

Brazil - 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 Brazil. 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	8.1	5.7	4.3	3.4	2.8	2.4	2.2	2.1	2.0	1.9
1	19 (17-24)	12 (11-16)	8.7 (7.1-11)	6.5 (4.9-8.1)	5.1 (3.7-6.5)	4.3 (2.9-5.6)	3.6 (2.4-4.9)	3.3 (2.2-4.6)	3.2 (2.0-4.4)	3.0 (1.9-4.2)	2.9 (1.9-4.1)
2	28 (22-38)	19 (15-26)	13 (9.5-18)	9.7 (6.4-14)	7.6 (4.7-12)	6.3 (3.6-10)	5.4 (2.9-9.1)	4.9 (2.6-8.4)	4.7 (2.4-8.1)	4.5 (2.3-7.8)	4.3 (2.2-7.5)
3	39 (29-52)	27 (20-36)	19 (13-28)	14 (8.6-23)	11 (6.2-19)	9.2 (4.7-16)	7.8 (3.8-14)	7.1 (3.4-13)	6.8 (3.1-13)	6.5 (3.0-12)	6.2 (2.8-12)
4	53 (38-65)	38 (26-45)	27 (18-35)	20 (13-29)	16 (10-24)	13 (7.8-21)	11 (6.3-18)	10 (5.5-17)	9.6 (5.1-16)	9.2 (4.8-16)	8.9 (4.6-15)
5	68 (57-76)	51 (41-56)	37 (29-43)	28 (22-34)	22 (17-29)	18 (14-25)	16 (12-21)	14 (10-20)	13 (9.4-19)	13 (8.8-18)	12 (8.4-18)
6	82	65	50	38	30	25	21	19	18	18	17

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

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	12	8.2	5.9	4.6	3.6	3.0	2.6	2.4	2.2	2.1	2.0
1	18 (16-21)	12 (11-15)	9.0 (7.2-11)	6.8 (5.2-8.3)	5.5 (3.9-7.0)	4.5 (3.1-6.0)	3.8 (2.6-5.2)	3.5 (2.3-4.9)	3.3 (2.2-4.6)	3.1 (2.0-4.4)	3.0 (1.9-4.2)
2	26 (21-35)	18 (14-25)	13 (9.7-18)	10 (6.8-15)	8.1 (5.0-12)	6.6 (3.9-11)	5.6 (3.1-9.3)	5.2 (2.8-8.7)	4.9 (2.6-8.3)	4.6 (2.4-7.9)	4.4 (2.3-7.5)
3	37 (28-46)	26 (20-35)	19 (13-28)	15 (9.0-23)	12 (6.6-20)	9.6 (5.1-17)	8.1 (4.1-15)	7.5 (3.6-14)	7.0 (3.3-13)	6.6 (3.1-13)	6.3 (2.9-12)
4	49 (36-58)	36 (26-44)	27 (19-36)	21 (14-29)	16 (11-25)	14 (8.4-21)	12 (6.7-19)	11 (5.9-18)	9.9 (5.4-17)	9.4 (5.0-16)	8.9 (4.7-15)
5	63 (55-70)	48 (40-53)	37 (30-43)	29 (23-35)	23 (18-29)	19 (15-25)	16 (12-22)	15 (11-20)	14 (9.6-19)	13 (8.9-18)	12 (8.4-18)
6	77	62	48	38	31	26	22	20	19	18	17

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	13	9.0	6.5	5.0	3.9	3.2	2.7	2.5	2.3	2.1	2.0
1	19 (17-22)	13 (12-15)	9.7 (8.0-11)	7.4 (5.7-8.9)	5.8 (4.3-7.4)	4.7 (3.3-6.2)	4.0 (2.8-5.5)	3.7 (2.5-5.1)	3.4 (2.2-4.7)	3.1 (2.1-4.4)	2.9 (1.9-4.2)
2	27 (23-35)	19 (16-25)	14 (11-19)	11 (7.5-15)	8.5 (5.5-13)	6.9 (4.2-11)	5.9 (3.4-9.5)	5.4 (3.0-8.8)	4.9 (2.7-8.2)	4.6 (2.4-7.7)	4.3 (2.3-7.3)
3	38 (30-46)	27 (21-36)	20 (14-29)	15 (10-24)	12 (7.3-20)	9.9 (5.5-17)	8.5 (4.4-15)	7.7 (3.9-14)	7.1 (3.5-13)	6.6 (3.2-12)	6.1 (2.9-11)
4	50 (38-57)	37 (28-45)	28 (20-36)	22 (15-30)	17 (12-25)	14 (9.0-21)	12 (7.3-19)	11 (6.3-18)	9.9 (5.6-16)	9.2 (5.1-15)	8.6 (4.7-15)
5	63 (56-68)	49 (42-54)	38 (32-44)	29 (24-36)	23 (19-30)	19 (15-25)	16 (13-22)	15 (11-21)	14 (9.7-19)	13 (8.8-18)	12 (8.1-17)
6	75	62	49	39	31	26	22	20	19	17	16

