

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 the T-score for femoral neck BMD, 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.

Note that the BMI is set at 24 kg/m².

Age = 50 years

Number of CRFs	BMD T-score (femoral neck)										
	-4.0	-3.5	-3.0	-2.5	-2.0	-1.5	-1.0	-0.5	0	0.5	1.0
0	12	8.3	6.2	4.9	4.1	3.5	3.1	2.8	2.7	2.6	2.5
1	18 (16-23)	13 (11-16)	9.4 (7.3-12)	7.5 (5.4-9.4)	6.2 (4.3-8.1)	5.3 (3.5-7.1)	4.6 (3.0-6.3)	4.2 (2.7-5.9)	4.0 (2.6-5.6)	3.9 (2.5-5.4)	3.7 (2.4-5.3)
2	27 (21-37)	19 (14-26)	14 (9.5-20)	11 (6.9-17)	9.1 (5.3-15)	7.8 (4.3-13)	6.8 (3.6-11)	6.2 (3.3-11)	6.0 (3.1-10)	5.7 (2.9-10)	5.5 (2.8-9.6)
3	38 (28-49)	27 (19-39)	20 (13-32)	16 (9.1-27)	13 (6.9-23)	11 (5.6-20)	9.8 (4.7-18)	9.0 (4.2-17)	8.6 (4.0-16)	8.3 (3.8-16)	8.0 (3.6-15)
4	51 (37-61)	38 (26-48)	29 (19-39)	23 (15-33)	19 (11-29)	16 (9.1-26)	14 (7.6-23)	13 (6.8-21)	12 (6.4-21)	12 (6.1-20)	11 (5.9-19)
5	66 (55-72)	51 (41-57)	39 (31-46)	31 (24-39)	26 (20-34)	22 (17-30)	19 (14-26)	18 (13-25)	17 (12-24)	16 (11-23)	16 (11-22)
6	80	65	52	42	35	30	26	24	23	22	21

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

Age = 55 years

Number of CRFs	BMD T-score (femoral neck)										
	-4.0	-3.5	-3.0	-2.5	-2.0	-1.5	-1.0	-0.5	0	0.5	1.0
0	14	10	8.0	6.5	5.4	4.6	4.0	3.7	3.5	3.4	3.2
1	21 (18-25)	15 (12-19)	12 (9.1-15)	9.7 (7.0-12)	8.1 (5.6-11)	6.9 (4.7-9.3)	6.0 (3.9-8.2)	5.6 (3.7-7.8)	5.3 (3.4-7.4)	5.0 (3.2-7.0)	4.8 (3.1-6.7)
2	30 (24-39)	22 (16-30)	17 (12-25)	14 (8.8-22)	12 (6.9-19)	10 (5.6-16)	8.7 (4.7-14)	8.1 (4.3-14)	7.7 (4.0-13)	7.3 (3.8-12)	7.0 (3.6-12)
3	41 (32-54)	31 (22-45)	25 (15-38)	20 (12-33)	17 (9.0-29)	14 (7.3-25)	12 (6.1-23)	12 (5.6-21)	11 (5.2-20)	10 (4.9-19)	10 (4.7-19)
4	55 (41-65)	43 (31-55)	34 (24-47)	28 (19-41)	23 (15-36)	20 (12-32)	17 (9.9-28)	16 (9.0-27)	15 (8.4-26)	15 (7.9-24)	14 (7.5-23)
5	69 (60-74)	56 (47-63)	45 (37-54)	37 (31-47)	32 (26-41)	27 (21-36)	24 (17-32)	22 (16-31)	21 (15-29)	20 (14-28)	19 (13-27)
6	81	69	58	49	42	36	32	30	28	27	26

Age = 60 years

Number of CRFs	BMD T-score (femoral neck)										
	-4.0	-3.5	-3.0	-2.5	-2.0	-1.5	-1.0	-0.5	0	0.5	1.0
0	17	13	9.9	7.9	6.5	5.5	4.8	4.4	4.1	3.9	3.6
1	25 (22-28)	19 (15-22)	15 (11-18)	12 (8.6-15)	9.6 (6.8-13)	8.1 (5.6-11)	7.1 (4.8-9.7)	6.5 (4.3-9.1)	6.1 (4.0-8.5)	5.7 (3.7-8.0)	5.4 (3.5-7.6)
2	35 (28-44)	27 (20-35)	21 (15-29)	17 (11-25)	14 (8.4-21)	12 (6.8-18)	10 (5.7-17)	9.5 (5.2-16)	8.8 (4.7-15)	8.3 (4.4-14)	7.8 (4.1-13)
3	47 (37-60)	37 (26-51)	29 (19-43)	24 (14-37)	20 (11-32)	16 (8.8-28)	15 (7.4-26)	13 (6.7-24)	13 (6.1-23)	12 (5.7-21)	11 (5.3-20)
4	60 (48-70)	49 (37-61)	39 (29-53)	32 (23-46)	27 (18-40)	23 (14-35)	20 (12-32)	19 (11-30)	17 (9.8-28)	16 (9.1-27)	15 (8.5-25)
5	74 (67-79)	62 (54-69)	51 (44-60)	43 (36-52)	36 (29-46)	31 (24-40)	27 (20-37)	25 (18-34)	24 (17-32)	22 (15-31)	21 (14-29)
6	85	74	64	54	47	40	36	34	31	30	28

