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**Supporting Table 1.** Age specific incidence rates per 100,000 per year for leg fractures: femur (not neck), neck of femur, lower leg, and ankle in post-menopausal women

Age (years)	Person Years	Femur (not neck)		Neck of femur		Lower leg		Ankle	
		Incident cases	Incidence rate per 100,000 (95% CI)	Incident cases	Incidence rate per 100,000 (95% CI)	Incident cases	Incidence rate per 100,000 (95% CI)	Incident cases	Incidence rate per 100,000 (95% CI)
50-54	469,406	20	5.4 (2.4-8.5)	86	16.2 (11.9-20.6)	79	19.8 (14.1-25.6)	250	50.8 (42.9-58.7)
55-59	3,376,760	148	4.3 (3.6-5.0)	873	25.3 (23.6-26.9)	669	19.6 (18.1-21.1)	2250	65.6 (62.9-68.4)
60-64	4,178,337	290	7.0 (6.2-7.8)	2222	53.4 (51.1-55.6)	981	23.5 (22.0-24.9)	3401	81.5 (78.7-84.2)
65-69	2,824,762	313	11.5 (10.2-12.8)	2662	98.2 (94.4-102.0)	838	29.7 (27.7-31.8)	2540	89.8 (86.3-93.4)
70-74	1,273,714	292	25.2 (22.1-28.2)	2665	227.4 (218.3-236.5)	501	40.3 (36.6-44.0)	1357	109.6 (103.5-115.8)
75-79	231,944	80	30.2 (22.6-37.8)	1027	484.2 (446.9-521.4)	112	50.8 (38.2-63.4)	254	1116.0 (97.6-134.9)

**Supporting Table 2.** Age specific incidence rates per 100,000 per year for arm fractures: forearm (not wrist), wrist, and humerus in post-menopausal women

Age (years)	Forearm (not wrist)			Wrist		Humerus	
	Person Years	Incident cases	Incidence rate per 100,000 (95% CI)	Incident cases	Incidence rate per 100,000 (95% CI)	Incident cases	Incidence rate per 100,000 (95% CI)
50-54	469,406	62	12.3 (8.2-16.3)	272	50.7 (43.4-57.9)	60	12.9 (8.7-17.1)
55-59	3,376,760	544	15.9 (14.6-17.3)	2761	80.2 (77.2-83.2)	572	16.4 (15.1-17.8)
60-64	4,178,337	893	21.4 (20.0-22.8)	4938	118.3 (115.0-121.6)	1334	32.0 (30.3-33.7)
65-69	2,824,762	794	28.8 (26.7-30.8)	4487	161.9 (157.1-166.7)	1387	50.1 (47.5-52.8)
70-74	1,273,714	471	37.9 (34.3-41.5)	2674	217.2 (208.5-225.8)	1158	95.6 (89.7-101.4)
75-79	231,944	134	55.6 (44.2-67.0)	627	285.6 (256.4-314.8)	337	153.8 (132.9-174.7)

**Supporting Table 3.** Adjusted<sup>a</sup> relative risks of femur (not neck), neck of femur, lower leg, and ankle fractures in women, cross-classified by both BMI and strenuous physical activity, and BMI and any activity

BMI (kg/m <sup>2</sup> )	Strenuous Physical Activity			<i>P</i> for interaction	Any activity				<i>P</i> for interaction
	Rarely/never active	At most once per week RR (gsCI)	More than once per week RR (gsCI)		Rarely/never active	At most once per week RR (gsCI)	2-3 times per week RR (gsCI)	More than 3 times per week RR (gsCI)	
<b>Femur (not neck)</b>									
<25.0	1.00 (0.88-1.13) <sup>c</sup>	0.67 (0.56-0.81)	0.61 (0.49-0.76)	.13 <sup>b</sup>	1.00 (0.82-1.22) <sup>c</sup>	0.58 (0.45-0.75)	0.56 (0.44-0.71)	0.81 (0.69-0.96)	.52 <sup>c</sup>
25.0-29.9	0.94 (0.83-1.08)	0.61 (0.49-0.76)	0.72 (0.56-0.93)		0.85 (0.69-1.03)	0.59 (0.46-0.75)	0.67 (0.53-0.85)	0.81 (0.67-0.98)	
30.0+	1.18 (1.01-1.38)	1.16 (0.90-1.50)	0.80 (0.54-1.18)		1.16 (0.95-1.42)	0.93 (0.72-1.21)	0.79 (0.56-1.10)	0.91 (0.68-1.21)	
<b>Neck of femur</b>									
<25.0	1.00 (0.96-1.04) <sup>c</sup>	0.75 (0.71-0.79)	0.67 (0.63-0.72)	.04 <sup>b</sup>	1.00 (0.94-1.06) <sup>c</sup>	0.81 (0.76-0.87)	0.73 (0.68-0.78)	0.84 (0.80-0.88)	.05 <sup>c</sup>
25.0-29.9	0.61 (0.58-0.64)	0.49 (0.46-0.53)	0.46 (0.42-0.50)		0.58 (0.53-0.62)	0.49 (0.45-0.53)	0.51 (0.47-0.55)	0.54 (0.50-0.58)	
30.0+	0.47 (0.43-0.50)	0.43 (0.38-0.48)	0.36 (0.30-0.43)		0.46 (0.41-0.50)	0.39 (0.34-0.44)	0.39 (0.34-0.46)	0.47 (0.42-0.53)	
<b>Lower Leg</b>									
<25.0	1.00 (0.92-1.09) <sup>c</sup>	0.95 (0.86-1.05)	0.99 (0.89-1.11)	.52 <sup>b</sup>	1.00 (0.87-1.15) <sup>c</sup>	0.88 (0.77-1.01)	0.80 (0.71-0.91)	1.01 (0.92-1.11)	.52 <sup>c</sup>
25.0-29.9	1.07 (0.98-1.16)	1.12 (1.01-1.24)	1.07 (0.93-1.22)		1.09 (0.96-1.24)	1.03 (0.91-1.17)	0.89 (0.78-1.02)	1.09 (0.98-1.22)	
30.0+	1.17 (1.05-1.30)	1.11 (0.94-1.31)	1.40 (1.16-1.70)		1.20 (1.04-1.38)	1.10 (0.93-1.29)	0.95 (0.78-1.16)	1.23 (1.04-1.46)	
<b>Ankle</b>									
<25.0	1.00 (0.95-1.05) <sup>c</sup>	0.97 (0.91-1.03)	1.03 (0.96-1.10)	.05 <sup>b</sup>	1.00 (0.92-1.09) <sup>c</sup>	0.88 (0.81-0.95)	0.91 (0.85-0.98)	0.96 (0.92-1.03)	.58 <sup>c</sup>
25.0-29.9	1.40 (1.34-1.47)	1.48 (1.40-1.56)	1.49 (1.39-1.60)		1.35 (1.25-1.45)	1.31 (1.22-1.40)	1.30 (1.21-1.39)	1.47 (1.39-1.56)	
30.0+	1.63 (1.53-1.72)	1.80 (1.67-1.95)	1.53 (1.36-1.71)		1.52 (1.40-1.65)	1.54 (1.41-1.67)	1.49 (1.35-1.65)	1.61 (1.47-1.76)	

