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Flowchart for low alkaline phosphatase (ALK)

(GP)

Low ALK

ALK < 40 U/l
Ref range is method dependent
(Rotherham = 40 - 150)

Blood sample contaminated with EDTA or citrate?

Check - **calcium**
- **magnesium**

? On HRT implant
? On bisphosphonates

Recheck ALK

Request ALK check using **different method**

Bone Alkaline Phosphatase

Possibility of genetic hypophosphatasia?

Dental problems?
History of fractures?

If ALK > 20 U/l and no dental problems or history of fractures then no further action required

If ALK consistently < 20 U/l or presence of dental problems / history of fractures then investigate further

Blood tests (NB check if on vitamins / supplements first)

FBC	**Zinc**
Vitamin B6	**IGF-1**
Vitamin B12	**Growth Hormone**
Vitamin C	**TSH**

Urine tests

NTX
Phosphoethanolamine

Discuss with Metabolic Bone Unit for further advice on investigations and management