

South Africa (African) - 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 South Africa (African). 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	8.5	5.2	3.4	2.4	1.8	1.4	1.2	1.1	1.0	1.0	0.9
1	13 (11-17)	8.1 (7.1-10)	5.3 (4.5-6.7)	3.7 (2.9-4.7)	2.8 (2.1-3.5)	2.2 (1.5-2.8)	1.8 (1.2-2.4)	1.6 (1.1-2.2)	1.5 (1.0-2.1)	1.5 (0.9-2.1)	1.4 (0.9-2.0)
2	20 (15-28)	12 (9.5-18)	8.0 (6.2-11)	5.6 (4.0-7.8)	4.1 (2.7-6.3)	3.3 (2.0-5.3)	2.7 (1.5-4.6)	2.4 (1.3-4.2)	2.3 (1.2-4.0)	2.2 (1.1-3.8)	2.1 (1.1-3.7)
3	29 (20-40)	18 (13-25)	12 (8.5-17)	8.3 (5.4-13)	6.1 (3.6-10)	4.8 (2.6-8.5)	4.0 (2.0-7.3)	3.5 (1.7-6.7)	3.3 (1.5-6.4)	3.2 (1.4-6.1)	3.0 (1.4-5.9)
4	40 (28-52)	26 (18-34)	17 (11-22)	12 (7.8-16)	8.9 (5.8-13)	7.0 (4.3-11)	5.7 (3.3-9.4)	5.1 (2.8-8.6)	4.8 (2.5-8.2)	4.5 (2.3-7.9)	4.3 (2.2-7.6)
5	54 (44-64)	37 (29-44)	25 (19-28)	17 (13-21)	13 (9.5-16)	9.9 (7.4-13)	8.1 (6.1-11)	7.2 (5.2-10)	6.7 (4.7-9.6)	6.4 (4.3-9.2)	6.1 (4.1-8.9)
6	68	49	34	24	18	14	11	10.0	9.3	8.8	8.4

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

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	9.0	5.8	3.9	2.8	2.1	1.7	1.4	1.2	1.2	1.1	1.0
1	14 (12-17)	8.8 (7.9-11)	5.9 (5.1-7.3)	4.2 (3.4-5.2)	3.2 (2.4-3.9)	2.5 (1.8-3.2)	2.1 (1.4-2.7)	1.9 (1.2-2.5)	1.7 (1.1-2.4)	1.6 (1.0-2.3)	1.5 (1.0-2.2)
2	20 (16-28)	13 (11-18)	8.9 (7.0-12)	6.3 (4.6-8.6)	4.7 (3.2-7.0)	3.7 (2.3-5.8)	3.0 (1.8-4.9)	2.7 (1.5-4.6)	2.5 (1.4-4.3)	2.4 (1.2-4.1)	2.2 (1.2-3.9)
3	29 (21-38)	19 (14-25)	13 (9.6-18)	9.3 (6.3-14)	6.9 (4.3-11)	5.4 (3.1-9.3)	4.4 (2.3-7.9)	4.0 (2.0-7.3)	3.7 (1.8-6.9)	3.4 (1.6-6.5)	3.2 (1.5-6.2)
4	40 (29-50)	27 (19-34)	19 (13-23)	13 (9.1-18)	10.0 (6.7-14)	7.8 (5.1-12)	6.3 (3.9-10)	5.7 (3.2-9.4)	5.2 (2.9-8.8)	4.9 (2.6-8.4)	4.6 (2.4-7.9)
5	53 (45-62)	38 (31-44)	26 (21-30)	19 (15-22)	14 (11-18)	11 (8.5-14)	8.9 (6.9-12)	8.0 (5.9-11)	7.3 (5.2-10)	6.8 (4.7-9.8)	6.4 (4.4-9.3)
6	67	50	36	26	20	15	12	11	10	9.4	8.9