BMI indicates body mass index; gsCI, group-specific confidence interval for RR; and RR, relative risk.

<sup>a</sup> Adjusted for study region, age, socio-economic status, smoking, alcohol consumption, use of hormone therapy, height, heart disease/thrombosis, diabetes mellitus, thyroid disease, rheumatoid arthritis/osteoarthritis, and exercise

<sup>b</sup> Likelihood ratio test for interaction between categories of BMI and strenuous activity

<sup>c</sup> Likelihood ratio test for interaction between categories of BMI and any activity.

**Supporting Table 4.** Adjusted<sup>a</sup> relative risks of forearm (not wrist), wrist, and humerus fractures in women, cross-classified by both BMI and strenuous physical activity, and BMI and any activity

BMI (kg/m <sup>2</sup> )	Strenuous Physical Activity			<i>P</i> <sub>for interaction</sub>	Any Activity			<i>P</i> <sub>for interaction</sub>	
	Rarely/never active	At most once per week RR (gsCI)	More than once per week RR (gsCI)		Rarely/never active	At most once per week RR (gsCI)	2-3 times per week RR (gsCI)		More than 3 times per week RR (gsCI)
<b>Forearm (not wrist)</b>									
<25.0	1.00 (0.92-1.08)	0.93 (0.84-1.02)	1.02 (0.92-1.13)	.54 <sup>b</sup>	1.00 (0.87-1.15)	1.09 (0.96-1.23)	0.86 (0.76-0.97)	1.10 (1.00-1.20)	.03 <sup>c</sup>
25.0-29.9	0.83 (0.75-0.91)	0.78 (0.69-0.88)	0.80 (0.63-0.93)		0.88 (0.76-1.02)	0.85 (0.74-0.98)	0.90 (0.79-1.03)	0.82 (0.72-0.93)	
30.0+	0.89 (0.79-1.00)	0.72 (0.59-0.87)	0.72 (0.55-0.93)		0.92 (0.78-1.09)	0.77 (0.63-0.93)	0.85 (0.68-1.05)	0.75 (0.60-0.93)	
<b>Wrist</b>									
<25.0	1.00 (0.97-1.03)	0.99 (0.95-1.03)	1.03 (0.99-1.08)	.83 <sup>b</sup>	1.00 (0.94-1.06)	0.90 (0.86-0.95)	0.92 (0.88-0.96)	0.95 (0.92-0.99)	.88 <sup>c</sup>
25.0-29.9	0.76 (0.75-0.81)	0.79 (0.75-0.83)	0.80 (0.75-0.85)		0.76 (0.71-0.81)	0.73 (0.69-0.77)	0.73 (0.69-0.78)	0.74 (0.70-0.78)	
30.0+	0.61 (0.58-0.65)	0.61 (0.56-0.67)	0.59 (0.53-0.67)		0.59 (0.54-0.64)	0.56 (0.51-0.62)	0.55 (0.49-0.61)	0.60 (0.54-0.66)	
<b>Humerus</b>									
<25.0	1.00 (0.94-1.07)	0.92 (0.85-1.00)	0.85 (0.77-0.93)	.84 <sup>b</sup>	1.00 (0.90-1.11)	0.95 (0.85-1.05)	0.92 (0.83-1.01)	0.96 (0.89-1.04)	.76 <sup>c</sup>
25.0-29.9	1.03 (0.97-1.10)	0.90 (0.82-0.99)	0.84 (0.74-0.94)		0.97 (0.87-1.08)	0.92 (0.83-1.02)	0.90 (0.81-1.01)	1.04 (0.95-1.14)	
30.0+	1.17 (1.08-1.27)	1.10 (0.96-1.25)	0.90 (0.75-1.09)		1.08 (0.96-1.22)	1.09 (0.95-1.24)	1.01 (0.86-1.18)	1.23 (1.08-1.41)	

BMI indicates body mass index; gsCI, group-specific confidence interval for RR; and RR, relative risk.

