The UK - The probabilities of a hip fracture in women

The following tables give the 10-year probability (%) of a hip 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	11	5.9	3.1	1.6	0.8	0.4	0.2	0.1	0.1	0.0	0.0
1	18 (12-23)	9.5 (6.2-12)	4.9 (3.2-6.5)	2.5 (1.7-3.3)	1.3 (0.8-1.7)	0.7 (0.4-0.9)	0.3 (0.2-0.5)	0.2 (0.1-0.2)	0.1 (0.1-0.1)	0.0 (0.0-0.1)	0.0 (0.0-0.0)
2	27 (16-38)	15 (8.8-22)	7.8 (4.6-12)	4.1 (2.4-6.2)	2.1 (1.2-3.2)	1.1 (0.6-1.6)	0.5 (0.3-0.8)	0.3 (0.2-0.4)	0.1 (0.1-0.2)	0.1 (0.1-0.1)	0.0 (0.0-0.1)
3	39 (24-56)	22 (13-35)	12 (6.9-20)	6.4 (3.6-10)	3.3 (1.8-5.5)	1.7 (0.9-2.8)	0.9 (0.5-1.5)	0.5 (0.3-0.8)	0.2 (0.1-0.4)	0.1 (0.1-0.2)	0.1 (0.0-0.1)
4	53 (38-71)	33 (22-48)	18 (12-28)	9.9 (6.1-16)	5.2 (3.2-8.3)	2.7 (1.6-4.3)	1.4 (0.8-2.2)	0.7 (0.4-1.2)	0.4 (0.2-0.6)	0.2 (0.1-0.3)	0.1 (0.1-0.2)
5	69 (59-82)	46 (36-60)	27 (21-37)	15 (11-21)	8.0 (5.9-12)	4.2 (3.0-6.1)	2.1 (1.6-3.1)	1.1 (0.8-1.6)	0.6 (0.4-0.9)	0.3 (0.2-0.5)	0.2 (0.1-0.2)
6	84	62	39	22	12	6.4	3.3	1.7	0.9	0.5	0.3

Ten year probability of hip 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	12	6.6	3.6	1.9	1.1	0.6	0.3	0.2	0.1	0.1	0.0
1	18 (13-22)	10 (6.9-13)	5.7 (3.8-7.0)	3.1 (2.0-3.8)	1.7 (1.1-2.1)	0.9 (0.6-1.1)	0.5 (0.3-0.6)	0.3 (0.2-0.3)	0.1 (0.1-0.2)	0.1 (0.1-0.1)	0.0 (0.0-0.1)
2	27 (17-37)	16 (9.7-22)	8.8 (5.3-13)	4.8 (2.9-7.0)	2.6 (1.6-3.8)	1.4 (0.8-2.1)	0.8 (0.5-1.1)	0.4 (0.3-0.6)	0.2 (0.1-0.3)	0.1 (0.1-0.2)	0.1 (0.0-0.1)
3	39 (25-55)	23 (14-35)	13 (8.0-21)	7.5 (4.4-12)	4.1 (2.4-6.5)	2.2 (1.3-3.5)	1.2 (0.7-1.9)	0.7 (0.4-1.1)	0.4 (0.2-0.6)	0.2 (0.1-0.3)	0.1 (0.1-0.2)
4	53 (39-70)	34 (24-48)	20 (13-30)	11 (7.5-17)	6.3 (4.1-9.8)	3.4 (2.2-5.4)	1.9 (1.2-2.9)	1.0 (0.7-1.6)	0.6 (0.4-0.9)	0.3 (0.2-0.5)	0.2 (0.1-0.3)
5	68 (60-81)	47 (39-60)	29 (24-39)	17 (13-24)	9.5 (7.5-14)	5.2 (4.1-7.5)	2.8 (2.2-4.1)	1.6 (1.2-2.3)	0.9 (0.7-1.3)	0.5 (0.4-0.7)	0.3 (0.2-0.4)
6	82	62	41	25	14	7.9	4.3	2.4	1.4	0.8	0.4

