Hong Kong - 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 Hong Kong. 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	8.7	5.3	3.4	2.3	1.7	1.3	1.1	0.9	0.8	0.8	0.7
1	13 (11-17)	8.2 (7.1-11)	5.2 (4.6-6.7)	3.5 (3.0-4.5)	2.6 (2.0-3.3)	2.0 (1.5-2.5)	1.6 (1.1-2.1)	1.4 (0.9-1.9)	1.2 (0.8-1.7)	1.2 (0.8-1.6)	1.1 (0.7-1.6)
2	20 (15-29)	12 (9.5-18)	8.0 (6.2-11)	5.4 (4.0-7.7)	3.9 (2.7-5.7)	3.0 (1.9-4.7)	2.4 (1.4-4.0)	2.1 (1.1-3.5)	1.8 (1.0-3.2)	1.7 (0.9-3.0)	1.7 (0.8-2.9)
3	29 (20-41)	19 (13-26)	12 (8.4-16)	8.1 (5.6-12)	5.8 (3.6-9.3)	4.5 (2.5-7.6)	3.6 (1.9-6.5)	3.0 (1.5-5.6)	2.7 (1.3-5.1)	2.5 (1.2-4.9)	2.4 (1.1-4.7)
4	41 (29-54)	27 (18-35)	18 (11-22)	12 (7.7-15)	8.5 (5.5-12)	6.5 (4.2-9.8)	5.2 (3.1-8.3)	4.4 (2.5-7.2)	3.9 (2.1-6.6)	3.6 (1.9-6.3)	3.5 (1.8-6.0)
5	55 (45-66)	38 (29-46)	25 (19-30)	17 (13-20)	12 (9.1-15)	9.3 (6.9-12)	7.4 (5.5-10)	6.2 (4.6-8.6)	5.5 (3.9-7.8)	5.1 (3.6-7.4)	4.9 (3.3-7.1)
6	69	51	35	24	17	13	10	8.6	7.6	7.1	6.8

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

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	13	8.2	5.4	3.8	2.8	2.2	1.8	1.5	1.3	1.3	1.2
1	19 (16-23)	12 (11-15)	8.3 (7.3-10)	5.8 (4.8-7.1)	4.3 (3.3-5.2)	3.3 (2.4-4.1)	2.7 (1.9-3.5)	2.2 (1.5-3.0)	2.0 (1.3-2.8)	1.9 (1.2-2.6)	1.8 (1.1-2.5)
2	28 (22-37)	18 (15-25)	12 (9.9-17)	8.6 (6.5-12)	6.3 (4.4-9.0)	4.9 (3.2-7.4)	3.9 (2.4-6.3)	3.3 (1.9-5.4)	2.9 (1.6-5.0)	2.7 (1.5-4.7)	2.6 (1.3-4.5)
3	39 (29-50)	26 (19-34)	18 (13-24)	13 (9.0-18)	9.2 (6.0-14)	7.1 (4.2-12)	5.7 (3.1-10)	4.8 (2.4-8.6)	4.3 (2.1-7.9)	4.0 (1.9-7.5)	3.7 (1.7-7.1)
4	52 (39-63)	37 (26-45)	26 (18-30)	18 (12-23)	13 (9.0-18)	10 (6.9-15)	8.2 (5.2-13)	6.8 (4.0-11)	6.1 (3.4-10)	5.6 (3.0-9.5)	5.3 (2.8-9.1)
5	65 (57-73)	49 (41-56)	35 (28-39)	25 (20-29)	19 (15-23)	14 (11-18)	11 (8.9-15)	9.5 (7.3-13)	8.5 (6.2-12)	7.8 (5.5-11)	7.4 (5.0-11)
6	77	62	46	34	26	20	16	13	12	11	10

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	16	11	7.5	5.4	4.1	3.2	2.6	2.1	1.9	1.8	1.7
1	23 (21-27)	16 (14-18)	11 (9.8-13)	8.1 (6.8-9.5)	6.1 (4.8-7.2)	4.8 (3.6-5.9)	3.8 (2.7-5.0)	3.2 (2.2-4.2)	2.9 (1.9-3.9)	2.6 (1.7-3.7)	2.4 (1.6-3.5)
2	32 (26-41)	23 (19-29)	16 (13-21)	12 (9.1-15)	8.9 (6.4-12)	6.9 (4.6-10)	5.6 (3.5-8.6)	4.6 (2.7-7.4)	4.2 (2.4-6.8)	3.8 (2.1-6.4)	3.6 (1.9-6.0)
3	43 (34-52)	32 (24-38)	23 (18-30)	17 (12-24)	13 (8.6-19)	9.9 (6.2-16)	8.0 (4.6-13)	6.6 (3.6-12)	6.0 (3.1-11)	5.5 (2.7-10)	5.1 (2.5-9.4)
4	56 (45-64)	42 (32-49)	31 (23-37)	23 (17-30)	18 (13-24)	14 (9.9-20)	11 (7.5-17)	9.3 (5.8-15)	8.4 (4.9-14)	7.7 (4.3-13)	7.1 (3.9-12)
5	67 (61-73)	54 (47-60)	42 (35-46)	32 (26-37)	24 (20-30)	19 (16-24)	16 (12-20)	13 (10-17)	12 (8.6-16)	11 (7.6-15)	9.8 (6.8-14)
6	77	66	53	42	33	26	21	17	16	14	13