<sup>a</sup> Adjusted for study region, age, socio-economic status, smoking, alcohol consumption, use of hormone therapy, height, heart disease/thrombosis, diabetes mellitus, thyroid disease, rheumatoid arthritis/osteoarthritis, and exercise

<sup>b</sup> Likelihood ratio test for interaction between categories of BMI and strenuous activity

<sup>c</sup> Likelihood ratio test for interaction between categories of BMI and any activity.

**Supporting Table 5.** Sensitivity analyses of hormone therapy for relative risk of femur (not neck), neck of femur, lower leg, and ankle fractures in post-menopausal women according to strenuous physical activity, and any activity <sup>a</sup>

	Femur (not neck)		Neck of femur		Lower leg		Ankle	
	Current users of hormone therapy RR (95% gsCI)	Never/past hormone therapy use RR (95% gsCI)	Current users of hormone therapy RR (95% gsCI)	Never/past hormone therapy use RR (95% gsCI)	Current users of hormone therapy RR (95% gsCI)	Never/past hormone therapy use RR (95% gsCI)	Current users of hormone therapy RR (95% gsCI)	Never/past hormone therapy use RR (95% gsCI)
<b>BMI (kg/m<sup>2</sup>)</b>								
<20.0	1.44 (0.88-2.37)	1.87 (1.41-2.52)	1.80 (1.57-2.07)	1.96 (1.81-2.21)	0.88 (0.60-1.27)	1.28 (1.04-1.56)	0.64 (0.49-0.82)	0.66 (0.56-0.79)
20.0-24.9	1.00 (0.83-1.20)	1.00 (0.88-1.13)	1.00 (0.94-1.06)	1.00 (0.97-1.04)	1.00 (0.90-1.11)	1.00 (0.93-1.07)	1.00 (0.94-1.06)	1.00 (0.96-1.04)
25.0-29.9	1.01 (0.83-1.23)	1.06 (0.94-1.19)	0.69 (0.64-0.74)	0.67 (0.64-0.70)	1.11 (0.99-1.24)	1.11 (1.04-1.19)	1.48 (1.40-1.56)	1.37 (1.32-1.42)
30.0-34.9	1.07 (0.77-1.48)	1.30 (1.10-1.54)	0.59 (0.51-0.68)	0.52 (0.49-0.56)	1.37 (1.14-1.63)	1.19 (1.07-1.32)	1.95 (1.79-2.13)	1.54 (1.45-1.63)
35+	1.43 (0.88-2.33)	1.87 (1.51-2.33)	0.65 (0.51-0.83)	0.48 (0.42-0.54)	1.61 (1.21-2.15)	1.12 (0.94-1.32)	1.70 (1.44-2.01)	1.45 (1.32-1.59)
<i>P</i> <sub>heterogeneity</sub>	.51	<.001	<.001	<.001	<.05	<.05	<.001	<.001
<i>P</i> <sub>interaction</sub>		.75		.14		<.05		<.001
<b>Strenuous Exercise</b>								
Rarely/never (inactive)	1.00 (0.82-1.22)	1.00 (0.83-1.16)	1.00 (0.93-1.07)	1.00 (0.96-1.04)	1.00 (0.88-1.13)	1.00 (0.93-1.08)	1.00 (0.94-1.07)	1.00 (0.96-1.04)
At most once per week	0.83 (0.66-1.04)	0.66 (0.57-0.77)	0.81 (0.75-0.87)	0.77 (0.74-0.81)	1.09 (0.97-1.23)	0.95 (0.88-1.03)	0.94 (0.88-1.01)	1.06 (1.02-1.11)
More than once per week	0.76 (0.57-1.02)	0.67 (0.56-0.80)	0.69 (0.62-0.76)	0.70 (0.66-0.75)	1.26 (1.09-1.47)	0.95 (0.86-1.05)	1.02 (0.94-1.11)	1.04 (0.98-1.10)
<i>P</i> <sub>heterogeneity</sub>	.25	<.001	<.001	<.001	.06	.57	.42	.12
<i>P</i> <sub>interaction</sub>		.51		.56	.34	.08		.003
<b>Any Activity</b>								
Rarely/never (inactive)	1.00 (0.76-1.32)	1.00 (0.86-1.16)	1.00 (0.90-1.11)	1.00 (0.95-1.06)	1.00 (0.83-1.20)	1.00 (0.90-1.11)	1.00 (0.91-1.10)	1.00 (0.94-1.07)
At most once per week	0.70 (0.53-0.91)	0.67 (0.56-0.80)	0.85 (0.78-0.94)	0.84 (0.79-0.89)	0.92 (0.791-0.6)	0.90 (0.82-0.99)	1.01 (0.93-1.09)	0.93 (0.88-0.98)
2-3 times per week	0.48 (0.34-0.67)	0.70 (0.59-0.83)	0.93 (0.85-1.02)	0.75 (0.71-0.809)	0.71 (0.61-0.84)	0.84 (0.76-0.93)	0.96 (0.88-1.04)	0.95 (0.90-1.00)
More than 3 times per week	0.90 (0.72-1.12)	0.83 (0.72-0.95)	1.03 (0.95-1.11)	0.83 (0.79-0.87)	0.86 (0.75-0.98)	1.05 (0.97-1.14)	1.15 (1.07-1.23)	1.00 (0.95-1.04)
<i>P</i> <sub>heterogeneity</sub>	<.05	<.05	<.05	<.001	<.05	<.001	<.05	.14
<i>P</i> <sub>interaction</sub>		.22		<.05	.62			.19

BMI indicates body mass index; gsCI, group-specific confidence interval for RR; and RR, relative risk.

