Eligible adults with diabetes and chronic kidney disease recruited from NARP clinics (AHS) and enrolled in RCT (n=120).

Baseline:
- Randomize to either 2,000IU/d (n=60) or 40,000IU/m (n=60) for 6 months, and provide 3 month supply.
- Anthropometric and Demographics: postal code, age, gender, diabetes duration, comorbidities, medications and supplement use, height, weight, BMI.
- DXA: Absolute BMD and T-score at the spine (L1-L4), left total hip, and left femoral neck.
- Questionnaires: 3 day food and activity record, sunlight exposure and quality of life (SF-36).
- Blood collection: HbA1c, BG, eGFR, creatinine, urea, albumin, ALP, calcium, magnesium, phosphorus, 25(OH)D (routine clinical blood work); PTH, 1,25(OH)2D, OC, BAP, NTx, FGF-23.

3 month Follow-up:
- Anthropometric and Demographics: medications and supplement use, height, weight, BMI.
- Questionnaires: 3 day food and activity record, sunlight exposure, adherence and acceptance survey.
- Blood collection: routine clinical blood work and 1,25(OH)2D.
- Pill count: provide final 3 month supply of vitamin D.

6 month Follow-up:
- Anthropometric and Demographics: medications and supplement use, height, weight, BMI.
- Questionnaires: 3 day food and activity record, sunlight exposure, quality of life (SF-36), adherence and acceptance survey.
- Blood collection: routine clinical blood work; PTH, 1,25(OH)2D, OC, BAP, NTx, FGF-23.
- Pill count