

The UK - 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 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	17	11	8.1	6.2	5.0	4.2	3.6	3.3	3.1	3.0	2.9	
1	26 (23-32)	17 (15-22)	12 (10-15)	9.3 (7.1-12)	7.5 (5.4-9.6)	6.3 (4.3-8.3)	5.4 (3.6-7.3)	4.9 (3.2-6.8)	4.7 (3.0-6.5)	4.5 (2.9-6.3)	4.3 (2.8-6.1)	
2	37 (30-49)	25 (20-35)	18 (13-25)	14 (9.1-20)	11 (6.7-17)	9.2 (5.3-15)	7.9 (4.3-13)	7.3 (3.9-12)	6.9 (3.6-12)	6.6 (3.4-11)	6.4 (3.3-11)	
3	51 (38-64)	36 (27-48)	26 (18-38)	20 (12-32)	16 (8.9-27)	13 (6.9-24)	11 (5.6-21)	10 (5.0-19)	10 (4.7-19)	9.6 (4.4-18)	9.2 (4.2-17)	
4	65 (49-77)	49 (35-58)	36 (25-47)	28 (19-39)	23 (15-34)	19 (11-30)	16 (9.2-26)	15 (8.1-24)	14 (7.5-24)	13 (7.1-23)	13 (6.8-22)	
5	79 (70-86)	63 (53-69)	49 (39-56)	38 (30-46)	31 (24-39)	26 (20-34)	22 (17-30)	20 (15-28)	19 (14-27)	19 (13-26)	18 (12-25)	
6	90	77	63	50	41	35	30	28	26	25	24	

Ten year probability of osteoporotic fractures (%) according to BMD, the number of clinical risk factors (CRF) and age in women 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	19	14	10	7.7	6.2	5.2	4.4	4.1	3.9	3.6	3.5
1	28 (25-34)	20 (17-24)	15 (12-18)	12 (8.8-14)	9.3 (6.7-12)	7.7 (5.4-10)	6.6 (4.4-8.9)	6.1 (4.0-8.4)	5.7 (3.7-8.0)	5.4 (3.5-7.6)	5.1 (3.3-7.2)
2	40 (33-51)	29 (23-38)	22 (16-29)	17 (11-24)	14 (8.4-21)	11 (6.6-18)	9.6 (5.4-16)	8.9 (4.8-15)	8.3 (4.4-14)	7.9 (4.2-13)	7.5 (3.9-13)
3	53 (43-64)	40 (31-53)	30 (21-44)	24 (15-37)	19 (11-32)	16 (8.6-28)	14 (7.0-24)	13 (6.2-23)	12 (5.7-22)	11 (5.4-21)	11 (5.0-20)
4	68 (53-76)	53 (40-63)	41 (30-53)	33 (23-45)	27 (18-39)	22 (14-34)	19 (11-30)	18 (10-29)	17 (9.2-27)	16 (8.6-26)	15 (8.1-25)
5	81 (73-86)	67 (58-72)	54 (46-61)	44 (36-52)	36 (29-45)	30 (24-40)	26 (20-35)	24 (18-33)	23 (16-31)	22 (15-30)	21 (14-29)
6	90	80	67	56	47	40	35	32	30	29	28

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	22	16	12	9.4	7.5	6.2	5.4	4.9	4.6	4.3	4.0
1	32 (29-36)	23 (20-27)	18 (14-20)	14 (11-17)	11 (8.1-14)	9.1 (6.4-12)	7.9 (5.4-11)	7.3 (4.9-10)	6.7 (4.4-9.4)	6.3 (4.1-8.8)	5.9 (3.8-8.3)
2	44 (38-54)	33 (26-41)	25 (19-33)	20 (14-28)	16 (10-24)	13 (7.9-20)	11 (6.6-18)	10 (5.8-17)	9.7 (5.3-16)	9.1 (4.9-15)	8.5 (4.5-14)
3	57 (47-68)	44 (35-57)	35 (25-48)	27 (18-41)	22 (13-36)	19 (10-31)	16 (8.5-28)	15 (7.5-26)	14 (6.8-25)	13 (6.3-23)	12 (5.8-22)
4	70 (58-77)	57 (45-67)	46 (35-58)	37 (27-50)	30 (22-44)	25 (17-38)	22 (14-34)	20 (12-32)	19 (11-30)	18 (10-29)	17 (9.2-27)
5	82 (76-85)	70 (63-76)	58 (51-66)	48 (41-58)	40 (34-50)	34 (28-44)	30 (23-40)	27 (20-37)	26 (18-35)	24 (17-33)	23 (16-31)
6	89	81	71	61	52	44	39	36	34	32	30