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

Age = 65 years

Number of CRFs	BMD T-score (femoral neck)										
	-4.0	-3.5	-3.0	-2.5	-2.0	-1.5	-1.0	-0.5	0	0.5	1.0
0	21	16	13	10	8.3	6.8	6.1	5.6	5.1	4.7	4.3
1	30 (26-34)	23 (19-27)	18 (14-22)	15 (11-19)	12 (8.6-16)	9.9 (7.0-13)	8.9 (6.1-12)	8.1 (5.4-11)	7.4 (4.9-10)	6.9 (4.5-9.7)	6.3 (4.2-9.0)
2	41 (34-50)	32 (25-41)	26 (18-35)	21 (14-30)	17 (11-25)	14 (8.5-22)	13 (7.3-20)	12 (6.5-18)	11 (5.9-17)	9.8 (5.3-16)	9.1 (4.9-15)
3	54 (44-67)	43 (32-58)	35 (24-50)	29 (18-44)	24 (14-38)	20 (11-33)	18 (9.5-30)	16 (8.4-28)	15 (7.6-26)	14 (6.9-25)	13 (6.3-23)
4	67 (55-76)	56 (44-68)	46 (36-60)	38 (29-52)	32 (22-46)	27 (18-40)	24 (15-37)	22 (13-35)	20 (12-33)	19 (11-31)	18 (10-29)
5	78 (73-83)	68 (62-75)	58 (52-67)	49 (43-59)	42 (35-52)	36 (28-46)	32 (24-43)	30 (22-40)	27 (20-37)	26 (18-35)	24 (17-33)
6	87	79	70	61	53	46	42	39	36	34	31

Age = 70 years

Number of CRFs	BMD T-score (femoral neck)										
	-4.0	-3.5	-3.0	-2.5	-2.0	-1.5	-1.0	-0.5	0	0.5	1.0
0	27	20	16	13	10	8.4	7.5	6.7	6.0	5.4	4.9
1	37 (32-43)	29 (24-33)	22 (18-26)	18 (14-20)	14 (11-16)	12 (8.7-14)	10 (7.5-12)	9.1 (6.6-11)	8.2 (5.8-9.7)	7.4 (5.2-8.8)	6.7 (4.7-8.0)
2	50 (41-61)	39 (31-49)	31 (23-39)	24 (18-31)	19 (13-25)	16 (11-21)	14 (9.2-19)	12 (7.9-17)	11 (7.0-15)	10 (6.2-14)	9.1 (5.6-13)
3	64 (52-76)	52 (40-65)	42 (30-55)	33 (23-46)	26 (18-38)	22 (14-32)	19 (12-28)	17 (10-26)	15 (9.0-23)	13 (8.0-21)	12 (7.2-19)
4	77 (67-84)	66 (55-75)	54 (43-65)	44 (34-55)	35 (27-46)	29 (22-40)	25 (19-35)	22 (16-32)	20 (14-29)	18 (13-26)	16 (11-24)
5	86 (82-89)	78 (72-83)	68 (61-74)	57 (50-64)	46 (40-54)	39 (33-47)	33 (29-41)	29 (25-37)	26 (22-34)	23 (20-31)	21 (18-28)
6	91	87	80	70	59	50	43	38	34	30	27

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

Age = 75 years

Number of CRFs	BMD T-score (femoral neck)										
	-4.0	-3.5	-3.0	-2.5	-2.0	-1.5	-1.0	-0.5	0	0.5	1.0
0	34	27	21	17	13	11	9.9	8.7	7.7	6.9	6.1
1	47 (40-64)	38 (31-51)	30 (24-39)	23 (18-30)	18 (14-23)	16 (12-18)	13 (10-15)	12 (8.6-14)	10 (7.5-12)	9.0 (6.6-11)	8.0 (5.9-9.6)
2	62 (49-79)	51 (39-68)	41 (30-56)	33 (23-45)	26 (18-35)	21 (15-28)	18 (12-23)	15 (11-21)	13 (9.1-18)	12 (7.9-17)	10 (7.0-15)
3	75 (60-86)	65 (48-79)	55 (38-69)	44 (30-58)	35 (23-47)	29 (19-39)	24 (16-33)	21 (14-28)	18 (12-24)	15 (10-21)	13 (9.0-19)
4	84 (72-90)	78 (62-86)	69 (51-78)	58 (41-68)	47 (33-57)	39 (28-49)	33 (24-41)	27 (20-35)	23 (18-31)	20 (15-27)	17 (13-23)
5	89 (82-92)	86 (75-90)	80 (66-85)	72 (57-77)	61 (47-67)	52 (40-58)	43 (35-50)	36 (31-43)	31 (27-37)	26 (22-32)	22 (19-28)
6	92	90	88	83	75	66	56	48	40	34	29

