

## Use of Calcium and Vitamin D post Fragility Fracture

The use of calcium and vitamin D are generally recommended after fragility fracture to reduce the risk of recurrent fractures. Current guidance from the Royal Osteoporosis Society<sup>1,2</sup> advises that calcium intake should be from dietary sources where possible, but may require supplementation.

Vitamin D and corrected serum calcium levels should be taken as a minimum in patients with fragility fractures, and dietary calcium intake and urinary calcium excretion may also be assessed if deemed appropriate.

### Calcium:

A calcium calculator, such as the one developed by the University of Edinburgh (available [here](#)) can help review dietary calcium intake.

If hypocalcaemia is observed, or if dietary intake is less than 700mg per day additional supplementation is advised. Patients with osteoporosis may have higher than normal calcium requirements and supplementation may still be prescribed if deemed appropriate<sup>3</sup>. Where calcium intake is relatively high, or hypercalcaemia is present, a vitamin D supplement alone can be prescribed.

### Vitamin D:

If Vitamin D levels are inadequate, high dose loading should be started (50,000 units once weekly for 6 weeks). Please remember to annotate discharge letter for GP to review and prescribe maintenance dose following this course.

If Vitamin D levels are in normal range, prescribe a maintenance dose of colecalciferol between 800 – 2000 units daily, with or without calcium depending on calcium assessment above.

### Prescribing summary:

	Hypocalcaemia evident on blood tests, or inadequate dietary intake.	Adequate dietary intake of calcium, or hypercalcaemia evident on blood tests.
<b>Vitamin D levels inadequate</b>	<p><u>Prescribe:</u> oral colecalciferol 50,000 units once weekly for 6 weeks</p> <p><b>PLUS</b> Calcichew tablets 2 daily. <i>*annotate discharge letter for GP to review following high dose colecalciferol and prescribe dual supplementation</i></p>	<p><u>Prescribe:</u> oral colecalciferol 50,000 units once weekly for 6 weeks.</p> <p>May consider prescribing calcium supplementation in addition based on clinical judgement. <i>*annotate discharge letter for GP if clinical reason why additional calcium supplementation is NOT recommended.</i></p>
<b>Vitamin D levels in normal range</b>	<p><u>Prescribe:</u> Calci-D tablets, 1 daily <b>OR</b> Adcal D3 Caplets 2 TWICE DAILY</p>	<p><u>Prescribe:</u> Colecalciferol 1000 – 2000 units daily <b>OR</b> Colecalciferol 25,000 units ONCE a MONTH May consider prescribing dual supplementation based on clinical judgement. <i>*annotate discharge letter for GP if clinical reason why additional calcium supplementation is NOT recommended.</i></p>

For additional guidance on management of Vitamin D deficiency see Barnsley guidelines

### References:

1. National Osteoporosis Guideline Group (NOGG) 2017. Clinical Guideline for the prevention and Treatment of Osteoporosis. Accessed via <https://www.sheffield.ac.uk/NOGG/NOGG%20Guideline%202017.pdf>
2. Royal Osteoporosis Society, August 2019. Effective Secondary Prevention of Fragility Fractures: Clinical Standards for Fracture Liaison Services. Accessed via <https://theros.org.uk/healthcare-professionals/fracture-liaison-services/>
3. SIGN Guideline 142: Management of Osteoporosis and the prevention of fragility fractures, 2020 Update. Accessed via <https://www.sign.ac.uk/assets/sign142.pdf>