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

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	14	9.8	7.1	5.3	4.1	3.2	2.8	2.5	2.3	2.1	1.9
1	20 (19-23)	14 (13-16)	10 (8.8-12)	7.8 (6.3-9.2)	6.0 (4.6-7.5)	4.8 (3.5-6.2)	4.1 (2.9-5.5)	3.7 (2.5-5.0)	3.3 (2.2-4.6)	3.0 (2.0-4.3)	2.8 (1.8-3.9)
2	29 (24-35)	21 (17-26)	15 (12-19)	11 (8.3-15)	8.7 (6.0-12)	6.9 (4.4-10)	6.0 (3.6-9.3)	5.3 (3.1-8.4)	4.8 (2.7-7.8)	4.4 (2.4-7.2)	4.0 (2.2-6.6)
3	39 (31-46)	29 (23-36)	21 (16-29)	16 (11-24)	12 (8.0-19)	9.9 (5.9-16)	8.5 (4.8-15)	7.6 (4.0-13)	6.8 (3.5-12)	6.2 (3.1-11)	5.7 (2.8-10)
4	50 (40-57)	38 (30-45)	29 (22-37)	22 (16-30)	17 (13-25)	14 (9.7-21)	12 (7.8-18)	11 (6.5-17)	9.5 (5.6-16)	8.7 (5.0-14)	8.0 (4.5-13)
5	63 (57-67)	50 (44-54)	39 (34-44)	30 (26-36)	24 (20-29)	19 (16-24)	16 (13-22)	14 (11-20)	13 (9.4-18)	12 (8.3-17)	11 (7.5-16)
6	74	62	50	39	31	25	22	19	18	16	15

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	16	12	8.5	6.3	4.8	3.9	3.3	2.9	2.5	2.3	2.0
1	24 (21-29)	17 (15-21)	12 (10-15)	9.2 (7.5-11)	6.9 (5.5-8.2)	5.5 (4.2-6.5)	4.6 (3.4-5.4)	4.0 (2.9-4.7)	3.5 (2.5-4.1)	3.1 (2.2-3.7)	2.8 (2.0-3.3)
2	34 (28-43)	25 (20-32)	18 (14-24)	13 (10-18)	10 (7.2-13)	7.8 (5.4-10)	6.5 (4.4-8.7)	5.6 (3.6-7.5)	4.8 (3.1-6.6)	4.3 (2.7-5.9)	3.8 (2.3-5.3)
3	47 (37-57)	35 (27-45)	26 (19-35)	19 (13-26)	14 (9.6-20)	11 (7.2-16)	9.1 (5.8-14)	7.7 (4.8-12)	6.6 (4.0-10)	5.8 (3.5-9.2)	5.2 (3.0-8.3)
4	61 (51-68)	48 (38-56)	36 (28-44)	27 (20-34)	20 (15-26)	16 (11-21)	13 (9.2-18)	11 (7.6-15)	9.0 (6.4-13)	7.9 (5.5-12)	7.0 (4.8-11)
5	73 (66-77)	62 (54-66)	49 (42-54)	37 (31-42)	28 (23-33)	22 (18-26)	18 (15-22)	15 (12-18)	12 (10-16)	11 (8.9-14)	9.3 (7.7-13)
6	82	74	62	50	39	30	24	20	17	14	12

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

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	19	14	11	7.9	6.0	4.9	4.1	3.5	3.0	2.7	2.3
1	30 (24-47)	22 (18-35)	16 (13-26)	12 (9.3-18)	9.0 (6.8-13)	7.2 (5.4-9.8)	5.9 (4.4-7.5)	4.9 (3.6-5.9)	4.2 (3.0-4.8)	3.6 (2.6-4.2)	3.1 (2.3-3.7)
2	43 (32-62)	33 (23-50)	25 (17-39)	18 (12-29)	14 (9.1-21)	11 (7.1-16)	8.5 (5.6-12)	6.9 (4.6-9.5)	5.7 (3.8-7.6)	4.9 (3.2-6.5)	4.2 (2.8-5.8)
3	57 (41-72)	47 (31-62)	36 (23-50)	27 (17-38)	20 (12-29)	16 (9.4-23)	12 (7.5-18)	9.9 (6.1-14)	8.0 (5.0-11)	6.6 (4.2-9.4)	5.6 (3.6-7.9)
4	70 (52-80)	61 (41-72)	50 (31-61)	39 (24-49)	30 (18-38)	23 (14-30)	18 (11-23)	14 (9.2-18)	11 (7.7-15)	9.2 (6.5-12)	7.6 (5.6-10)
5	80 (65-84)	73 (55-79)	64 (44-70)	53 (35-59)	42 (27-47)	33 (21-38)	26 (17-30)	20 (14-24)	16 (12-19)	13 (10-16)	10 (8.7-13)
6	86	82	76	67	56	46	37	29	23	18	14