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	7.5	4.3	2.4	1.3	0.8	0.4	0.2	0.1	0.1	0.1
1	20 (14-23)	11 (7.9-13)	6.6 (4.5-7.8)	3.7 (2.5-4.4)	2.1 (1.4-2.5)	1.2 (0.8-1.4)	0.7 (0.4-0.8)	0.4 (0.3-0.5)	0.2 (0.2-0.3)	0.1 (0.1-0.2)	0.1 (0.1-0.1)
2	28 (19-37)	17 (11-23)	10 (6.3-14)	5.7 (3.6-7.9)	3.2 (2.0-4.5)	1.8 (1.1-2.5)	1.0 (0.6-1.4)	0.6 (0.4-0.8)	0.3 (0.2-0.5)	0.2 (0.1-0.3)	0.1 (0.1-0.2)
3	40 (27-54)	25 (16-36)	15 (9.5-22)	8.7 (5.4-13)	4.9 (3.0-7.5)	2.8 (1.7-4.3)	1.6 (1.0-2.4)	0.9 (0.6-1.4)	0.5 (0.3-0.8)	0.3 (0.2-0.5)	0.2 (0.1-0.3)
4	53 (42-69)	35 (26-49)	22 (16-32)	13 (9.1-19)	7.5 (5.2-11)	4.2 (2.9-6.4)	2.4 (1.7-3.7)	1.4 (1.0-2.2)	0.8 (0.6-1.3)	0.5 (0.3-0.7)	0.3 (0.2-0.4)
5	68 (62-79)	48 (42-61)	31 (27-42)	19 (16-26)	11 (9.2-16)	6.4 (5.2-9.0)	3.7 (3.0-5.2)	2.1 (1.7-3.1)	1.2 (1.0-1.8)	0.7 (0.6-1.0)	0.4 (0.3-0.6)
6	81	63	43	27	16	9.5	5.5	3.2	1.9	1.1	0.6

FRAX® — WHO Fracture Risk Assessment Tool

Ten year probability of hip 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	14	8.5	5.0	2.9	1.7	1.0	0.6	0.4	0.2	0.1	0.1
1	21 (15-24)	13 (8.9-15)	7.6 (5.2-9.0)	4.5 (3.1-5.3)	2.6 (1.8-3.1)	1.5 (1.0-1.8)	0.9 (0.6-1.1)	0.6 (0.4-0.7)	0.3 (0.2-0.4)	0.2 (0.1-0.2)	0.1 (0.1-0.1)
2	29 (20-37)	19 (12-24)	11 (7.4-15)	6.7 (4.3-8.8)	4.0 (2.5-5.2)	2.3 (1.5-3.1)	1.4 (0.9-1.9)	0.8 (0.5-1.1)	0.5 (0.3-0.7)	0.3 (0.2-0.4)	0.2 (0.1-0.2)
3	40 (29-53)	26 (18-36)	16 (11-23)	10 (6.6-14)	5.9 (3.9-8.6)	3.5 (2.3-5.1)	2.1 (1.4-3.1)	1.3 (0.8-1.9)	0.8 (0.5-1.1)	0.5 (0.3-0.7)	0.3 (0.2-0.4)
4	53 (44-66)	37 (29-49)	24 (18-33)	15 (11-21)	8.8 (6.4-13)	5.2 (3.7-7.6)	3.2 (2.3-4.7)	1.9 (1.4-2.8)	1.2 (0.8-1.7)	0.7 (0.5-1.0)	0.4 (0.3-0.6)
5	66 (61-77)	49 (43-60)	33 (28-43)	21 (17-28)	13 (11-18)	7.7 (6.3-11)	4.7 (3.8-6.6)	2.9 (2.3-4.0)	1.7 (1.4-2.4)	1.0 (0.8-1.5)	0.6 (0.5-0.9)
6	78	62	44	29	18	11	6.9	4.2	2.6	1.6	0.9

