

Supplementary Appendix 1. Literature search terms and Participants, Intervention, Comparison, Outcomes, Time, Setting, and Study Design (PICOTS-SD) description. The keywords for the literature search were as follows: (aerobic OR endurance OR weight-bearing OR muscle strength OR resistance OR power OR impact OR plyometric OR exercises OR physical activity OR balance OR stability OR flexibility OR jump OR walking OR running) AND (BMD OR bone metabolic markers OR fracture OR fall OR posture) AND (osteoporosis). In the review stage, the committee used the PICOTS-SD framework to determine the scope of inclusion in the literature for the use of systematic review methods (Supplementary Table 1).

Supplementary Table 1. Participants, Intervention, Comparison, Outcomes, Time, Setting, and Study Design for determining the scope of literature

Category	Research questions
Participants	The osteoporosis patients (both male and female)
Intervention	aerobic OR endurance OR weight-bearing OR muscle strength OR resistance OR power OR impact OR plyometric OR exercises OR physical activity OR balance OR stability OR flexibility OR jump OR walking OR running
Comparison	Non-exercise control, routine care, etc.
Outcomes	BMD OR bone metabolic markers OR fracture OR fall OR posture, etc.
Time	Pre- and post- test studies, etc.
Setting	Home, hospital, gym, community, etc.
Study design	RCT

BMD, bone mineral density; RCT, randomized controlled trial.