Age = 80 years

Number of CRFs	BMD T-score (femoral neck)										
	-4.0	-3.5	-3.0	-2.5	-2.0	-1.5	-1.0	-0.5	0	0.5	1.0
0	40	33	27	21	18	15	13	11	10	8.8	7.7
1	53 (45-68)	44 (36-58)	36 (29-47)	29 (23-37)	24 (18-30)	20 (15-24)	17 (13-20)	15 (11-17)	13 (9.7-15)	11 (8.5-13)	10 (7.4-12)
2	66 (54-80)	57 (45-72)	48 (36-63)	39 (29-52)	32 (23-43)	27 (19-36)	23 (16-30)	20 (14-25)	17 (12-22)	15 (10-20)	13 (8.9-18)
3	76 (64-85)	69 (54-80)	60 (45-72)	51 (36-63)	42 (29-54)	36 (25-47)	31 (21-40)	26 (18-35)	22 (15-30)	19 (13-26)	17 (11-23)
4	83 (73-88)	78 (65-85)	72 (56-80)	63 (47-72)	54 (39-64)	47 (34-57)	40 (29-49)	34 (25-43)	29 (22-37)	25 (19-33)	22 (17-28)
5	88 (81-90)	85 (76-88)	81 (69-85)	74 (61-80)	67 (53-73)	59 (47-66)	51 (41-58)	44 (36-51)	38 (32-45)	32 (28-39)	28 (24-34)
6	89	89	86	83	77	71	64	56	48	41	36

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

Age = 85 years

Number of CRFs	BMD T-score (femoral neck)										
	-4.0	-3.5	-3.0	-2.5	-2.0	-1.5	-1.0	-0.5	0	0.5	1.0
0	38	31	25	20	17	14	12	10	8.9	7.7	6.6
1	50 (42-65)	42 (34-56)	34 (27-47)	28 (22-38)	23 (18-31)	20 (15-26)	17 (13-21)	14 (11-17)	12 (9.0-14)	10 (7.6-12)	8.8 (6.5-10)
2	62 (51-76)	54 (42-69)	46 (34-61)	38 (28-52)	32 (23-44)	27 (19-37)	23 (16-31)	19 (13-26)	16 (11-22)	14 (9.4-18)	12 (8.0-15)
3	72 (60-82)	65 (51-77)	58 (43-70)	49 (35-62)	43 (29-55)	36 (25-48)	31 (21-41)	26 (17-35)	22 (15-30)	19 (12-25)	16 (10-21)
4	80 (69-85)	75 (62-82)	69 (53-77)	61 (45-71)	54 (39-64)	48 (33-57)	41 (28-50)	35 (24-43)	30 (21-37)	25 (18-32)	21 (15-27)
5	84 (77-87)	82 (72-86)	78 (65-83)	72 (58-78)	66 (51-73)	60 (45-66)	53 (40-60)	46 (34-52)	39 (30-46)	33 (26-39)	28 (22-34)
6	87	86	84	80	76	71	65	58	51	44	37

Age = 90 years

Number of CRFs	BMD T-score (femoral neck)										
	-4.0	-3.5	-3.0	-2.5	-2.0	-1.5	-1.0	-0.5	0	0.5	1.0
0	28	23	18	14	12	10	8.5	7.1	6.0	5.0	4.2
1	39 (31-55)	32 (25-47)	26 (20-39)	21 (16-32)	18 (14-27)	15 (11-22)	12 (9.3-18)	10 (7.7-15)	8.6 (6.4-12)	7.2 (5.3-9.9)	6.0 (4.4-8.0)
2	50 (39-66)	43 (32-60)	36 (26-52)	30 (21-44)	26 (18-38)	22 (15-32)	18 (12-27)	15 (10-23)	13 (8.4-19)	10 (6.9-15)	8.6 (5.7-13)
3	62 (48-74)	55 (41-69)	48 (34-62)	41 (28-55)	36 (23-48)	31 (20-42)	26 (16-36)	22 (13-30)	18 (11-25)	15 (9.2-21)	12 (7.6-17)
4	72 (57-80)	66 (50-76)	60 (43-70)	53 (36-64)	48 (31-58)	42 (26-51)	36 (22-45)	31 (19-38)	26 (16-32)	22 (13-27)	18 (11-23)
5	79 (67-83)	75 (61-80)	71 (54-76)	65 (47-71)	60 (41-66)	54 (36-60)	48 (31-54)	42 (27-47)	36 (23-41)	30 (19-35)	25 (16-30)
6	83	81	79	75	71	66	60	54	48	41	35