

Portugal - 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 Portugal. 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	9.6	6.1	4.1	3.0	2.3	1.9	1.6	1.5	1.4	1.3	1.3
1	15 (13-19)	9.4 (8.2-12)	6.3 (5.3-8.0)	4.6 (3.6-5.8)	3.5 (2.6-4.4)	2.9 (2.0-3.8)	2.4 (1.6-3.3)	2.2 (1.4-3.0)	2.1 (1.3-2.9)	2.0 (1.3-2.8)	1.9 (1.2-2.7)
2	22 (17-32)	14 (11-20)	9.6 (7.2-14)	6.9 (4.8-10.0)	5.3 (3.3-8.2)	4.3 (2.5-7.0)	3.6 (2.0-6.1)	3.3 (1.7-5.6)	3.1 (1.6-5.4)	2.9 (1.5-5.2)	2.8 (1.4-5.0)
3	33 (23-44)	21 (15-28)	14 (9.9-21)	10 (6.4-16)	7.8 (4.4-13)	6.3 (3.3-11)	5.3 (2.6-9.8)	4.8 (2.3-9.0)	4.5 (2.1-8.6)	4.3 (2.0-8.3)	4.1 (1.9-8.0)
4	45 (31-58)	30 (20-38)	21 (14-27)	15 (9.7-21)	11 (7.4-17)	9.1 (5.6-14)	7.6 (4.4-13)	6.9 (3.7-12)	6.5 (3.4-11)	6.2 (3.2-11)	5.9 (3.0-10)
5	60 (49-70)	42 (33-49)	29 (23-33)	21 (16-26)	16 (12-21)	13 (9.8-17)	11 (8.2-15)	9.7 (7.0-14)	9.1 (6.4-13)	8.7 (5.9-12)	8.3 (5.6-12)
6	75	56	40	30	23	18	15	13	13	12	12

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

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	11	7.1	5.0	3.7	2.9	2.4	2.0	1.8	1.7	1.6	1.5
1	16 (15-20)	11 (9.6-13)	7.6 (6.4-9.2)	5.6 (4.4-6.8)	4.4 (3.2-5.4)	3.5 (2.5-4.6)	3.0 (2.0-4.0)	2.7 (1.8-3.7)	2.5 (1.7-3.5)	2.4 (1.5-3.3)	2.2 (1.4-3.2)
2	24 (19-32)	16 (13-22)	11 (8.6-15)	8.4 (5.9-12)	6.5 (4.2-9.8)	5.2 (3.1-8.3)	4.4 (2.5-7.1)	4.0 (2.2-6.7)	3.7 (2.0-6.3)	3.5 (1.8-6.0)	3.3 (1.7-5.7)
3	34 (26-45)	24 (18-31)	17 (12-24)	12 (7.9-19)	9.5 (5.6-16)	7.6 (4.1-13)	6.4 (3.3-11)	5.8 (2.8-11)	5.4 (2.6-10)	5.1 (2.4-9.6)	4.8 (2.2-9.1)
4	47 (34-58)	33 (23-40)	24 (16-30)	18 (12-24)	14 (9.2-20)	11 (7.0-17)	9.1 (5.4-15)	8.3 (4.7-14)	7.7 (4.2-13)	7.2 (3.9-12)	6.8 (3.6-12)
5	61 (53-70)	45 (37-51)	33 (27-37)	25 (20-30)	19 (15-24)	15 (12-20)	13 (9.8-17)	12 (8.4-16)	11 (7.6-15)	10 (6.9-14)	9.5 (6.5-14)
6	76	59	44	34	26	21	18	16	15	14	13

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	8.8	6.3	4.7	3.6	2.9	2.4	2.2	2.0	1.9	1.8
1	19 (17-22)	13 (12-15)	9.4 (8.0-11)	7.0 (5.6-8.2)	5.4 (4.1-6.7)	4.3 (3.1-5.6)	3.6 (2.5-4.9)	3.3 (2.2-4.5)	3.0 (2.0-4.2)	2.8 (1.8-3.9)	2.6 (1.7-3.7)
2	28 (23-36)	19 (16-25)	14 (11-18)	10 (7.4-14)	7.9 (5.3-12)	6.3 (3.9-9.6)	5.3 (3.1-8.5)	4.8 (2.7-7.8)	4.4 (2.4-7.3)	4.1 (2.2-6.8)	3.8 (2.0-6.4)
3	38 (30-47)	27 (21-35)	20 (15-28)	15 (9.9-22)	11 (7.0-18)	9.1 (5.2-15)	7.7 (4.1-14)	6.9 (3.5-12)	6.3 (3.1-12)	5.9 (2.8-11)	5.5 (2.6-10)
4	51 (39-60)	38 (28-44)	28 (20-35)	21 (15-28)	16 (11-23)	13 (8.7-20)	11 (6.8-17)	9.8 (5.8-16)	8.9 (5.1-15)	8.3 (4.6-14)	7.7 (4.2-13)
5	65 (58-72)	50 (43-55)	38 (32-43)	29 (24-34)	22 (18-28)	18 (15-23)	15 (12-20)	14 (10-19)	12 (8.9-17)	11 (8.0-16)	11 (7.3-15)
6	78	64	50	39	30	24	21	19	17	16	15

