

The UK - The probabilities of a major osteoporotic fracture in men

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 the UK. 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	20	13	8.8	6.4	4.9	4.0	3.4	2.9	2.6	2.5	2.4
1	30 (26-37)	20 (17-25)	13 (11-17)	9.7 (7.7-12)	7.4 (5.5-9.3)	6.0 (4.2-7.7)	5.0 (3.4-6.7)	4.3 (2.9-5.9)	3.9 (2.6-5.4)	3.8 (2.4-5.2)	3.6 (2.3-5.0)
2	42 (33-55)	29 (23-39)	20 (15-27)	14 (10-20)	11 (7.2-16)	8.8 (5.3-14)	7.4 (4.2-12)	6.4 (3.5-11)	5.8 (3.1-10)	5.5 (2.9-9.6)	5.3 (2.7-9.3)
3	56 (43-69)	40 (30-51)	28 (21-38)	21 (14-31)	16 (9.6-25)	13 (7.0-22)	11 (5.5-19)	9.2 (4.5-17)	8.3 (4.0-16)	7.9 (3.7-15)	7.6 (3.5-15)
4	70 (55-81)	53 (39-63)	39 (27-48)	29 (20-38)	22 (15-32)	18 (12-27)	15 (9.0-24)	13 (7.3-21)	12 (6.4-20)	11 (5.9-19)	11 (5.6-18)
5	82 (74-87)	67 (57-74)	52 (42-57)	40 (31-46)	31 (24-38)	25 (19-32)	21 (16-28)	18 (14-25)	16 (12-23)	16 (11-22)	15 (10-21)
6	89	80	65	52	41	33	28	24	22	21	20

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

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	22	15	10	7.5	5.8	4.7	3.9	3.3	3.0	2.8	2.7
1	31 (28-37)	22 (19-26)	15 (13-18)	11 (9.0-14)	8.6 (6.5-10)	6.9 (4.9-8.8)	5.7 (3.9-7.6)	4.9 (3.3-6.7)	4.5 (2.9-6.2)	4.2 (2.7-5.9)	4.0 (2.5-5.6)
2	43 (36-55)	31 (25-40)	22 (17-29)	16 (12-22)	13 (8.4-18)	10 (6.3-16)	8.4 (4.9-13)	7.1 (4.0-12)	6.5 (3.5-11)	6.1 (3.2-10)	5.8 (3.0-10)
3	56 (45-67)	42 (33-51)	31 (23-41)	23 (16-33)	18 (11-28)	14 (8.3-24)	12 (6.4-21)	10 (5.2-18)	9.3 (4.6-17)	8.7 (4.2-16)	8.3 (3.9-15)
4	69 (57-78)	55 (42-62)	42 (30-50)	32 (23-42)	25 (17-35)	20 (13-30)	17 (10-26)	14 (8.3-23)	13 (7.2-21)	12 (6.6-20)	12 (6.2-20)
5	80 (73-85)	67 (59-73)	54 (45-59)	42 (35-49)	34 (27-41)	27 (22-35)	23 (18-30)	20 (15-27)	18 (13-25)	17 (12-24)	16 (11-23)
6	87	78	66	54	44	36	30	26	24	22	21

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	21	15	11	8.3	6.5	5.2	4.3	3.6	3.3	3.1	2.9
1	30 (28-35)	22 (19-25)	16 (14-19)	12 (9.7-14)	9.5 (7.2-12)	7.6 (5.5-9.7)	6.3 (4.4-8.4)	5.3 (3.6-7.2)	4.9 (3.2-6.8)	4.5 (2.9-6.4)	4.2 (2.7-6.0)
2	41 (34-50)	30 (25-38)	23 (18-29)	17 (13-23)	14 (9.3-19)	11 (7.0-17)	9.1 (5.5-14)	7.7 (4.4-12)	7.0 (3.9-12)	6.5 (3.5-11)	6.1 (3.2-10)
3	53 (43-61)	41 (33-50)	31 (24-41)	24 (17-34)	19 (12-29)	15 (9.3-25)	13 (7.2-22)	11 (5.8-19)	9.9 (5.1-18)	9.2 (4.6-17)	8.6 (4.2-16)
4	64 (54-71)	52 (41-59)	41 (31-50)	32 (24-42)	26 (19-36)	21 (15-31)	18 (11-27)	15 (9.1-24)	14 (7.9-22)	13 (7.1-21)	12 (6.5-20)
5	74 (68-78)	63 (56-68)	52 (45-59)	42 (36-50)	34 (28-42)	28 (23-36)	24 (19-32)	20 (15-28)	19 (14-26)	17 (12-24)	16 (11-23)
6	81	73	63	53	44	37	31	27	25	23	22