Ten year probability of osteoporotic fractures (%) according to BMD, the number of clinical risk factors (CRF) and age in women 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	26	20	15	12	9.6	7.9	7.0	6.4	5.8	5.3	4.9
1	36 (33-40)	28 (24-31)	22 (17-26)	17 (13-21)	14 (10-18)	11 (8.1-15)	10 (7.0-14)	9.2 (6.2-13)	8.4 (5.6-12)	7.8 (5.1-11)	7.2 (4.7-10)
2	48 (42-57)	38 (31-47)	30 (23-39)	24 (17-33)	20 (13-28)	16 (10-24)	14 (8.5-22)	13 (7.5-21)	12 (6.7-19)	11 (6.1-18)	10 (5.6-17)
3	61 (52-72)	50 (39-63)	40 (29-55)	33 (22-48)	27 (17-42)	22 (13-36)	20 (11-33)	18 (9.7-31)	17 (8.6-29)	15 (7.8-27)	14 (7.1-26)
4	73 (63-80)	62 (51-73)	52 (41-65)	43 (33-57)	36 (26-50)	30 (20-44)	27 (17-41)	25 (15-38)	23 (14-36)	21 (12-34)	20 (11-32)
5	82 (78-86)	73 (68-80)	64 (58-72)	54 (48-64)	46 (40-57)	39 (32-50)	36 (28-46)	33 (24-43)	30 (22-41)	28 (20-38)	26 (18-36)
6	89	83	75	66	57	50	46	42	39	37	34

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	29	23	18	14	11	9.2	8.1	7.2	6.5	5.9	5.3
1	40 (35-47)	31 (26-36)	24 (20-28)	19 (15-22)	15 (12-18)	13 (9.4-15)	11 (8.1-13)	9.9 (7.1-12)	8.8 (6.3-10)	8.0 (5.6-9.5)	7.3 (5.1-8.7)
2	53 (44-63)	42 (34-52)	33 (26-42)	26 (19-34)	21 (15-27)	17 (12-23)	15 (9.9-20)	13 (8.6-18)	12 (7.5-16)	11 (6.7-15)	9.8 (6.0-14)
3	66 (55-77)	55 (43-67)	44 (33-57)	35 (25-48)	28 (19-40)	23 (15-34)	20 (13-30)	18 (11-27)	16 (9.7-24)	14 (8.6-22)	13 (7.7-20)
4	78 (70-84)	68 (58-76)	57 (46-67)	47 (37-58)	38 (29-49)	31 (23-42)	27 (20-37)	24 (17-34)	21 (15-31)	19 (13-28)	17 (12-26)
5	85 (81-88)	79 (73-83)	69 (62-76)	59 (52-66)	49 (42-57)	41 (35-49)	35 (30-44)	31 (26-39)	27 (23-35)	25 (21-32)	22 (19-30)
6	89	86	80	71	61	52	45	40	35	31	29

Ten year probability of osteoporotic fractures (%) according to BMD, the number of clinical risk factors (CRF) and age in women 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	31	24	19	15	12	9.9	8.5	7.4	6.6	5.8	5.2
1	44 (36-61)	35 (28-49)	27 (21-38)	21 (16-29)	16 (12-21)	14 (10-17)	12 (8.6-13)	10 (7.4-12)	8.7 (6.4-10)	7.7 (5.6-9.1)	6.8 (4.9-8.2)
2	58 (45-74)	48 (36-64)	38 (27-53)	30 (21-42)	23 (16-32)	19 (13-26)	16 (11-21)	13 (9.1-18)	12 (7.8-16)	10 (6.7-14)	8.8 (5.9-13)
3	70 (56-82)	61 (45-75)	51 (35-65)	41 (27-54)	32 (21-44)	26 (17-36)	22 (14-30)	18 (12-25)	15 (10-21)	13 (8.7-18)	12 (7.6-16)
4	80 (67-86)	73 (57-82)	64 (47-74)	54 (37-64)	44 (30-54)	36 (25-45)	30 (21-38)	25 (18-32)	21 (15-27)	17 (13-23)	15 (11-20)
5	86 (77-89)	82 (69-86)	76 (60-81)	67 (51-73)	57 (42-63)	48 (35-54)	40 (30-46)	33 (26-39)	27 (23-33)	23 (20-28)	20 (17-24)
6	89	87	84	78	70	61	52	44	36	30	25