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	9.8	6.1	3.7	2.3	1.4	0.9	0.6	0.3	0.2	0.1
1	25 (21-30)	16 (14-20)	10 (8.5-13)	6.2 (5.2-7.8)	3.8 (3.2-4.8)	2.3 (2.0-3.0)	1.5 (1.2-1.9)	0.9 (0.8-1.2)	0.6 (0.5-0.7)	0.4 (0.3-0.5)	0.2 (0.2-0.3)
2	37 (30-46)	25 (20-32)	16 (13-21)	10 (7.9-14)	6.3 (4.8-8.5)	3.9 (3.0-5.3)	2.5 (1.9-3.4)	1.6 (1.2-2.1)	1.0 (0.8-1.4)	0.6 (0.5-0.9)	0.4 (0.3-0.5)
3	52 (43-61)	37 (29-46)	25 (19-32)	16 (12-21)	10 (7.4-14)	6.4 (4.6-8.6)	4.1 (2.9-5.5)	2.6 (1.8-3.5)	1.6 (1.2-2.2)	1.0 (0.7-1.4)	0.7 (0.5-0.9)
4	68 (58-73)	52 (42-59)	37 (29-44)	25 (19-30)	16 (12-20)	10 (7.6-13)	6.7 (4.8-8.4)	4.3 (3.1-5.4)	2.7 (1.9-3.4)	1.7 (1.2-2.2)	1.1 (0.8-1.4)
5	80 (74-82)	68 (60-72)	52 (44-57)	38 (31-42)	25 (20-29)	17 (13-19)	11 (8.5-13)	7.0 (5.5-8.1)	4.5 (3.5-5.2)	2.8 (2.2-3.3)	1.8 (1.4-2.1)
6	87	80	68	53	38	26	17	11	7.3	4.7	3.0

Ten year probability of hip 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	17	12	7.5	4.8	3.1	2.0	1.3	0.9	0.6	0.4	0.3
1	30 (24-54)	21 (16-40)	14 (10-28)	9.4 (6.8-19)	6.1 (4.4-13)	4.1 (2.9-8.6)	2.7 (1.9-5.7)	1.8 (1.3-3.8)	1.2 (0.8-2.5)	0.8 (0.5-1.7)	0.5 (0.4-1.1)
2	46 (32-69)	34 (22-56)	24 (15-43)	17 (9.6-31)	11 (6.2-21)	7.5 (4.1-15)	5.1 (2.7-9.9)	3.4 (1.8-6.7)	2.2 (1.2-4.5)	1.5 (0.8-3.0)	1.0 (0.5-2.0)
3	62 (43-79)	50 (31-69)	38 (21-56)	28 (14-42)	19 (9.3-31)	13 (6.2-22)	9.1 (4.1-15)	6.1 (2.7-10)	4.1 (1.8-7.1)	2.7 (1.2-4.8)	1.8 (0.8-3.2)
4	75 (57-84)	66 (43-77)	54 (31-67)	42 (22-55)	31 (14-42)	22 (9.8-31)	15 (6.6-22)	11 (4.4-15)	7.2 (2.9-11)	4.8 (1.9-7.2)	3.2 (1.3-4.8)
5	84 (70-88)	78 (58-83)	70 (45-75)	59 (33-65)	46 (23-52)	35 (16-40)	25 (11-30)	18 (7.6-21)	12 (5.1-15)	8.3 (3.4-10)	5.6 (2.3-6.8)
6	88	86	81	74	63	51	39	28	20	14	9.5