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

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	12	9.3	7.4	6.0	5.0	4.3	3.9	3.6	3.3
1	29 (26-32)	22 (19-25)	17 (14-19)	13 (10-16)	11 (8.0-13)	8.7 (6.2-11)	7.2 (5.0-9.6)	6.2 (4.2-8.4)	5.6 (3.7-7.8)	5.2 (3.4-7.3)	4.8 (3.1-6.8)
2	38 (33-45)	30 (25-36)	23 (18-30)	19 (14-25)	15 (10-21)	12 (8.0-18)	10 (6.3-16)	8.8 (5.2-14)	8.0 (4.5-13)	7.4 (4.1-12)	6.8 (3.7-11)
3	49 (41-56)	39 (32-48)	31 (24-41)	25 (18-35)	20 (14-30)	17 (11-26)	14 (8.3-23)	12 (6.8-21)	11 (5.9-19)	10 (5.3-18)	9.5 (4.8-17)
4	59 (50-65)	49 (41-57)	40 (32-50)	33 (26-43)	27 (21-37)	22 (16-33)	19 (13-29)	16 (10-26)	15 (8.9-24)	14 (8.0-23)	13 (7.2-21)
5	68 (63-73)	59 (53-65)	50 (44-57)	42 (36-50)	35 (30-44)	29 (25-38)	25 (20-33)	22 (17-30)	20 (15-28)	18 (13-26)	17 (12-25)
6	75	67	59	51	44	37	32	28	26	24	22

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	12	9.6	7.7	6.3	5.2	4.5	4.1	3.7	3.4
1	28 (23-33)	22 (18-26)	17 (14-21)	13 (10-16)	11 (8.1-13)	8.8 (6.4-10)	7.2 (5.2-8.6)	6.2 (4.4-7.3)	5.5 (3.8-6.6)	5.0 (3.4-6.0)	4.6 (3.1-5.5)
2	37 (30-46)	30 (23-37)	24 (18-30)	19 (14-25)	15 (11-20)	12 (8.3-16)	9.8 (6.6-13)	8.4 (5.5-12)	7.5 (4.7-10)	6.7 (4.2-9.5)	6.1 (3.7-8.6)
3	48 (39-57)	39 (30-49)	32 (24-41)	25 (18-34)	20 (14-28)	16 (11-24)	13 (8.6-20)	11 (7.2-17)	10 (6.2-15)	9.0 (5.5-14)	8.1 (4.9-13)
4	58 (49-66)	50 (40-58)	41 (32-50)	34 (26-42)	27 (20-35)	22 (16-30)	18 (13-25)	15 (11-22)	13 (9.1-20)	12 (8.0-18)	11 (7.2-16)
5	68 (61-73)	60 (52-66)	51 (44-58)	43 (36-50)	36 (29-43)	29 (24-36)	24 (19-30)	20 (16-26)	18 (14-23)	16 (13-21)	14 (11-19)
6	75	69	61	53	45	38	31	26	23	20	18

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

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	18	14	11	9.1	7.3	6.0	4.9	4.3	3.8	3.4	3.1
1	26 (20-41)	21 (16-33)	17 (12-26)	13 (9.6-21)	11 (7.6-16)	8.6 (6.0-12)	6.9 (4.8-9.6)	5.9 (4.1-7.8)	5.2 (3.6-6.4)	4.5 (3.1-5.4)	4.0 (2.8-4.8)
2	36 (26-51)	30 (21-43)	24 (16-35)	19 (13-29)	15 (10-23)	12 (8.0-18)	9.9 (6.3-14)	8.3 (5.3-11)	7.1 (4.5-9.6)	6.1 (3.9-8.1)	5.4 (3.4-7.0)
3	47 (34-61)	40 (27-53)	34 (22-45)	27 (17-38)	22 (13-31)	18 (11-25)	14 (8.4-20)	12 (7.0-17)	9.8 (6.0-14)	8.4 (5.2-12)	7.2 (4.5-10)
4	59 (42-69)	52 (35-62)	44 (29-54)	37 (23-47)	30 (19-39)	25 (15-32)	20 (12-26)	16 (10-22)	14 (8.5-18)	11 (7.4-16)	9.7 (6.4-13)
5	69 (52-75)	62 (44-69)	55 (37-62)	48 (31-55)	41 (26-47)	33 (21-40)	27 (17-33)	22 (15-28)	19 (13-23)	16 (11-20)	13 (9.8-17)
6	77	72	66	59	52	44	36	31	25	21	18