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

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	16	11	8.0	6.0	4.6	3.7	3.2	2.8	2.5	2.3	2.1
1	23 (21-26)	16 (15-18)	12 (10-13)	8.9 (7.2-10)	6.8 (5.2-8.4)	5.4 (4.0-7.0)	4.7 (3.3-6.2)	4.1 (2.8-5.7)	3.7 (2.5-5.2)	3.4 (2.3-4.8)	3.1 (2.0-4.4)
2	32 (27-40)	23 (20-29)	17 (14-22)	13 (9.5-17)	9.9 (6.8-14)	7.8 (5.1-12)	6.8 (4.1-10)	6.0 (3.5-9.5)	5.4 (3.0-8.7)	4.9 (2.7-8.0)	4.5 (2.4-7.4)
3	43 (35-51)	32 (26-41)	24 (18-33)	18 (13-27)	14 (9.1-22)	11 (6.7-18)	9.6 (5.4-16)	8.5 (4.6-15)	7.7 (4.0-14)	7.0 (3.5-13)	6.4 (3.1-12)
4	56 (45-63)	43 (33-50)	33 (25-41)	25 (19-33)	20 (14-28)	16 (11-23)	13 (8.9-21)	12 (7.4-19)	11 (6.4-17)	9.8 (5.7-16)	9.0 (5.1-15)
5	69 (63-74)	55 (49-60)	43 (38-49)	34 (29-40)	27 (23-33)	21 (18-27)	18 (15-24)	16 (12-22)	15 (11-20)	13 (9.5-19)	12 (8.5-17)
6	80	68	55	44	35	29	25	22	20	18	17

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	20	15	11	8.2	6.3	5.1	4.4	3.9	3.4	3.1	2.8
1	29 (26-34)	21 (18-25)	16 (13-19)	12 (9.6-14)	9.1 (7.1-11)	7.3 (5.5-8.5)	6.2 (4.6-7.2)	5.4 (3.9-6.3)	4.7 (3.4-5.6)	4.2 (3.0-5.0)	3.8 (2.7-4.6)
2	41 (34-51)	30 (24-39)	23 (18-29)	17 (13-22)	13 (9.3-17)	10 (7.1-14)	8.6 (5.8-11)	7.4 (4.8-10)	6.5 (4.1-8.9)	5.8 (3.6-8.0)	5.2 (3.2-7.2)
3	55 (44-66)	42 (32-53)	32 (23-42)	24 (17-33)	18 (12-26)	14 (9.4-21)	12 (7.6-18)	10 (6.3-16)	8.9 (5.4-14)	7.9 (4.7-12)	7.0 (4.1-11)
4	69 (59-76)	56 (45-64)	44 (34-52)	33 (25-41)	25 (19-33)	20 (15-27)	17 (12-23)	14 (10-20)	12 (8.6-18)	11 (7.4-16)	9.4 (6.6-14)
5	80 (74-83)	70 (62-74)	57 (50-62)	45 (38-51)	35 (29-40)	27 (23-33)	23 (19-28)	19 (16-24)	16 (14-21)	14 (12-19)	13 (10-17)
6	87	81	71	58	47	37	30	25	22	19	17

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

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	25	19	14	11	8.6	7.2	6.1	5.3	4.6	4.1	3.6
1	37 (31-55)	29 (23-43)	22 (17-32)	16 (13-24)	13 (9.5-17)	10 (7.7-13)	8.5 (6.3-10)	7.2 (5.3-8.3)	6.2 (4.6-7.2)	5.4 (3.9-6.4)	4.7 (3.5-5.7)
2	51 (39-70)	41 (30-59)	32 (22-47)	24 (17-36)	18 (12-27)	15 (9.9-21)	12 (8.0-16)	10.0 (6.6-13)	8.4 (5.6-11)	7.2 (4.8-9.9)	6.3 (4.2-8.9)
3	65 (50-78)	55 (39-70)	44 (29-59)	35 (22-47)	26 (16-37)	21 (13-29)	17 (11-24)	14 (8.7-19)	11 (7.3-16)	9.7 (6.3-14)	8.3 (5.4-12)
4	76 (61-84)	68 (50-78)	58 (40-69)	48 (31-58)	37 (24-46)	30 (19-37)	24 (16-31)	19 (13-25)	16 (11-21)	13 (9.7-18)	11 (8.4-15)
5	84 (73-87)	79 (64-84)	71 (54-77)	62 (44-68)	51 (35-57)	41 (28-47)	33 (24-38)	27 (20-31)	22 (17-26)	18 (15-22)	15 (13-18)
6	88	85	81	74	65	55	45	37	30	24	20