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

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	19	13	9.9	7.4	5.7	4.5	3.6	3.0	2.7	2.5	2.2
1	26 (25-29)	19 (17-22)	14 (12-16)	11 (8.9-12)	8.3 (6.6-9.7)	6.5 (4.9-8.0)	5.3 (3.8-6.8)	4.4 (3.1-5.9)	3.9 (2.7-5.4)	3.6 (2.4-5.0)	3.3 (2.1-4.6)
2	36 (30-43)	27 (22-33)	20 (17-25)	15 (12-19)	12 (8.7-16)	9.3 (6.5-13)	7.5 (4.9-11)	6.3 (3.9-9.8)	5.7 (3.3-9.0)	5.1 (2.9-8.3)	4.7 (2.6-7.8)
3	46 (38-54)	36 (29-43)	27 (22-35)	21 (16-29)	16 (12-24)	13 (8.6-20)	11 (6.5-17)	8.9 (5.2-15)	8.0 (4.4-14)	7.2 (3.8-13)	6.6 (3.4-12)
4	57 (48-64)	46 (37-52)	36 (29-43)	29 (22-36)	23 (17-30)	18 (13-25)	15 (10-22)	12 (8.2-19)	11 (6.9-17)	10 (6.0-16)	9.2 (5.3-15)
5	67 (62-71)	57 (51-61)	46 (41-52)	37 (32-43)	30 (26-36)	24 (20-30)	20 (16-26)	17 (13-22)	15 (11-21)	14 (9.9-19)	12 (8.8-18)
6	75	67	57	47	38	32	26	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	22	16	12	9.4	7.3	5.7	4.6	3.9	3.4	3.0	2.7
1	31 (27-37)	23 (20-28)	18 (15-22)	14 (11-16)	10 (8.4-13)	8.2 (6.4-9.8)	6.5 (4.9-7.8)	5.4 (4.0-6.4)	4.7 (3.4-5.6)	4.2 (3.0-4.9)	3.7 (2.6-4.4)
2	42 (35-50)	33 (27-40)	25 (20-32)	19 (15-25)	15 (11-19)	12 (8.5-15)	9.2 (6.5-12)	7.6 (5.2-10)	6.6 (4.3-8.9)	5.7 (3.7-7.9)	5.1 (3.2-7.1)
3	54 (45-63)	44 (35-54)	35 (27-44)	27 (20-36)	21 (15-29)	16 (11-23)	13 (8.6-19)	11 (6.9-16)	9.0 (5.7-14)	7.9 (4.9-12)	6.9 (4.2-11)
4	65 (57-72)	56 (47-63)	46 (38-54)	37 (29-45)	29 (22-36)	23 (17-29)	18 (13-24)	15 (11-20)	12 (8.8-18)	11 (7.5-15)	9.4 (6.5-14)
5	74 (68-78)	67 (59-72)	58 (50-63)	48 (41-54)	39 (32-45)	31 (26-37)	25 (20-30)	20 (16-25)	17 (14-21)	14 (12-19)	13 (10-17)
6	80	75	68	59	50	41	33	27	23	19	17

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

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	22	17	13	10	8.1	6.4	5.1	4.3	3.7	3.3	2.9
1	33 (26-52)	26 (20-42)	20 (16-33)	16 (12-26)	12 (9.3-20)	9.7 (7.2-15)	7.6 (5.6-11)	6.3 (4.6-9.0)	5.3 (3.9-7.2)	4.6 (3.3-5.8)	4.0 (2.8-4.8)
2	45 (34-63)	37 (27-54)	30 (21-45)	24 (16-37)	19 (12-29)	15 (9.6-23)	11 (7.5-17)	9.3 (6.0-14)	7.7 (5.0-11)	6.5 (4.2-9.1)	5.5 (3.6-7.5)
3	58 (43-72)	50 (35-64)	42 (28-56)	34 (22-47)	28 (17-38)	22 (13-31)	17 (10-24)	14 (8.1-20)	11 (6.7-16)	9.3 (5.6-13)	7.7 (4.7-11)
4	69 (54-78)	62 (45-72)	55 (37-65)	47 (30-57)	39 (23-48)	31 (18-40)	25 (15-32)	20 (12-26)	16 (10-21)	13 (8.4-17)	11 (7.1-15)
5	78 (63-82)	73 (55-78)	66 (48-73)	59 (40-66)	51 (32-58)	43 (26-49)	35 (21-40)	28 (17-33)	23 (15-28)	19 (12-23)	15 (11-19)
6	83	81	76	71	63	55	47	39	32	27	22