<sup>a</sup> Adjusted for study region, age, socio-economic status, smoking, alcohol consumption, height, heart disease/thrombosis, diabetes mellitus, thyroid disease, rheumatoid arthritis/osteoarthritis, and BMI (for adjustment of strenuous activity and any activity), strenuous activity (for adjustment of BMI and any activity), or any activity (for adjustment of BMI and strenuous activity).



**Supporting Table 6.** Sensitivity analyses of hormone therapy for relative risk of forearm (not wrist), wrist, and humerus fractures in post-menopausal women according to BMI, strenuous physical activity, and any activity<sup>a</sup>

	Forearm (not wrist)		Wrist		Humerus	
	Current users of hormone therapy RR (95% gsCI)	Never/past hormone therapy use RR (95% gsCI)	Current users of hormone therapy RR (95% gsCI)	Never/past hormone therapy use RR (95% gsCI)	Current users of hormone therapy RR (95% gsCI)	Never/past hormone therapy use RR (95% gsCI)
<b>BMI (kg/m<sup>2</sup>)</b>						
<20.0	1.41 (1.03-1.91)	1.44 (1.19-1.73)	1.05 (0.90-1.22)	1.00 (1.16-1.37)	1.25 (0.96-1.63)	1.19 (1.00-1.40)
20.0-24.9	1.00 (0.90-1.12)	1.00 (0.94-1.07)	1.00 (0.95-1.05)	1.00 (0.97-1.03)	1.00 (0.91-1.09)	1.00 (0.95-1.06)
25.0-29.9	0.99 (0.87-1.11)	0.79 (0.74-0.85)	0.80 (0.75-0.84)	0.80 (0.77-0.82)	1.10 (1.00-1.21)	1.00 (0.95-1.06)
30.0-34.9	0.91 (0.72-1.15)	0.84 (0.75-0.95)	0.67 (0.60-0.75)	0.63 (0.60-0.67)	1.25 (1.07-1.47)	1.11 (1.02-1.21)
35+	0.73 (0.46-1.15)	0.82 (0.68-0.99)	0.65 (0.53-0.80)	0.54 (0.49-0.60)	1.52 (1.17-1.98)	1.25 (1.10-1.43)
<i>P</i> <sub>heterogeneity</sub>	.15	<.001	<.001	<.001	<.05	<.001
<i>P</i> <sub>interaction</sub>		.26		.19		.69
<b>Strenuous Exercise</b>						
Rarely/never (inactive)	1.00 (0.87-1.15)	1.00 (0.93-1.08)	1.00 (0.94-1.06)	1.00 (0.97-1.03)	1.00 (0.90-1.11)	1.00 (0.95-1.06)
At most once per week	1.15 (1.02-1.30)	0.85 (0.78-0.92)	1.03 (0.97-1.09)	1.00 (0.96-1.03)	0.99 (0.90-1.10)	0.89 (0.84-0.95)
More than once per week	1.06 (0.90-1.24)	0.95 (0.86-1.05)	1.05 (0.98-1.13)	1.02 (0.98-1.07)	0.82 (0.71-0.94)	0.83 (0.76-0.90)
<i>P</i> <sub>heterogeneity</sub>	.33	<.05	.60	.58	<.05	<.001
<i>P</i> <sub>interaction</sub>		<.05		.81		.52
<b>Any Activity</b>						
Rarely/never (inactive)	1.00 (0.81-1.24)	1.00 (0.89-1.12)	1.00 (0.91-1.09)	1.00 (0.95-1.05)	1.00 (0.86-1.16)	1.00 (0.92-1.09)
At most once per week	0.92 (0.78-1.09)	1.01 (0.92-1.11)	0.85 (0.79-0.92)	0.95 (0.91-0.99)	0.83 (0.73-0.95)	0.99 (0.92-1.07)
2-3 times per week	0.99 (0.84-1.16)	0.85 (0.77-0.94)	0.83 (0.77-0.89)	0.97 (0.93-1.01)	0.89 (0.78-1.01)	0.93 (0.86-1.00)
More than 3 times per week	1.06 (0.93-1.22)	0.94 (0.87-1.03)	0.93 (0.87-0.99)	0.97 (0.93-1.00)	0.95 (0.85-1.07)	1.06 (0.99-1.13)
<i>P</i> <sub>heterogeneity</sub>	.63	.09	<.001	.53	.23	.07
<i>P</i> <sub>interaction</sub>		.11		<.05		.44

BMI indicates body mass index; gsCI, group-specific confidence interval for RR; and RR, relative risk.

