Assessed for eligibility (n=140)

Medical examination (n=85)

Randomized (n=85)

Assigned to vitamin D group (n=42)
- Lost to follow up (n=3)
  - Non compliant (n=1)
  - Pregnancy (n=1)
  - Follow weight reduction program (n=1)

Completed 12-week follow-up (n=39)
Analyses (n=39)

Assigned to placebo group (n=43)
- Lost to follow up (n=5)
  - Non compliant (n=4)
  - Take OCP (n=1)

Completed 12-week follow-up (n=38)
Analyses (n=38)

Excluded (n=55)
Did not meet inclusion criteria