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	20	16	13	11	8.6	7.0	5.8	5.0	4.3	3.8	3.3
1	29 (23-47)	24 (18-39)	20 (15-33)	16 (12-27)	13 (9.4-21)	10 (7.5-17)	8.5 (6.1-13)	7.2 (5.1-11)	6.2 (4.3-9.0)	5.3 (3.7-7.5)	4.6 (3.2-6.2)
2	40 (29-57)	34 (24-50)	28 (19-42)	23 (16-35)	19 (13-29)	15 (10-24)	12 (8.1-19)	10 (6.8-16)	8.9 (5.7-13)	7.5 (4.8-11)	6.4 (4.1-9.1)
3	51 (36-65)	45 (30-59)	38 (25-52)	32 (21-45)	27 (17-38)	22 (14-31)	18 (11-26)	15 (9.1-22)	13 (7.6-18)	11 (6.5-15)	9.0 (5.5-13)
4	62 (45-72)	56 (39-67)	49 (33-60)	43 (27-53)	37 (22-46)	31 (18-39)	25 (15-33)	21 (13-28)	18 (11-23)	15 (9.1-20)	13 (7.8-17)
5	71 (54-77)	66 (47-72)	60 (41-67)	54 (35-61)	47 (29-54)	41 (24-47)	35 (20-41)	30 (17-35)	25 (15-30)	21 (13-25)	18 (11-22)
6	78	75	71	65	59	52	45	39	34	29	24

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

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	18	15	12	10	8.3	6.9	5.9	5.1	4.5	3.9	3.5
1	25 (19-41)	21 (16-35)	18 (13-29)	15 (11-24)	12 (8.9-20)	10 (7.3-17)	8.6 (6.1-14)	7.5 (5.2-12)	6.5 (4.5-9.7)	5.6 (3.9-8.2)	4.9 (3.4-7.0)
2	35 (25-51)	30 (21-44)	26 (17-39)	22 (14-33)	18 (12-28)	15 (9.8-23)	13 (8.2-19)	11 (7.0-17)	9.3 (6.0-14)	8.1 (5.2-12)	7.0 (4.4-10)
3	46 (32-60)	41 (27-54)	35 (23-48)	30 (19-42)	26 (16-36)	22 (13-31)	18 (11-26)	16 (9.4-22)	13 (8.0-19)	12 (6.9-16)	9.9 (5.9-14)
4	57 (40-67)	52 (35-62)	46 (30-57)	41 (25-51)	35 (21-45)	30 (18-39)	26 (15-33)	22 (13-29)	19 (11-25)	16 (9.6-21)	14 (8.4-18)
5	66 (49-72)	62 (44-68)	57 (38-64)	52 (33-58)	46 (28-53)	40 (24-46)	35 (20-41)	31 (18-36)	27 (15-32)	23 (13-28)	20 (12-24)
6	73	71	67	63	57	52	46	41	36	32	27

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	10	8.7	7.4	6.2	5.3	4.4	3.9	3.4	3.0	2.7	2.4
1	15 (11-25)	13 (9.2-21)	11 (7.8-18)	9.3 (6.5-15)	7.9 (5.5-13)	6.6 (4.6-11)	5.7 (4.0-9.3)	5.0 (3.5-8.1)	4.4 (3.0-7.0)	3.9 (2.7-6.0)	3.4 (2.3-5.2)
2	22 (15-33)	19 (12-29)	16 (10-25)	14 (8.8-21)	12 (7.4-18)	9.8 (6.2-15)	8.5 (5.3-13)	7.4 (4.7-12)	6.5 (4.1-10)	5.7 (3.6-8.7)	5.0 (3.1-7.5)
3	30 (19-42)	26 (16-37)	23 (14-33)	20 (12-28)	17 (10-24)	14 (8.4-21)	12 (7.3-18)	11 (6.4-16)	9.5 (5.5-14)	8.3 (4.8-12)	7.2 (4.2-10)
4	40 (25-50)	36 (22-45)	31 (19-40)	27 (16-36)	24 (14-31)	20 (11-27)	18 (10-24)	16 (8.7-21)	14 (7.7-18)	12 (6.7-16)	11 (5.9-14)
5	50 (32-57)	46 (28-52)	41 (25-48)	37 (21-43)	33 (18-38)	28 (16-34)	25 (14-30)	22 (12-27)	20 (11-24)	17 (9.4-21)	15 (8.2-18)
6	60	56	52	47	43	38	34	31	27	24	21