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	9.3	6.1	4.2	3.1	2.3	1.8	1.5	1.4	1.2	1.1	1.1
1	14 (12-16)	9.2 (8.3-11)	6.4 (5.5-7.5)	4.6 (3.7-5.4)	3.5 (2.7-4.2)	2.7 (2.0-3.5)	2.3 (1.6-3.0)	2.0 (1.4-2.8)	1.8 (1.2-2.6)	1.7 (1.1-2.4)	1.6 (1.0-2.2)
2	20 (16-26)	14 (11-18)	9.4 (7.5-12)	6.8 (5.1-9.1)	5.1 (3.5-7.3)	4.0 (2.5-6.1)	3.3 (2.0-5.3)	3.0 (1.7-4.8)	2.7 (1.5-4.5)	2.5 (1.3-4.2)	2.3 (1.2-3.9)
3	29 (22-36)	20 (15-25)	14 (10-19)	9.9 (6.9-15)	7.4 (4.7-12)	5.8 (3.4-9.7)	4.8 (2.6-8.4)	4.3 (2.2-7.7)	3.9 (1.9-7.1)	3.6 (1.7-6.7)	3.3 (1.6-6.3)
4	39 (29-47)	27 (20-33)	19 (14-24)	14 (9.9-19)	11 (7.4-15)	8.2 (5.7-12)	6.8 (4.3-11)	6.1 (3.6-9.9)	5.5 (3.1-9.1)	5.1 (2.8-8.5)	4.7 (2.5-8.0)
5	51 (45-58)	37 (32-42)	27 (22-30)	20 (16-23)	15 (12-18)	12 (9.3-15)	9.5 (7.6-13)	8.4 (6.3-12)	7.6 (5.5-11)	7.0 (4.9-10)	6.5 (4.4-9.4)
6	64	49	36	27	20	16	13	12	10	9.6	8.9

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

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	9.3	6.4	4.5	3.3	2.5	1.9	1.6	1.4	1.3	1.2	1.1
1	14 (13-16)	9.4 (8.6-11)	6.6 (5.8-7.5)	4.8 (4.0-5.5)	3.7 (2.8-4.4)	2.8 (2.1-3.6)	2.4 (1.7-3.2)	2.1 (1.5-2.9)	1.9 (1.3-2.6)	1.7 (1.1-2.4)	1.6 (1.0-2.2)
2	20 (16-25)	14 (11-17)	9.7 (7.8-12)	7.1 (5.4-9.2)	5.3 (3.8-7.4)	4.1 (2.7-6.1)	3.5 (2.2-5.4)	3.1 (1.8-4.9)	2.8 (1.6-4.5)	2.5 (1.4-4.1)	2.3 (1.2-3.8)
3	28 (22-33)	19 (15-24)	14 (11-19)	10 (7.3-15)	7.7 (5.1-12)	5.9 (3.7-9.7)	5.0 (2.9-8.6)	4.4 (2.4-7.8)	3.9 (2.0-7.1)	3.6 (1.8-6.5)	3.3 (1.6-6.0)
4	37 (29-44)	27 (20-31)	19 (14-24)	14 (10-19)	11 (7.8-15)	8.4 (6.0-12)	7.1 (4.7-11)	6.2 (3.9-10.0)	5.5 (3.3-9.1)	5.0 (2.9-8.4)	4.6 (2.6-7.7)
5	49 (43-54)	36 (32-40)	27 (23-30)	20 (17-23)	15 (13-19)	12 (9.7-15)	9.9 (7.9-13)	8.6 (6.5-12)	7.7 (5.6-11)	6.9 (4.9-9.8)	6.3 (4.3-9.1)
6	60	47	35	27	20	16	13	12	10	9.5	8.6