<sup>a</sup> Adjusted for study region, age, socio-economic status, smoking, alcohol consumption, height, heart disease/thrombosis, diabetes mellitus, thyroid disease, rheumatoid arthritis/osteoarthritis, and BMI (for adjustment of strenuous activity and any activity), strenuous activity (for adjustment of BMI and any activity), or any activity (for adjustment of BMI and strenuous activity).

**Supporting Table 7.** Sensitivity analyses of adjusted<sup>a</sup> relative risks of femur (not neck), neck of femur, lower leg, and ankle fractures in post-menopausal women according to BMI, stratified by age-bands.

BMI (kg/m <sup>2</sup> )	Femur (not neck)			Neck of Femur			Lower Leg			Ankle		
	Population at risk	Incident cases	Adjusted RR (95% gsCI)	Population at risk	Incident cases	Adjusted RR (95% gsCI)	Population at risk	Incident cases	Adjusted RR (95% gsCI)	Population at risk	Incident cases	Adjusted RR (95% gsCI)
<b>50-64.9 years</b>												
<20.0	40 143	29	1.83 (1.27-2.65)	40 143	336	2.11 (1.89-2.35)	40 142	73	1.21 (0.96-1.52)	40 142	104	0.61 (0.50-0.74)
20.0-24.9	476 464	168	1.00 (0.85-1.17)	476 468	1646	1.00 (0.95-1.05)	476 471	684	1.00 (0.92-1.08)	476 466	2004	1.00 (0.96-1.05)
25.0-29.9	398 181	145	1.01 (0.86-1.18)	398 184	857	0.62 (0.58-0.67)	398 182	626	1.15 (1.07-1.25)	398 188	2373	1.51 (1.45-1.57)
30.0-34.9	141 028	67	1.19 (0.93-1.51)	141 028	231	0.43 (0.38-0.50)	141 028	240	1.23 (1.08-1.40)	141 033	1024	1.87 (1.76-1.99)
35+	57 956	46	1.71 (1.26-2.31)	57 956	101	0.40 (0.33-0.49)	57 958	99	1.16 (0.94-1.41)	57 956	376	1.65 (1.49-1.83)
<i>P</i> <sub>heterogeneity</sub>			<.05			<.001			<.05			<.001
<b>65-69.9</b>												
<20.0	26 106	16	1.77 (1.08-2.90)	26 122	240	2.05 (1.81-2.34)	26 107	26	0.96 (0.65-1.41)	26 106	46	0.65 (0.48-0.86)
20.0-24.9	322 792	102	1.00 (0.82-1.23)	322 850	1253	1.00 (0.94-1.06)	322 797	311	1.00 (0.89-1.12)	322 799	875	1.00 (0.93-1.07)
25.0-29.9	283 311	114	1.15 (0.96-1.38)	283 340	829	0.71 (0.67-0.76)	283 319	315	1.12 (1.00-1.24)	283 328	1055	1.35 (1.27-1.43)
30.0-34.9	98 929	53	1.36 (1.04-1.80)	98 941	232	0.53 (0.46-0.60)	98 932	134	1.30 (1.09-1.55)	98 934	416	1.50 (1.36-1.66)
35+	37 785	26	1.58 (1.06-2.35)	37 789	90	0.50 (0.40-0.61)	37 784	50	1.21 (0.91-1.61)	37 784	144	1.36 (1.15-1.61)
<i>P</i> <sub>heterogeneity</sub>			.10			<.001			.15			<.001
<b>70+</b>												
<20.0	13 102	20	1.60 (1.03-2.49)	13 114	272	1.53 (1.36-1.73)	13 100	24	1.16 (0.78-1.74)	13 099	42	0.83 (0.61-1.13)
20.0-24.9	163 770	140	1.00 (0.84-1.19)	163 836	1915	1.00 (0.95-1.05)	163 762	233	1.00 (0.87-1.15)	163 786	599	1.00 (0.92-1.09)
25.0-29.9	152 767	135	1.01 (0.85-1.19)	152 824	1271	0.71 (0.67-0.74)	152 766	234	1.04 (0.92-1.18)	152 778	677	1.22 (1.14-1.32)
30.0-34.9	53 156	60	1.22 (0.94-1.57)	53 180	418	0.65 (0.59-0.72)	53 160	98	1.20 (0.98-1.47)	53 162	235	1.25 (1.09-1.42)
35+	19 017	36	2.02 (1.43-2.84)	19 020	136	0.61 (0.52-0.73)	19 019	42	1.40 (1.02-1.92)	19 019	86	1.36 (1.09-1.64)
<i>P</i> <sub>heterogeneity</sub>			<.05			<.001			.30			<.001

BMI indicates body mass index; gsCI, group-specific confidence interval for RR; and RR, relative risk.

<sup>a</sup> Adjusted for study region, age, socio-economic status, smoking, alcohol consumption, height, heart disease/thrombosis, diabetes mellitus, thyroid disease, rheumatoid arthritis/osteoarthritis, strenuous activity and any activity.

**Supporting Table 8.** Sensitivity analyses of adjusted<sup>a</sup> relative risks of forearm (not wrist), wrist and humerus fracture in post-menopausal women according to BMI, stratified by age-bands.

