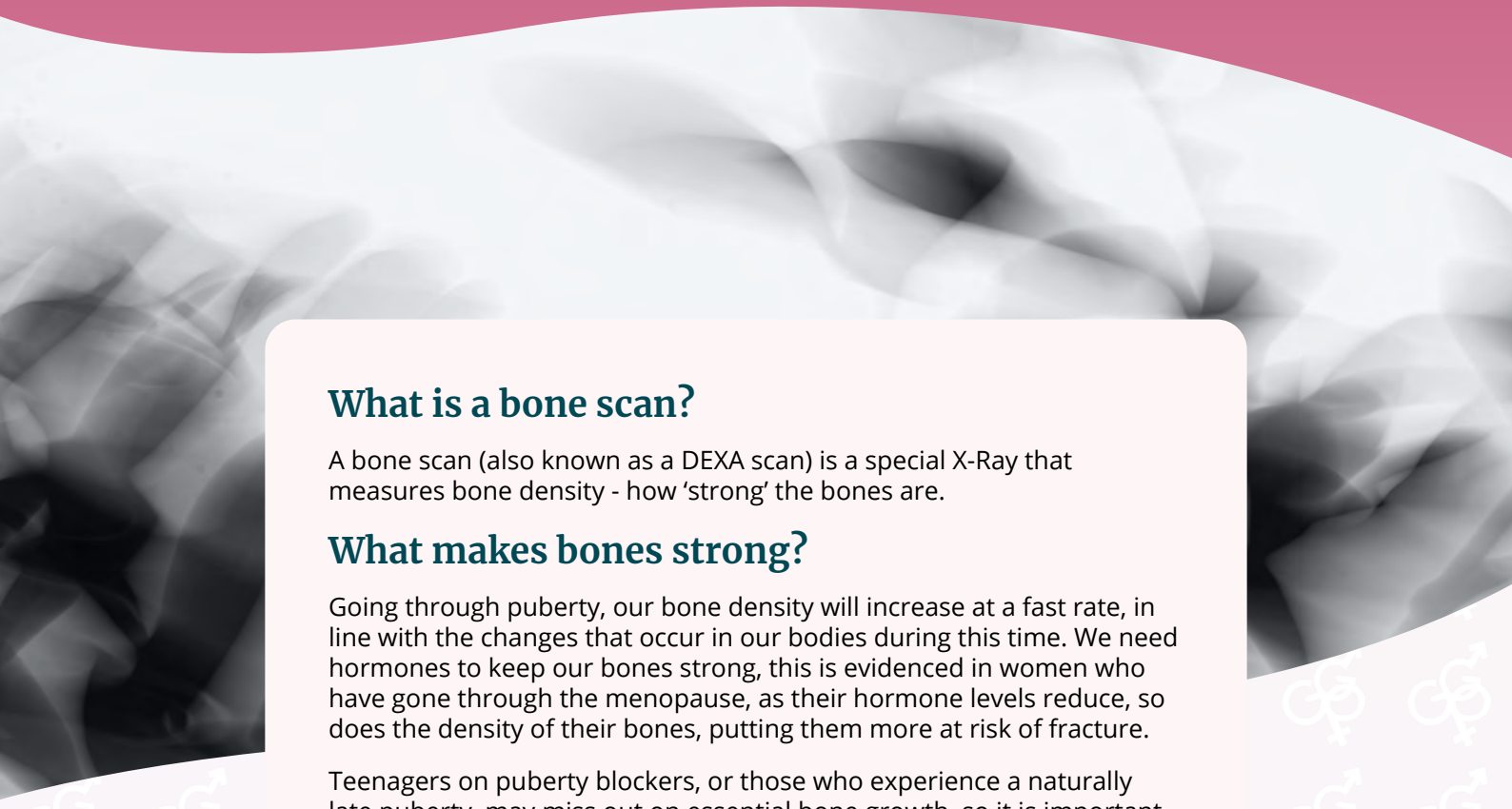
Bone Density Scans

What You Need to Know



What is a bone scan?

A bone scan (also known as a DEXA scan) is a special X-Ray that measures bone density - how 'strong' the bones are.

What makes bones strong?

Going through puberty, our bone density will increase at a fast rate, in line with the changes that occur in our bodies during this time. We need hormones to keep our bones strong, this is evidenced in women who have gone through the menopause, as their hormone levels reduce, so does the density of their bones, putting them more at risk of fracture.