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	21	16	12	9.1	7.1	5.9	4.9	4.1	3.5	3.0	2.6
1	31 (25-49)	24 (19-38)	18 (14-29)	14 (11-22)	11 (8.1-16)	8.6 (6.5-13)	7.1 (5.2-9.7)	5.8 (4.3-7.6)	4.9 (3.6-6.1)	4.1 (3.0-4.9)	3.5 (2.5-4.0)
2	43 (32-61)	35 (25-51)	27 (19-41)	21 (14-32)	16 (11-25)	13 (8.6-19)	10 (6.8-15)	8.3 (5.5-12)	6.8 (4.5-9.6)	5.7 (3.8-7.7)	4.8 (3.2-6.3)
3	56 (41-71)	47 (32-62)	38 (25-52)	30 (19-42)	23 (14-33)	19 (11-26)	15 (9.1-21)	12 (7.3-17)	9.6 (6.0-13)	7.9 (5.0-11)	6.5 (4.2-9.1)
4	67 (50-77)	59 (41-70)	51 (32-62)	41 (25-51)	33 (20-42)	27 (16-34)	21 (13-27)	17 (10-22)	14 (8.7-18)	11 (7.3-14)	9.0 (6.2-12)
5	76 (61-81)	70 (52-76)	63 (44-69)	54 (35-60)	45 (28-51)	37 (23-42)	30 (19-35)	24 (16-28)	19 (13-23)	15 (11-19)	12 (9.3-15)
6	82	79	73	66	58	50	41	34	27	22	17

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

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	22	17	13	11	8.7	7.4	6.2	5.3	4.5	3.9	3.3
1	30 (24-46)	25 (19-38)	20 (15-30)	15 (11-23)	13 (9.2-19)	11 (7.6-15)	8.8 (6.3-12)	7.4 (5.3-9.8)	6.2 (4.4-8.0)	5.3 (3.7-6.5)	4.5 (3.2-5.3)
2	41 (30-57)	34 (24-49)	28 (19-41)	22 (15-33)	18 (12-27)	15 (10-22)	12 (8.2-18)	10 (6.8-15)	8.6 (5.7-12)	7.2 (4.7-9.9)	6.1 (4.0-8.1)
3	52 (38-66)	45 (31-59)	38 (25-51)	31 (20-42)	26 (16-35)	21 (13-29)	18 (11-24)	14 (9.0-20)	12 (7.5-17)	10 (6.2-14)	8.3 (5.2-12)
4	63 (47-73)	56 (40-67)	49 (32-59)	41 (26-51)	35 (22-44)	29 (18-37)	24 (15-31)	20 (13-26)	17 (11-22)	14 (9.0-18)	11 (7.7-15)
5	72 (56-78)	67 (49-73)	60 (42-67)	53 (35-59)	46 (29-52)	40 (25-46)	33 (21-39)	28 (18-33)	23 (15-28)	19 (13-23)	16 (11-19)
6	79	76	70	64	58	51	44	38	32	26	22

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	22	18	14	12	10	8.8	7.5	6.5	5.6	4.8	4.2
1	29 (21-41)	24 (18-35)	20 (14-29)	16 (12-24)	14 (9.9-20)	12 (8.4-17)	10 (7.2-14)	8.8 (6.1-12)	7.6 (5.2-9.8)	6.5 (4.5-8.1)	5.5 (3.8-6.8)
2	38 (27-50)	32 (23-44)	27 (18-37)	22 (15-32)	19 (13-27)	17 (11-23)	14 (9.3-20)	12 (7.9-17)	10 (6.7-14)	8.8 (5.7-12)	7.5 (4.8-10)
3	47 (34-59)	41 (29-53)	35 (24-46)	30 (20-40)	26 (17-35)	22 (14-30)	19 (12-26)	16 (10-22)	14 (8.8-19)	12 (7.5-16)	10 (6.4-14)
4	57 (42-66)	51 (36-61)	45 (31-54)	39 (26-48)	34 (22-43)	30 (19-38)	26 (17-33)	22 (14-29)	19 (12-25)	16 (10-21)	14 (8.9-18)
5	66 (50-72)	61 (44-67)	55 (38-62)	49 (33-56)	44 (29-51)	39 (26-46)	34 (22-41)	30 (19-36)	26 (17-31)	22 (15-27)	19 (13-23)
6	74	70	65	60	55	49	44	39	34	29	25