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	16	13	11	8.7	7.1	5.9	4.9	4.3	3.8	3.4	3.0
1	23 (17-37)	19 (14-31)	16 (11-25)	13 (9.0-21)	10 (7.3-17)	8.5 (5.9-13)	7.0 (4.8-11)	6.0 (4.1-8.8)	5.2 (3.6-7.3)	4.6 (3.1-6.1)	4.0 (2.7-5.2)
2	32 (22-47)	27 (18-40)	22 (15-33)	18 (12-27)	15 (9.7-22)	12 (7.9-18)	10 (6.4-15)	8.5 (5.4-12)	7.3 (4.6-10)	6.3 (4.0-8.7)	5.5 (3.5-7.4)
3	42 (29-55)	36 (24-49)	30 (20-42)	25 (16-35)	21 (13-30)	17 (10-24)	14 (8.5-20)	12 (7.2-17)	10 (6.2-14)	8.7 (5.3-12)	7.4 (4.6-10)
4	52 (36-63)	46 (30-57)	40 (25-50)	34 (21-43)	29 (17-37)	24 (14-31)	20 (12-26)	17 (9.9-22)	14 (8.5-19)	12 (7.3-16)	10 (6.3-14)
5	63 (44-69)	57 (38-63)	51 (32-57)	44 (27-51)	38 (23-44)	32 (19-38)	27 (16-32)	23 (14-28)	19 (12-24)	16 (10-21)	14 (9.0-18)
6	71	67	61	55	48	42	36	31	26	22	19

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

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	14	12	10	8.4	7.0	5.8	5.0	4.4	3.9	3.4	3.1
1	21 (15-34)	17 (13-29)	15 (10-24)	12 (8.6-20)	10 (7.1-17)	8.5 (5.8-14)	7.3 (4.9-12)	6.3 (4.2-9.9)	5.5 (3.7-8.4)	4.8 (3.2-7.2)	4.2 (2.8-6.1)
2	29 (20-43)	25 (17-37)	21 (14-32)	18 (11-27)	15 (9.5-23)	12 (7.8-19)	10 (6.6-16)	9.1 (5.7-14)	7.8 (4.9-12)	6.8 (4.3-9.9)	5.9 (3.7-8.5)
3	38 (25-51)	33 (22-45)	29 (18-40)	25 (15-34)	21 (13-29)	17 (11-25)	15 (8.9-21)	13 (7.6-18)	11 (6.6-16)	9.6 (5.7-13)	8.3 (4.9-12)
4	48 (32-59)	43 (28-53)	38 (24-48)	33 (20-42)	28 (17-37)	24 (14-32)	21 (12-27)	18 (10-24)	16 (8.9-21)	13 (7.7-18)	12 (6.7-15)
5	58 (40-65)	54 (35-60)	48 (30-55)	43 (26-50)	38 (22-44)	33 (19-39)	28 (16-34)	25 (14-30)	21 (12-26)	19 (11-23)	16 (9.3-20)
6	67	63	59	54	48	43	37	33	29	25	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	13	11	9.1	7.7	6.5	5.5	4.8	4.2	3.8	3.3	2.9
1	19 (14-31)	16 (12-27)	14 (9.8-23)	12 (8.2-20)	9.9 (6.9-17)	8.3 (5.8-14)	7.3 (5.0-12)	6.4 (4.4-11)	5.6 (3.8-9.2)	4.9 (3.3-8.0)	4.3 (2.9-6.9)
2	26 (18-40)	23 (15-35)	20 (13-31)	17 (11-27)	15 (9.3-23)	12 (7.8-20)	11 (6.8-17)	9.5 (5.9-15)	8.3 (5.2-13)	7.3 (4.5-11)	6.4 (4.0-9.8)
3	36 (23-48)	32 (20-44)	28 (17-39)	24 (15-35)	21 (13-30)	18 (11-26)	16 (9.3-23)	14 (8.1-20)	12 (7.1-18)	11 (6.2-16)	9.3 (5.4-14)
4	45 (30-56)	41 (26-52)	37 (23-47)	33 (20-42)	29 (17-38)	25 (14-33)	22 (12-30)	20 (11-26)	17 (9.6-23)	15 (8.5-21)	13 (7.4-18)
5	55 (37-61)	51 (33-58)	47 (29-54)	43 (26-49)	39 (22-45)	34 (19-40)	31 (17-36)	28 (15-33)	25 (13-29)	22 (12-26)	19 (10-23)
6	63	60	57	53	49	45	41	37	33	30	27