BMI (kg/m <sup>2</sup> )	Forearm (not wrist)			Wrist			Humerus		
	Population at risk	Incident cases	Adjusted RR (95% gsCI)	Population at risk	Incident cases	Adjusted RR (95% gsCI)	Population at risk	Incident cases	Adjusted RR (95% gsCI)
<b>50-64.9 years</b>									
<20.0	40 142	83	1.40 (1.13-1.75)	40 144	363	1.11 (1.00-1.23)	40 146	93	1.30 (1.06-1.59)
20.0-24.9	476 466	681	1.00 (0.92-1.08)	476 468	3955	1.00 (0.97-1.03)	476 467	784	1.00 (0.93-1.08)
25.0-29.9	398 181	473	0.88 (0.81-0.96)	398 192	2612	0.82 (0.78-0.85)	398 184	674	1.07 (0.99-1.15)
30.0-34.9	141 027	171	0.90 (0.77-1.04)	141 031	735	0.65 (0.60-0.70)	141 028	272	1.19 (1.05-1.34)
35+	55 957	80	0.98 (0.78-1.23)	57 956	273	0.57 (0.51-0.65)	57 957	138	1.36 (1.14-1.62)
<i>P</i> <sub>heterogeneity</sub>			<.05			<.001			<.05
<b>65-69.9</b>									
<20.0	26 105	45	1.49 (1.11-2.01)	26 119	214	1.24 (1.08-1.41)	26 112	60	1.29 (1.00-1.67)
20.0-24.9	322 811	360	1.00 (0.90-1.11)	322 844	2135	1.00 (0.96-1.05)	322 815	535	1.00 (0.91-1.09)
25.0-29.9	283 314	245	0.75 (0.66-0.85)	283 362	1529	0.79 (0.75-0.83)	283 341	497	1.02 (0.94-1.12)
30.0-34.9	98 933	116	0.99 (0.82-1.19)	98 936	446	0.65 (0.59-0.71)	98 933	195	1.11 (0.97-1.29)
35+	37 786	25	0.56 (0.37-0.83)	37 788	137	0.53 (0.45-0.63)	37 787	96	1.41 (1.15-1.74)
<i>P</i> <sub>heterogeneity</sub>			<.001			<.001			<.05
<b>70+</b>									
<20.0	13 099	33	1.42 (1.00-2.00)	13 109	182	1.34 (1.15-1.55)	13 104	54	0.99 (0.76-1.30)
20.0-24.9	163 764	280	1.00 (0.88-1.13)	163 816	1617	1.00 (0.95-1.05)	163 789	614	1.00 (0.92-1.09)
25.0-29.9	152 765	234	0.88 (0.77-1.00)	152 797	1184	0.77 (0.73-0.82)	152 788	586	1.00 (0.93-1.09)
30.0-34.9	53 154	59	0.63 (0.48-0.81)	53 162	327	0.62 (0.56-0.69)	53 164	228	1.09 (0.95-1.25)
35+	19 018	27	0.82 (0.56-1.21)	19 022	100	0.56 (0.46-0.68)	19 021	85	1.16 (0.93-1.44)
<i>P</i> <sub>heterogeneity</sub>			<.05			<.001			.67

BMI indicates body mass index; gsCI, group-specific confidence interval for RR; and RR, relative risk.

<sup>a</sup> Adjusted for study region, age, socio-economic status, smoking, alcohol consumption, height, heart disease/thrombosis, diabetes mellitus, thyroid disease, rheumatoid arthritis/osteoarthritis, strenuous activity and any activity.

**Supporting Table 9.** Sensitivity analyses of adjusted<sup>a</sup> relative risks femur (not neck), neck of femur, lower leg, and ankle fracture in post-menopausal women according to strenuous activity, stratified by age-bands.

Strenuous activity	Femur (not neck)			Neck of Femur			Lower Leg			Ankle		
	Population at risk	Incident cases	Adjusted RR (95% gsCI)	Population at risk	Incident cases	Adjusted RR (95% gsCI)	Population at risk	Incident cases	Adjusted RR (95% gsCI)	Population at risk	Incident cases	Adjusted RR (95% gsCI)
<b>50-64.9</b>												
Rarely/never (inactive)	529914	276	1.00 (0.85-1.18)	529915	1826	1.00 (0.94-1.06)	529918	821	1.00 (0.91-1.09)	529920	2771	1.00 (0.95-1.05)
At most once per week	345709	104	0.71 (0.59-0.87)	345711	815	0.73 (0.68-0.78)	345710	519	0.99 (0.91-1.08)	345713	1816	1.01 (0.96-1.05)
More than once per week	238149	75	0.69 (0.54-0.87)	238153	530	0.64 (0.59-0.70)	238153	382	1.02 (0.92-1.14)	238152	1294	1.04 (0.98-1.10)
<i>P<sub>heterogeneity</sub></i>			<.05			<.001			.91			.64
<b>65-69.9</b>												
Rarely/never (inactive)	374225	199	1.00 (0.82-1.21)	374293	1567	1.00 (0.94-1.07)	374228	444	1.00 (0.89-1.13)	374243	1240	1.00 (0.93-1.07)
At most once per week	232448	71	0.83 (0.65-1.04)	232477	642	0.77 (0.71-0.83)	232460	220	0.95 (0.83-1.09)	232457	775	1.10 (1.02-1.18)
More than once per week	162250	41	0.66 (0.48-0.90)	162272	435	0.70 (0.64-0.78)	162251	172	1.02 (0.87-1.20)	162251	521	1.06 (0.96-1.16)
<i>P<sub>heterogeneity</sub></i>			.15			<.001			.77			.18
<b>70+</b>												
Rarely/never (inactive)	204344	258	1.00 (0.85-1.17)	204444	2444	1.00 (0.95-1.05)	204339	353	1.00 (0.87-1.14)	204356	865	1.00 (0.92-1.09)
At most once per week	114982	71	0.63 (0.50-0.80)	115021	927	0.83 (0.78-0.89)	114983	162	1.03 (0.88-1.20)	114995	456	1.04 (0.95-1.14)
More than once per week	82846	62	0.70 (0.54-0.91)	82509	642	0.75 (0.69-0.81)	82485	116	1.03 (0.85-1.25)	82493	318	0.98 (0.87-1.10)
<i>P<sub>heterogeneity</sub></i>			<.05			<.001			.96			.72