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	9.5	6.7	4.8	3.5	2.7	2.1	1.8	1.5	1.4	1.2	1.1
1	14 (13-18)	10 (8.8-12)	7.2 (6.1-8.7)	5.2 (4.3-6.2)	3.9 (3.1-4.6)	3.0 (2.3-3.6)	2.5 (1.9-3.0)	2.2 (1.6-2.5)	1.9 (1.4-2.2)	1.7 (1.2-2.0)	1.5 (1.1-1.8)
2	22 (18-28)	15 (12-20)	11 (8.3-14)	7.7 (5.8-10)	5.7 (4.1-7.6)	4.4 (3.1-5.9)	3.6 (2.4-4.8)	3.0 (2.0-4.1)	2.6 (1.7-3.6)	2.3 (1.4-3.2)	2.1 (1.3-2.9)
3	32 (24-40)	22 (17-30)	16 (11-22)	11 (7.9-16)	8.3 (5.5-12)	6.3 (4.1-9.3)	5.1 (3.2-7.7)	4.3 (2.6-6.6)	3.6 (2.2-5.7)	3.2 (1.9-5.1)	2.8 (1.6-4.5)
4	44 (35-51)	32 (25-39)	23 (17-28)	17 (12-21)	12 (8.7-16)	9.0 (6.5-12)	7.2 (5.2-10)	6.0 (4.2-8.6)	5.0 (3.6-7.4)	4.3 (3.0-6.5)	3.8 (2.6-5.8)
5	59 (51-62)	45 (38-49)	33 (27-37)	24 (20-27)	17 (14-20)	13 (11-16)	10 (8.4-13)	8.3 (6.8-11)	6.9 (5.7-9.0)	5.9 (4.9-7.9)	5.1 (4.3-7.0)
6	72	59	46	34	25	19	14	12	9.5	8.0	6.9

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

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	9.7	7.1	5.2	3.9	2.9	2.4	2.0	1.7	1.5	1.3	1.2
1	16 (13-27)	11 (9.0-19)	8.2 (6.4-13)	6.0 (4.6-9.0)	4.5 (3.4-6.3)	3.5 (2.7-4.7)	2.9 (2.2-3.6)	2.4 (1.8-2.8)	2.1 (1.5-2.4)	1.8 (1.3-2.1)	1.6 (1.1-1.9)
2	25 (17-41)	18 (12-30)	13 (8.6-21)	9.4 (6.2-15)	6.8 (4.5-11)	5.3 (3.5-7.9)	4.2 (2.8-6.0)	3.4 (2.3-4.7)	2.9 (1.9-3.8)	2.4 (1.6-3.3)	2.1 (1.4-2.9)
3	38 (23-52)	28 (17-40)	20 (12-29)	15 (8.4-21)	10 (6.1-15)	7.9 (4.7-12)	6.2 (3.7-9.0)	4.9 (3.0-7.1)	4.0 (2.5-5.7)	3.3 (2.1-4.7)	2.8 (1.8-4.0)
4	53 (32-64)	41 (23-51)	31 (17-39)	22 (12-29)	16 (9.0-21)	12 (7.0-16)	9.2 (5.6-12)	7.1 (4.6-9.4)	5.7 (3.9-7.6)	4.6 (3.3-6.2)	3.8 (2.8-5.2)
5	68 (46-74)	57 (35-62)	44 (26-50)	33 (19-38)	24 (14-27)	18 (11-21)	14 (9.0-16)	10 (7.3-12)	8.1 (6.1-9.8)	6.4 (5.2-7.9)	5.2 (4.5-6.5)
6	80	72	60	48	36	27	20	15	12	9.1	7.3

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	9.6	7.2	5.4	4.1	3.2	2.7	2.3	1.9	1.6	1.4	1.2
1	15 (12-25)	11 (8.7-18)	8.3 (6.4-13)	6.2 (4.7-9.4)	4.8 (3.6-6.9)	3.9 (2.9-5.3)	3.2 (2.4-4.1)	2.7 (2.0-3.3)	2.2 (1.7-2.6)	1.9 (1.4-2.2)	1.6 (1.2-1.9)
2	23 (16-37)	17 (12-28)	13 (8.6-21)	9.5 (6.4-15)	7.2 (4.8-11)	5.7 (3.8-8.7)	4.6 (3.1-6.8)	3.8 (2.5-5.3)	3.1 (2.1-4.3)	2.6 (1.7-3.5)	2.2 (1.5-3.0)
3	34 (21-48)	26 (16-37)	19 (12-28)	14 (8.6-21)	11 (6.5-15)	8.5 (5.1-12)	6.7 (4.1-9.5)	5.4 (3.3-7.6)	4.4 (2.7-6.1)	3.6 (2.3-5.0)	3.0 (1.9-4.2)
4	47 (28-58)	37 (21-47)	29 (16-36)	21 (12-27)	16 (9.1-21)	13 (7.3-16)	9.8 (5.9-13)	7.8 (4.9-10)	6.2 (4.1-8.1)	5.0 (3.4-6.7)	4.1 (2.9-5.5)
5	61 (40-66)	51 (31-57)	40 (24-46)	31 (18-36)	24 (14-27)	19 (11-21)	14 (9.2-17)	11 (7.6-13)	8.8 (6.3-11)	7.0 (5.3-8.6)	5.7 (4.5-7.0)
6	73	65	54	44	34	27	21	16	13	10.0	7.9

