

Japan - The probabilities of a major osteoporotic fracture in women

The following tables give the 10-year probability (%) of a major osteoporotic fracture (hip, clinical spine, forearm or proximal humerus fracture) according to body mass index (BMI kg/m²), the number of clinical risk factors (CRF) and age. Each table provides a mean estimate and a range, based on the epidemiology of Japan. The range is not a confidence interval, but because the weight of different risk factors varies, is a true range.

Age = 50 years

Number of CRFs	BMI (kg/m ²)						
	15	20	25	30	35	40	45
0	3.1	3.0	2.9	2.5	2.2	2.0	1.7
1	5.0 (3.4-7.1)	4.6 (3.1-6.4)	4.5 (3.0-6.1)	3.9 (2.6-5.3)	3.4 (2.3-4.6)	3.0 (2.0-4.1)	2.7 (1.8-3.6)
2	7.8 (4.2-13)	7.2 (3.8-12)	6.8 (3.6-12)	6.0 (3.2-10)	5.3 (2.8-9.2)	4.6 (2.4-8.1)	4.1 (2.1-7.1)
3	12 (5.9-21)	11 (5.3-19)	10 (4.9-19)	9.0 (4.3-17)	7.9 (3.7-15)	6.9 (3.3-13)	6.1 (2.9-11)
4	18 (10-28)	16 (8.8-26)	15 (8.0-24)	13 (7.0-22)	12 (6.1-19)	10 (5.3-17)	9.0 (4.7-15)
5	27 (18-34)	24 (16-31)	22 (15-29)	19 (13-26)	17 (12-23)	15 (10-20)	13 (9.1-18)
6	39	34	31	27	24	21	19

Ten year probability of osteoporotic fractures (%) according to BMI, the number of clinical risk factors (CRF) and age in women from Japan.

Age = 55 years

Number of CRFs	BMI (kg/m ²)						
	15	20	25	30	35	40	45
0	4.5	4.2	4.0	3.5	3.1	2.7	2.4
1	7.0 (4.9-9.7)	6.5 (4.5-8.7)	6.2 (4.2-8.2)	5.5 (3.7-7.2)	4.8 (3.2-6.3)	4.2 (2.8-5.6)	3.7 (2.5-4.9)
2	11 (6.1-17)	9.9 (5.4-16)	9.4 (5.1-16)	8.3 (4.5-14)	7.2 (3.9-12)	6.4 (3.4-11)	5.6 (3.0-9.6)
3	16 (8.6-28)	15 (7.5-26)	14 (6.9-25)	12 (6.0-22)	11 (5.3-19)	9.5 (4.6-17)	8.3 (4.0-15)
4	24 (15-37)	22 (13-34)	20 (11-32)	18 (9.9-29)	16 (8.6-25)	14 (7.5-23)	12 (6.5-20)
5	35 (25-44)	31 (22-40)	29 (21-37)	25 (18-33)	22 (16-30)	20 (14-26)	18 (13-24)
6	49	43	40	35	31	28	25

Age = 60 years

Number of CRFs	BMI (kg/m ²)						
	15	20	25	30	35	40	45
0	6.0	5.5	5.2	4.6	4.0	3.5	3.1
1	9.5 (6.8-13)	8.5 (6.0-11)	8.0 (5.5-10)	7.0 (4.8-9.1)	6.1 (4.2-7.9)	5.3 (3.7-6.9)	4.7 (3.2-6.1)
2	15 (8.7-22)	13 (7.4-20)	12 (6.7-20)	10 (5.8-17)	9.2 (5.1-15)	8.1 (4.4-13)	7.1 (3.8-12)
3	22 (13-35)	19 (10-32)	18 (9.2-30)	15 (8.0-27)	14 (6.9-24)	12 (6.0-21)	10 (5.2-19)
4	32 (21-46)	28 (18-41)	25 (15-39)	22 (13-35)	20 (11-31)	17 (9.9-27)	15 (8.6-24)
5	45 (34-55)	39 (29-49)	35 (27-45)	31 (24-40)	28 (21-36)	25 (18-32)	22 (16-29)
6	61	53	48	43	38	34	30

Ten year probability of osteoporotic fractures (%) according to BMI, the number of clinical risk factors (CRF) and age in women from Japan.

Age = 65 years

Number of CRFs	BMI (kg/m ²)						
	15	20	25	30	35	40	45
0	8.8	7.8	7.2	6.3	5.5	4.8	4.2
1	14 (10-18)	12 (8.6-15)	11 (7.7-14)	9.6 (6.7-12)	8.3 (5.8-11)	7.3 (5.1-9.4)	6.4 (4.4-8.2)
2	21 (13-29)	18 (11-27)	16 (9.5-25)	14 (8.2-22)	12 (7.1-20)	11 (6.2-18)	9.5 (5.3-15)
3	30 (19-44)	26 (15-40)	24 (13-38)	21 (11-34)	18 (9.8-30)	16 (8.5-27)	14 (7.3-24)
4	42 (30-57)	37 (26-52)	33 (22-48)	29 (19-44)	26 (16-39)	23 (14-35)	20 (12-31)
5	57 (46-66)	50 (40-60)	45 (36-56)	40 (32-50)	36 (28-45)	32 (24-41)	28 (21-36)
6	72	65	59	53	48	43	38