gsCI indicates group-specific confidence interval for RR; and RR indicates relative risk.

<sup>a</sup> Adjusted for study region, age, socio-economic status, smoking, alcohol consumption, height, heart disease/thrombosis, diabetes mellitus, thyroid disease, rheumatoid arthritis/osteoarthritis, BMI and any activity.

**Supporting Table 10.** Sensitivity analyses of adjusted<sup>a</sup> relative risks forearm (not wrist), wrist and humerus fracture in post-menopausal women according to strenuous activity, stratified by age-bands.

Strenuous activity	Forearm (not wrist)			Wrist			Humerus		
	Population at risk	Incident cases	Adjusted RR (95% gsCI)	Population at risk	Incident cases	Adjusted RR (95% gsCI)	Population at risk	Incident cases	Adjusted RR (95% gsCI)
<b>50-64.9</b>									
Rarely/never (inactive)	529911	700	1.00 (0.91-1.10)	529914	3535	1.00 (0.96-1.04)	529918	1027	1.00 (0.92-1.08)
At most once per week	345709	446	0.91 (0.83-1.00)	345715	2506	1.03 (0.99-1.07)	345713	560	0.87 (0.80-0.95)
More than once per week	238153	342	1.03 (0.91-1.16)	238162	1897	1.11 (1.06-1.17)	238151	374	0.82 (0.74-0.92)
<i>P<sub>heterogeneity</sub></i>			.22			<.05			<.05
<b>65-69.9</b>									
Rarely/never (inactive)	374237	426	1.00 (0.89-1.13)	374292	2201	1.00 (0.94-1.05)	374263	765	1.00 (0.91-1.10)
At most once per week	232459	221	0.87 (0.76-0.99)	232484	1325	0.98 (0.93-1.04)	232464	374	0.94 (0.85-1.04)
More than once per week	162253	144	0.76 (0.64-0.90)	162273	935	0.96 (0.89-1.02)	162261	244	0.83 (0.73-0.95)
<i>P<sub>heterogeneity</sub></i>			<.05			.60			.08
<b>70+</b>									
Rarely/never (inactive)	204328	328	1.00 (0.88-1.14)	204391	1805	1.00 (0.94-1.06)	204370	896	1.00 (0.92-1.09)
At most once per week	114983	162	0.97 (0.83-1.13)	115011	926	0.98 (0.92-1.05)	115004	408	0.94 (0.85-1.03)
More than once per week	82849	143	1.15 (0.92-1.43)	82504	679	0.94 (0.87-1.02)	82492	263	0.81 (0.72-0.92)
<i>P<sub>heterogeneity</sub></i>			.32			.45			<.05

gsCI indicates group-specific confidence interval for RR; and RR indicates relative risk.

<sup>a</sup> Adjusted for study region, age, socio-economic status, smoking, alcohol consumption, height, heart disease/thrombosis, diabetes mellitus, thyroid disease, rheumatoid arthritis/osteoarthritis, BMI and any activity.

**Supporting Table11.** Sensitivity analyses of adjusted<sup>a</sup> relative risks femur (not neck), neck of femur, lower leg, and ankle fracture in post-menopausal women according to any activity, stratified by age-bands.