Teenagers on puberty blockers, or those who experience a naturally late puberty, may miss out on essential bone growth, so it is important to make sure puberty is not blocked for longer than necessary and that hormones are introduced as soon as the individual is ready. This may involve either reverting to birth hormones, by stopping the blockers, or introducing hormones as medication.

Evidence shows that bone density soon catches up when hormones are reintroduced. Bone scans may also be a valuable tool to monitor when the maximum bone development has occurred.

When do I need a scan?

Some experts advocate for a baseline bone scan prior to commencement of puberty blockers. Bone density is then monitored one to two years into treatment with gender affirming hormones. It is important to note that there is no official medical evidence to support the need for this investigation.

Indeed, given that puberty blockers are introduced to block the progression of puberty, checking a patient's bone density prior to starting HRT may just show the expected results for someone who has not yet hit that development milestone. We understand that density will improve with hormones, so why is there the need to check it?

When on puberty blockers, bone density results are usually in the expected range of the gender assigned at birth prior to starting HRT. Scans do show that density catches up when hormones are initiated.

The actual concern is how long it is safe to be on blockers without the introduction of hormones and whether the bones will always fully catch up if puberty is blocked for an unnaturally prolonged period.

What is our opinion on bone scans?

At GenderGP we do not believe that bone scans are necessary prior to starting treatment, unless there are specific risk factors, such as family history of non-trauma bone fractures, or when risk factors for osteoporosis exist. This is based on clinical experience as well as information found in major guidelines all over the world.

Taking into consideration the fact that bone scans are not a usual investigation that can be easily done, GenderGP will recommend a bone scan only if there is a significant risk factor that shows there is a risk to a young person's bone health. If you would like us to help organise a bone scan, then we are very happy to write to your healthcare provider about this.

The longer someone is on blockers alone, the higher the theoretical risk of bone problems. With the introduction of an affirming hormone, or stopping of puberty blockers to allow natal puberty to happen, there is no perceived risk to bone health.

The UK NHS system undertakes this investigation on all young patients and some patients are forced to come off blockers and to let puberty resume in order for the scan to take place. The evidence for this approach is not clear.

What do the international guidelines suggest?

UCSF Guidelines for the Primary and Gender-Affirming Care of Transgender and Gender Nonbinary People

"There are potential benefits of baseline information about bone density, although no consensus about the necessity of obtaining bone densitometry prior to, and during GnRH analogue administration exists. If there is a family history of non-traumatic bone fractures, or osteoporosis, baseline screening is recommended." This is in line with the advice that bone scans should not be done for everyone, but resorted to when needed on a case-by-case basis.

The Endocrine Society

- For transgender males, baseline bone mineral measurements are generally in the expected range for their pretreatment gender.

- For transgender females, consider bone scans at baseline.

- Recommend obtaining bone scans in transgender adults when risk factors for osteoporosis exist.

WPATH

There is no mention of baseline bone scans, only that physical development should be carefully monitored – preferably by a pediatric endocrinologist – so that any necessary interventions can occur if any concerns arise.

Australian Standards of Care

They include bone mineral density in the list of investigations to be done prior to starting puberty blockers, then every 12 months until completion of treatment or as required.

The American Academy of Pediatrics
No mention of baseline bone scans.

Summary & Conclusion

Summary:

1. UCSF and the Endocrine society both recommend baseline screening when there's positive family history or presence risk factors for osteoporosis.
2. The Endocrine Society leaves it for the treating physician to consider baseline BMD in transgender females, but leaves out transgender males.
3. Australia recommends baseline bone scans for all.

Conclusion

The important consideration here is how long a young person will be on blockers and without hormones. As a general rule low readings should be expected in adolescents on blockers for any length of time due to the requirement of hormones to support bone development.

When hormones are introduced, the bone density is likely to catch up with expected strength. Bone scans can be useful in certain circumstances, particularly if risk factors are present, but they should not be regarded as a reason to prevent, or a requirement to start, gender-affirming treatment.

About **GenderGP**

At GenderGP we provide Health and Wellbeing services to trans people of all ages, and to those who support them. We are fierce advocates, campaigning for better healthcare for the trans community. We provide prescription medication, blood tests, advice, monitoring, education and support. If you, or someone close to you needs help, visit our website.

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