Web Table 1. Summary of covariates selected by the Deletion/Substitution/Addition algorithm for logistic models of physical activity A, and hip fracture Y.

Model, estimator	**Covariates included in *W***
$E(A \mid W)$*, IPTW	age^2 x height, excellent/good health x walking speed, total difficulty with 5 daily activities, white x Pittsburgh clinical site
$E(Y \mid A,W)$, G-Computation, T-MLE	total hip bone mineral density, age
$E(A = low \mid W)$, T-MLE	total difficulty with 5 daily activities, age^3, excellent/good health, Pittsburgh clinical site, walking speed, San Diego clinical site, unable to complete narrow walk, current smoker
$E(A = \text{mod}\,erate \mid W)$, T-MLE	total difficulty with 5 daily activities^2, Pittsburgh clinical site, age^2, age^3, unable to complete narrow walk, current smoker, unable to complete 5 chair stands
$E(A = high \mid W)$, T-MLE	age^3, excellent/good health, total difficulty with 5 daily activities, weight, total hip bone mineral density, history of diabetes, fall in previous year, history of stroke, history of Parkinson's Disease, walking speed

Abbreviations: IPTW, inverse probability of treatment weighting; T-MLE, targeted maximum likelihood estimation; *W*, set of baseline confounders.
*multinomial

Web Table 2. Odds ratios (OR) from multivariable logistic regression models and hazard ratios (HR) from multivariable Cox proportional hazards (PH) regression models for hip fracture in relation to physical activity level.

Physical Activity	**Multivariable Logistic Model* OR (95% CI)**	**Multivariable Cox PH Model* HR (95% CI)**
Low	1.00 (reference)	1.00 (reference)
Moderate	1.01 (0.60-1.68)	1.07 (0.66-1.72)
High	0.97 (0.50-1.88)	1.01 (0.54-1.88)

* adjusted for age (y), weight (kg) , clinical site, race (white/other), smoking status (never/past/current), self-reported health (excellent/good vs. fair/poor/very poor), walking speed (m/s), femoral neck BMD (g/cm^2), history of non-trauma fracture after age 50, fall in the previous year, history of myocardial infarction, history of stroke. These covariates represent a standard set of variables often used in multivariable analyses of physical activity and hip fracture to adjust for confounding.