Any activity	Femur (not neck)			Neck of Femur			Lower Leg			Ankle		
	Population at risk	Incident cases	Adjusted RR (95% gsCI)	Population at risk	Incident cases	Adjusted RR (95% gsCI)	Population at risk	Incident cases	Adjusted RR (95% gsCI)	Population at risk	Incident cases	Adjusted RR (95% gsCI)
<b>50-64.9</b>												
Rarely/never	213464	130	1.00 (0.83-1.20)	213464	790	1.00 (0.93-1.08)	213465	351	1.00 (0.90-1.11)	213465	1166	1.00 (0.94-1.06)
At most once per week	243701	83	0.63 (0.51-0.78)	243702	633	0.74 (0.68-0.80)	243702	356	0.90 (0.81-1.00)	243703	1275	0.96 (0.91-1.01)
2-3 times week	238931	60	0.49 (0.38-0.64)	238933	522	0.61 (0.56-0.67)	238932	330	0.89 (0.80-0.99)	238933	1187	0.97 (0.91-1.03)
More than 3 times per week	311925	135	0.82 (0.69-0.98)	311928	896	0.73 (0.68-0.78)	311929	518	1.06 (0.98-1.16)	311930	1700	1.10 (1.05-1.16)
<i>P</i> <sub>heterogeneity</sub>			<.001			<.001			<.05			<.001
<b>65-69.9</b>												
Rarely/never	141815	98	1.00 (0.81-1.23)	141840	619	1.00 (0.92-1.09)	14817	177	1.00 (0.86-1.17)	141820	485	1.00 (0.91-1.10)
At most once per week	155983	51	0.58 (0.44-0.76)	156001	488	0.83 (0.76-0.90)	155987	156	0.91 (0.78-1.07)	155988	501	0.99 (0.91-1.08)
2-3 times week	163739	52	0.57 (0.43-0.74)	163759	462	0.70 (0.64-0.77)	163742	137	0.75 (0.63-0.89)	163743	539	0.99 (0.91-1.08)
More than 3 times per week	220148	73	0.57 (0.45-0.71)	220186	748	0.76 (0.70-0.81)	220154	253	1.00 (0.88-1.14)	220158	735	1.01 (0.94-1.09)
<i>P</i> <sub>heterogeneity</sub>			<.001			<.001			<.05			.99
<b>70+</b>												
Rarely/never	73044	103	1.00 (0.81-1.23)	73084	913	1.00 (0.93-1.07)	73044	142	1.00 (0.84-1.19)	73052	306	1.00 (0.89-1.12)
At most once per week	74299	52	0.55 (0.42-0.72)	74326	614	0.74 (0.68-0.80)	74300	120	0.93 (0.77-1.11)	74310	276	0.93 (0.82-1.04)
2-3 times week	86178	63	0.56 (0.43-0.71)	86191	724	0.69 (0.64-0.75)	86181	102	0.67 (0.55-0.81)	86180	341	0.95 (0.86-1.06)
More than 3 times per week	118840	110	0.69 (0.57-0.84)	118889	1170	0.75 (0.71-0.80)	118832	190	0.88 (0.76-1.02)	118848	493	1.00 (0.91-1.09)
<i>P</i> <sub>heterogeneity</sub>			<.001			<.001			<.05			.74

gsCI indicates group-specific confidence interval for RR; and RR indicates relative risk.

<sup>a</sup> Adjusted for study region, age, socio-economic status, smoking, alcohol consumption, height, heart disease/thrombosis, diabetes mellitus, thyroid disease, rheumatoid arthritis/osteoarthritis, BMI and strenuous activity.

**Supporting Table 12.** Sensitivity analyses of adjusted<sup>a</sup> relative risks forearm (not wrist), wrist and humerus fracture in post-menopausal women according to any activity, stratified by age-bands.

gsCI indicates group-specific confidence interval for RR; and RR indicates relative risk.  
<sup>a</sup> Adjusted for study region, age, socio-economic status, smoking, alcohol consumption, height,

Any activity	Forearm (not wrist)			Wrist			Humerus		
	Population at risk	Incident cases	Adjusted RR (95% gsCI)	Population at risk	Incident cases	Adjusted RR (95% gsCI)	Population at risk	Incident cases	Adjusted RR (95% gsCI)
<b>50-64.9</b>									
Rarely/never	213461	280	1.00 (0.89-1.13)	213462	1492	1.00 (0.95-1.05)	213465	425	1.00 (0.91-1.10)
At most once per week	243702	338	1.00 (0.90-1.12)	243703	1717	0.94 (0.90-0.98)	243703	418	0.91 (0.83-1.01)
2-3 times week	238933	289	0.89 (0.79-0.99)	238936	1725	0.95 (0.91-1.00)	238933	370	0.86 (0.78-0.95)
More than 3 times per week	311925	430	1.00 (0.91-1.10)	311938	2331	0.99 (0.95-1.03)	311929	553	0.96 (0.88-1.04)
<i>P</i> <sub>heterogeneity</sub>			.33			.22			.19
<b>65-69.9</b>									
Rarely/never	141827	161	1.00 (0.85-1.17)	141841	801	1.00 (0.93-1.07)	141823	317	1.00 (0.89-1.12)
At most once per week	155984	146	0.84 (0.71-0.99)	156007	851	0.99 (0.92-1.06)	155996	255	0.83 (0.73-0.93)
2-3 times week	163749	152	0.77 (0.66-0.91)	163764	972	0.98 (0.92-1.05)	163752	250	0.75 (0.66-0.85)
More than 3 times per week	220156	243	0.88 (0.77-1.00)	220186	1344	0.96 (0.91-1.02)	220168	409	0.88 (0.80-0.97)
<i>P</i> <sub>heterogeneity</sub>			.16			.86			<.05
<b>70+</b>									
Rarely/never	73036	110	1.00 (0.82-1.21)	73060	634	1.00 (0.92-1.08)	73052	301	1.00 (0.89-1.13)
At most once per week	74298	102	0.95 (0.78-1.15)	74318	535	0.84 (0.77-0.92)	74315	269	0.99 (0.88-1.12)
2-3 times week	86184	130	0.97 (0.82-1.15)	86201	710	0.88 (0.82-0.95)	86190	301	0.92 (0.82-1.03)
More than 3 times per week	118831	183	0.95 (0.82-1.10)	118865	1094	0.95 (0.89-1.00)	118853	454	0.96 (0.87-1.05)
<i>P</i> <sub>heterogeneity</sub>			.23			<.05			.73

heart disease/thrombosis, diabetes mellitus, thyroid disease, rheumatoid arthritis/osteoarthritis, BMI and strenuous activity.