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	33	26	21	16	13	11	9.5	8.2	7.1	6.2	5.5
1	44 (37-62)	36 (29-51)	29 (23-41)	23 (18-32)	19 (14-25)	15 (12-20)	13 (9.6-16)	11 (8.1-13)	9.5 (6.9-11)	8.2 (6.0-9.4)	7.2 (5.2-8.3)
2	57 (45-72)	48 (37-64)	40 (29-55)	32 (23-45)	26 (18-37)	21 (15-30)	18 (12-25)	15 (10-20)	13 (8.6-17)	11 (7.3-14)	9.4 (6.3-12)
3	67 (55-79)	60 (46-72)	51 (37-64)	43 (29-55)	35 (23-46)	29 (19-39)	24 (16-33)	20 (13-28)	17 (11-23)	14 (9.5-20)	12 (8.2-17)
4	76 (64-83)	70 (55-79)	63 (46-72)	54 (38-64)	46 (31-56)	39 (26-48)	33 (22-41)	27 (19-35)	23 (16-30)	19 (14-25)	16 (12-22)
5	82 (72-86)	78 (65-83)	73 (57-78)	66 (49-72)	58 (42-65)	50 (36-57)	43 (31-50)	36 (27-43)	30 (23-36)	26 (20-31)	21 (18-26)
6	86	84	80	75	69	62	55	47	40	34	28

Ten year probability of osteoporotic fractures (%) according to BMD, the number of clinical risk factors (CRF) and age in women 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	34	28	22	18	15	13	11	9.3	8.0	6.9	5.9
1	44 (36-60)	37 (29-52)	31 (24-44)	25 (19-36)	21 (16-30)	18 (13-25)	15 (11-20)	13 (9.2-17)	11 (7.8-14)	9.2 (6.6-11)	7.9 (5.6-9.3)
2	55 (44-69)	48 (36-62)	40 (30-54)	34 (24-47)	29 (20-40)	24 (17-34)	21 (14-29)	17 (12-24)	15 (9.8-20)	12 (8.3-17)	11 (7.0-14)
3	64 (52-75)	58 (45-70)	51 (38-63)	44 (31-56)	38 (26-49)	33 (22-43)	28 (18-37)	24 (15-32)	20 (13-27)	17 (11-23)	14 (9.2-19)
4	73 (60-80)	67 (54-76)	61 (46-70)	54 (39-64)	48 (34-58)	42 (29-52)	37 (25-45)	32 (21-39)	27 (18-34)	23 (15-29)	19 (13-25)
5	79 (68-83)	75 (62-80)	70 (55-76)	64 (48-71)	59 (43-66)	53 (38-60)	47 (33-54)	41 (29-48)	35 (25-42)	30 (22-36)	25 (19-31)
6	82	81	78	73	69	63	58	51	45	39	33

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	30	25	20	16	14	12	10	8.6	7.4	6.3	5.3
1	40 (32-56)	34 (26-49)	28 (21-41)	23 (17-35)	20 (15-29)	17 (12-25)	14 (10-21)	12 (8.8-17)	10 (7.4-14)	8.7 (6.2-12)	7.4 (5.2-9.8)
2	50 (39-65)	44 (33-59)	38 (27-52)	32 (23-45)	28 (19-40)	24 (16-34)	20 (14-29)	17 (11-25)	14 (9.6-21)	12 (8.0-17)	10 (6.8-15)
3	61 (48-72)	55 (41-67)	48 (35-61)	42 (29-55)	37 (25-49)	32 (21-43)	28 (18-38)	24 (15-32)	20 (13-28)	17 (11-23)	14 (8.9-20)
4	69 (56-77)	65 (50-73)	59 (43-69)	53 (37-63)	48 (32-58)	43 (28-52)	37 (24-46)	32 (21-40)	28 (18-35)	24 (15-30)	20 (13-26)
5	75 (64-80)	73 (59-78)	68 (52-74)	64 (46-70)	59 (41-66)	54 (37-60)	48 (32-55)	43 (28-49)	37 (24-43)	32 (21-38)	27 (18-33)
6	78	78	76	73	69	65	60	54	48	43	37