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

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	9.4	7.2	5.5	4.3	3.5	2.9	2.4	2.0	1.7	1.5	1.3
1	14 (11-23)	11 (8.2-17)	8.4 (6.3-13)	6.4 (4.7-9.8)	5.2 (3.8-7.6)	4.2 (3.1-6.0)	3.5 (2.5-4.7)	2.9 (2.1-3.8)	2.4 (1.8-3.0)	2.0 (1.5-2.4)	1.7 (1.2-2.0)
2	21 (14-33)	17 (11-26)	13 (8.4-20)	9.6 (6.4-15)	7.7 (5.1-12)	6.2 (4.1-9.5)	5.1 (3.3-7.5)	4.1 (2.7-6.0)	3.4 (2.2-4.8)	2.8 (1.9-3.9)	2.4 (1.6-3.2)
3	31 (19-43)	24 (15-35)	19 (11-27)	14 (8.6-21)	11 (6.8-16)	9.2 (5.5-13)	7.4 (4.5-10)	6.0 (3.6-8.4)	4.9 (3.0-6.9)	4.0 (2.5-5.6)	3.3 (2.1-4.6)
4	42 (26-53)	34 (20-44)	27 (15-35)	21 (12-27)	17 (9.5-22)	14 (7.8-17)	11 (6.4-14)	8.7 (5.2-11)	7.0 (4.3-9.1)	5.6 (3.6-7.5)	4.6 (3.0-6.1)
5	54 (35-61)	46 (28-52)	38 (22-43)	30 (18-35)	25 (14-28)	20 (12-23)	16 (9.6-19)	13 (8.0-15)	10 (6.6-12)	8.1 (5.5-9.8)	6.5 (4.7-8.0)
6	66	59	50	42	35	28	23	18	15	12	9.3

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	8.7	6.8	5.3	4.2	3.5	3.0	2.5	2.1	1.8	1.5	1.2
1	13 (9.6-21)	10 (7.5-16)	8.0 (5.8-13)	6.4 (4.6-9.9)	5.3 (3.8-8.0)	4.4 (3.1-6.5)	3.6 (2.6-5.3)	3.0 (2.2-4.2)	2.5 (1.8-3.4)	2.1 (1.5-2.8)	1.7 (1.3-2.3)
2	19 (13-29)	15 (10-24)	12 (7.8-19)	9.5 (6.2-15)	7.9 (5.1-12)	6.5 (4.2-10)	5.3 (3.5-8.2)	4.4 (2.9-6.6)	3.6 (2.4-5.4)	3.0 (2.0-4.4)	2.5 (1.6-3.6)
3	27 (17-38)	22 (14-31)	18 (11-25)	14 (8.4-21)	12 (6.9-17)	9.6 (5.7-14)	7.9 (4.7-11)	6.5 (3.8-9.2)	5.3 (3.2-7.5)	4.4 (2.6-6.2)	3.6 (2.2-5.1)
4	37 (23-47)	31 (18-40)	25 (14-33)	21 (12-27)	17 (9.6-22)	14 (7.9-18)	12 (6.6-15)	9.5 (5.5-12)	7.8 (4.5-10)	6.4 (3.8-8.3)	5.2 (3.1-6.8)
5	48 (30-55)	42 (25-48)	35 (20-41)	29 (17-34)	25 (14-29)	20 (12-24)	17 (9.7-20)	14 (8.1-17)	11 (6.8-14)	9.3 (5.7-11)	7.6 (4.7-9.2)
6	60	53	46	40	34	29	24	20	17	14	11