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	29	22	17	14	11	9.0	7.6	6.5	5.6	4.8	4.2
1	40 (33-58)	32 (26-48)	25 (20-38)	20 (15-29)	16 (12-22)	13 (9.6-18)	11 (7.9-14)	8.9 (6.6-11)	7.6 (5.5-9.0)	6.5 (4.7-7.4)	5.6 (4.0-6.4)
2	53 (42-69)	44 (33-61)	36 (26-51)	28 (20-41)	22 (15-33)	18 (12-27)	15 (10-21)	12 (8.4-17)	10 (6.9-14)	8.7 (5.8-11)	7.4 (5.0-9.7)
3	64 (51-77)	56 (42-70)	48 (33-62)	39 (26-52)	31 (20-42)	26 (16-35)	21 (13-29)	17 (11-24)	14 (9.1-20)	12 (7.7-16)	10.0 (6.5-14)
4	74 (60-81)	67 (51-77)	60 (42-70)	51 (34-61)	42 (27-52)	35 (23-44)	29 (19-36)	24 (16-30)	20 (13-25)	16 (11-21)	13 (9.6-18)
5	81 (69-85)	76 (62-81)	70 (54-76)	63 (45-69)	55 (38-61)	47 (32-53)	39 (27-45)	33 (23-38)	27 (19-32)	22 (17-26)	18 (14-22)
6	85	82	78	73	66	59	51	43	36	30	24

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

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	28	22	18	14	12	9.8	8.3	7.0	6.0	5.1	4.4
1	39 (31-55)	32 (25-47)	26 (20-38)	20 (15-30)	17 (12-25)	14 (10-20)	12 (8.5-16)	9.8 (7.1-13)	8.3 (6.0-11)	7.0 (5.0-8.7)	6.0 (4.3-7.1)
2	50 (39-65)	42 (32-58)	35 (25-50)	29 (20-41)	24 (16-35)	20 (13-29)	16 (11-24)	14 (9.2-20)	11 (7.6-16)	9.6 (6.4-13)	8.1 (5.4-11)
3	61 (47-73)	54 (40-67)	46 (33-60)	39 (26-51)	33 (21-44)	28 (18-37)	23 (15-31)	19 (12-26)	16 (10-22)	13 (8.4-18)	11 (7.0-15)
4	70 (56-78)	64 (49-74)	58 (41-68)	50 (34-60)	43 (28-53)	37 (24-46)	32 (20-39)	26 (17-33)	22 (14-28)	18 (12-24)	15 (10-20)
5	77 (65-82)	73 (58-78)	68 (51-74)	61 (44-68)	55 (38-62)	48 (32-55)	42 (28-48)	36 (24-42)	30 (20-35)	25 (17-30)	21 (15-25)
6	82	80	76	71	66	60	53	47	40	34	28

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	23	19	15	13	11	9.2	7.8	6.7	5.7	4.9	4.1
1	32 (24-46)	27 (20-39)	22 (16-33)	18 (13-27)	15 (11-23)	13 (9.3-19)	11 (7.8-16)	9.3 (6.6-13)	7.9 (5.6-11)	6.7 (4.7-9.0)	5.7 (4.0-7.4)
2	42 (31-56)	36 (26-49)	30 (21-42)	25 (17-36)	21 (15-31)	18 (12-27)	16 (10-23)	13 (8.6-19)	11 (7.2-16)	9.4 (6.1-13)	7.9 (5.1-11)
3	52 (39-65)	46 (33-59)	40 (27-52)	34 (22-45)	29 (19-40)	25 (16-34)	22 (14-29)	18 (11-25)	15 (9.6-21)	13 (8.1-18)	11 (6.8-15)
4	62 (47-71)	56 (41-66)	50 (35-60)	44 (29-54)	39 (25-48)	34 (22-43)	29 (19-37)	25 (16-32)	21 (13-28)	18 (11-23)	15 (9.7-20)
5	71 (56-76)	66 (49-72)	61 (43-67)	55 (37-62)	50 (33-57)	44 (29-51)	39 (25-46)	34 (22-40)	29 (19-35)	25 (16-30)	21 (14-26)
6	77	74	70	65	61	55	50	44	39	34	29