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	19	13	9.0	6.1	4.2	2.9	2.0	1.4	1.0	0.7	0.5
1	31 (24-55)	23 (17-43)	16 (12-33)	11 (8.0-24)	8.0 (5.5-17)	5.7 (3.8-12)	4.0 (2.7-8.6)	2.8 (1.9-6.0)	1.9 (1.3-4.2)	1.3 (0.9-2.9)	0.9 (0.6-2.0)
2	45 (32-67)	36 (23-57)	27 (16-46)	20 (11-35)	14 (7.7-26)	10 (5.4-19)	7.2 (3.8-14)	5.1 (2.6-10)	3.6 (1.8-7.2)	2.5 (1.3-5.0)	1.7 (0.9-3.5)
3	59 (42-76)	50 (32-68)	40 (23-58)	31 (16-47)	23 (11-36)	17 (8.1-28)	12 (5.7-21)	8.9 (4.0-15)	6.3 (2.8-11)	4.5 (1.9-7.7)	3.1 (1.3-5.4)
4	71 (53-81)	63 (43-75)	54 (32-67)	44 (24-57)	35 (17-47)	27 (12-37)	20 (8.8-29)	15 (6.2-22)	11 (4.4-16)	7.6 (3.1-11)	5.4 (2.1-8.1)
5	80 (64-84)	75 (55-80)	68 (44-73)	59 (34-66)	49 (26-56)	40 (19-47)	31 (14-37)	23 (10-29)	17 (7.2-21)	13 (5.1-16)	9.0 (3.6-11)
6	85	83	78	72	63	54	45	35	27	20	15

Ten year probability of hip 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	20	15	11	7.7	5.7	4.2	3.1	2.3	1.7	1.2	0.9
1	31 (25-54)	24 (19-45)	19 (14-36)	14 (10-28)	10 (7.4-22)	7.9 (5.5-17)	5.9 (4.1-13)	4.4 (3.0-9.5)	3.2 (2.2-7.1)	2.4 (1.6-5.2)	1.8 (1.2-3.9)
2	44 (32-65)	36 (25-56)	29 (19-47)	23 (14-39)	18 (10-31)	14 (7.7-25)	10 (5.7-19)	7.8 (4.2-15)	5.9 (3.1-11)	4.3 (2.3-8.5)	3.2 (1.7-6.3)
3	56 (40-72)	49 (32-66)	41 (25-58)	34 (19-50)	27 (15-42)	22 (11-34)	17 (8.4-27)	13 (6.3-22)	10 (4.7-17)	7.5 (3.4-13)	5.6 (2.5-9.5)
4	68 (50-78)	61 (42-73)	54 (34-66)	46 (27-59)	39 (21-51)	32 (16-43)	26 (12-36)	21 (9.3-28)	16 (7.0-23)	12 (5.2-18)	9.3 (3.8-13)
5	76 (60-81)	72 (52-77)	66 (44-72)	59 (36-65)	52 (29-58)	45 (23-51)	38 (18-44)	31 (14-36)	25 (11-30)	19 (8.2-24)	15 (6.1-18)
6	82	80	76	70	65	58	51	43	36	29	23

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	17	13	9.9	7.6	6.0	4.6	3.6	2.8	2.2	1.7	1.3
1	28 (21-50)	22 (17-42)	17 (13-34)	14 (9.9-28)	11 (7.8-23)	8.6 (6.1-18)	6.8 (4.7-15)	5.3 (3.7-11)	4.1 (2.8-9.0)	3.2 (2.2-7.0)	2.5 (1.7-5.5)
2	40 (28-61)	33 (22-53)	27 (17-46)	22 (14-38)	18 (11-32)	15 (8.5-27)	12 (6.6-22)	9.4 (5.2-18)	7.4 (4.0-14)	5.8 (3.1-11)	4.5 (2.4-8.8)
3	53 (36-69)	46 (29-63)	40 (23-57)	33 (19-50)	28 (15-43)	23 (12-37)	19 (9.5-31)	15 (7.5-25)	12 (5.9-20)	9.8 (4.6-16)	7.7 (3.6-13)
4	65 (46-75)	59 (39-71)	53 (32-65)	46 (26-59)	40 (22-52)	35 (17-46)	29 (14-39)	24 (11-33)	20 (8.8-27)	16 (6.9-22)	13 (5.4-18)
5	73 (57-78)	70 (50-75)	65 (43-71)	59 (36-65)	54 (30-60)	48 (25-54)	41 (21-48)	35 (17-41)	30 (13-35)	25 (11-29)	20 (8.4-24)
6	78	77	74	70	66	61	55	49	42	36	30