Age = 70 years

Number of CRFs	BMI (kg/m ²)						
	15	20	25	30	35	40	45
0	13	11	9.9	8.6	7.4	6.5	5.6
1	20 (15-24)	16 (12-20)	14 (11-18)	12 (9.3-16)	11 (8.0-14)	9.3 (6.9-12)	8.1 (6.0-10)
2	29 (20-39)	24 (16-32)	21 (13-29)	18 (12-25)	16 (9.9-22)	13 (8.5-19)	12 (7.3-17)
3	42 (30-57)	35 (23-49)	29 (19-43)	26 (16-37)	22 (14-33)	19 (12-29)	17 (10-25)
4	58 (46-71)	48 (37-63)	41 (30-55)	36 (26-49)	31 (22-44)	27 (19-38)	23 (16-34)
5	73 (67-80)	64 (57-73)	55 (47-65)	49 (41-58)	43 (35-52)	38 (31-46)	33 (26-41)
6	84	79	71	64	57	51	45

Ten year probability of osteoporotic fractures (%) according to BMI, the number of clinical risk factors (CRF) and age in women from Japan.

Age = 75 years

Number of CRFs	BMI (kg/m ²)						
	15	20	25	30	35	40	45
0	20	17	15	13	11	9.6	8.3
1	30 (23-40)	25 (19-30)	21 (16-26)	18 (14-22)	16 (12-19)	14 (10-17)	12 (8.8-15)
2	44 (30-58)	36 (25-48)	30 (21-39)	26 (18-34)	22 (15-30)	19 (13-26)	16 (11-22)
3	60 (44-74)	51 (35-66)	43 (29-57)	37 (25-50)	32 (21-44)	27 (18-38)	23 (15-33)
4	73 (59-83)	67 (52-79)	58 (44-72)	51 (38-65)	44 (33-58)	38 (28-51)	33 (24-45)
5	82 (74-87)	79 (70-86)	73 (64-81)	66 (57-75)	60 (51-69)	53 (45-62)	46 (39-55)
6	88	87	85	80	75	68	61

Age = 80 years

Number of CRFs	BMI (kg/m ²)						
	15	20	25	30	35	40	45
0	28	24	22	19	16	14	12
1	40 (31-52)	34 (27-43)	30 (24-35)	26 (20-30)	23 (17-27)	19 (15-23)	17 (13-20)
2	53 (40-67)	47 (34-59)	42 (30-51)	36 (25-45)	31 (22-38)	27 (19-33)	23 (16-29)
3	66 (53-78)	61 (47-73)	55 (41-67)	48 (35-61)	42 (30-54)	37 (26-48)	32 (22-41)
4	76 (65-84)	73 (62-82)	68 (57-79)	62 (50-74)	55 (44-68)	49 (38-61)	43 (33-55)
5	83 (75-86)	82 (74-86)	79 (71-85)	74 (66-81)	68 (60-76)	62 (53-71)	55 (47-64)
6	86	87	86	83	79	74	68

Ten year probability of osteoporotic fractures (%) according to BMI, the number of clinical risk factors (CRF) and age in women from Japan.

Age = 85 years

Number of CRFs	BMI (kg/m ²)						
	15	20	25	30	35	40	45
0	30	26	24	20	17	15	13
1	42 (33-56)	38 (29-49)	33 (26-40)	29 (22-34)	24 (19-29)	21 (16-24)	18 (13-21)
2	55 (42-69)	51 (37-64)	45 (33-56)	39 (28-49)	34 (24-43)	29 (20-36)	25 (17-31)
3	67 (53-78)	63 (50-75)	59 (45-70)	52 (39-64)	46 (33-57)	40 (28-51)	34 (24-44)
4	75 (64-83)	74 (63-82)	71 (59-80)	65 (53-76)	59 (46-70)	52 (40-64)	46 (34-58)
5	81 (74-84)	81 (73-85)	80 (72-85)	76 (67-82)	70 (61-78)	65 (54-73)	58 (48-67)
6	82	85	86	83	79	75	70

Age = 90 years

Number of CRFs	BMI (kg/m ²)						
	15	20	25	30	35	40	45
0	26	23	20	17	14	11	9.5
1	38 (30-53)	34 (26-47)	29 (22-39)	24 (18-32)	20 (15-27)	17 (12-22)	14 (10-18)
2	51 (39-67)	46 (34-61)	41 (29-54)	35 (24-46)	30 (20-39)	25 (16-33)	21 (13-27)
3	63 (49-75)	59 (45-72)	54 (41-67)	48 (34-61)	41 (29-53)	35 (24-46)	29 (20-39)
4	72 (60-80)	70 (57-79)	67 (54-77)	61 (47-72)	54 (40-66)	47 (34-59)	41 (29-52)
5	77 (70-80)	78 (69-82)	77 (66-82)	72 (60-79)	66 (54-74)	60 (47-68)	53 (41-62)
6	77	81	83	80	76	71	65