Estonia - 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 Estonia. 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	14	8.8	5.5	3.7	2.7	2.0	1.6	1.4	1.2	1.2	1.1
1	22 (17-27)	13 (11-17)	8.5 (7.5-11)	5.7 (4.7-7.3)	4.0 (3.2-5.2)	3.1 (2.3-3.9)	2.5 (1.7-3.2)	2.1 (1.4-2.8)	1.9 (1.2-2.5)	1.8 (1.1-2.4)	1.7 (1.0-2.4)
2	31 (23-42)	20 (15-28)	13 (9.7-18)	8.5 (6.4-12)	6.0 (4.3-8.6)	4.6 (2.9-7.1)	3.7 (2.2-6.0)	3.1 (1.7-5.2)	2.7 (1.5-4.7)	2.6 (1.3-4.5)	2.5 (1.3-4.4)
3	42 (31-54)	28 (20-37)	19 (13-24)	12 (8.9-17)	8.9 (5.8-14)	6.7 (3.9-11)	5.3 (2.9-9.4)	4.5 (2.3-8.1)	3.9 (1.9-7.4)	3.7 (1.7-7.1)	3.6 (1.6-6.8)
4	55 (42-66)	39 (27-48)	26 (18-32)	18 (12-23)	13 (8.4-18)	9.6 (6.3-14)	7.6 (4.7-12)	6.3 (3.6-10)	5.6 (3.0-9.5)	5.3 (2.7-9.1)	5.0 (2.5-8.8)
5	67 (57-75)	51 (41-59)	36 (28-42)	25 (19-29)	18 (13-22)	13 (10-17)	11 (7.9-14)	8.9 (6.6-12)	7.8 (5.7-11)	7.3 (5.1-11)	7.0 (4.8-10)
6	77	63	47	34	25	19	15	12	11	10	9.6

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

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	15	9.4	6.3	4.4	3.3	2.6	2.1	1.8	1.6	1.5	1.4
1	21 (18-26)	14 (13-17)	9.4 (8.2-12)	6.6 (5.4-8.2)	4.9 (3.8-6.1)	3.8 (2.8-4.8)	3.1 (2.1-4.1)	2.6 (1.7-3.5)	2.4 (1.5-3.3)	2.2 (1.4-3.1)	2.1 (1.3-3.0)
2	30 (24-39)	20 (16-27)	14 (11-19)	9.7 (7.3-13)	7.2 (5.0-10)	5.6 (3.6-8.6)	4.5 (2.7-7.3)	3.8 (2.1-6.3)	3.4 (1.8-5.9)	3.2 (1.7-5.6)	3.0 (1.6-5.3)
3	40 (31-50)	28 (21-36)	20 (15-26)	14 (10-20)	10 (6.8-16)	8.0 (4.8-13)	6.5 (3.6-11)	5.4 (2.8-9.8)	4.9 (2.4-9.0)	4.6 (2.2-8.6)	4.3 (2.0-8.2)
4	52 (41-61)	38 (28-45)	27 (19-33)	20 (14-25)	15 (10-20)	11 (7.6-17)	9.1 (5.6-14)	7.6 (4.4-12)	6.9 (3.8-12)	6.4 (3.4-11)	6.1 (3.1-10)
5	63 (55-69)	49 (41-55)	36 (29-40)	27 (21-31)	20 (15-25)	16 (12-20)	13 (9.6-17)	10 (8.0-15)	9.4 (6.8-14)	8.8 (6.1-13)	8.3 (5.6-12)
6	72	60	46	35	27	21	17	14	13	12	11

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	9.2	6.5	4.8	3.6	2.9	2.3	2.0	1.8	1.7	1.5
1	19 (18-22)	13 (12-16)	9.5 (8.0-11)	7.0 (5.6-8.3)	5.3 (4.0-6.4)	4.2 (3.0-5.3)	3.4 (2.4-4.5)	2.9 (1.9-3.9)	2.6 (1.7-3.7)	2.4 (1.5-3.4)	2.3 (1.4-3.2)
2	26 (21-33)	19 (15-24)	14 (11-17)	10 (7.5-13)	7.7 (5.4-11)	6.1 (3.9-9.2)	5.0 (3.0-7.9)	4.2 (2.4-6.8)	3.8 (2.1-6.3)	3.5 (1.9-6.0)	3.3 (1.7-5.6)
3	35 (28-43)	26 (20-32)	19 (15-25)	14 (10-20)	11 (7.2-17)	8.6 (5.3-14)	7.0 (4.0-12)	5.9 (3.2-10)	5.3 (2.7-9.6)	4.9 (2.4-9.1)	4.6 (2.2-8.6)
4	45 (36-53)	34 (26-40)	26 (19-32)	19 (14-26)	15 (11-21)	12 (8.2-18)	9.7 (6.2-15)	8.1 (4.8-13)	7.4 (4.2-12)	6.8 (3.7-12)	6.4 (3.4-11)
5	55 (49-60)	44 (37-48)	34 (28-39)	26 (21-31)	20 (16-26)	16 (13-21)	13 (10-18)	11 (8.4-16)	10 (7.3-14)	9.3 (6.5-14)	8.7 (5.9-13)
6	64	53	43	34	27	21	17	15	13	12	12

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

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	12	8.9	6.5	4.9	3.8	3.0	2.4	2.0	1.8	1.7	1.5
1	17 (16-20)	13 (11-14)	9.3 (7.8-11)	7.0 (5.6-8.1)	5.4 (4.1-6.5)	4.3 (3.1-5.4)	3.5 (2.5-4.5)	2.9 (2.0-4.0)	2.6 (1.7-3.6)	2.4 (1.5-3.4)	2.2 (1.4-3.2)
2	24 (19-29)	17 (14-21)	13 (10-16)	9.9 (7.6-13)	7.7 (5.5-11)	6.1 (4.1-9.0)	5.0 (3.2-7.6)	4.2 (2.5-6.7)	3.8 (2.2-6.1)	3.4 (1.9-5.7)	3.2 (1.7-5.3)
3	31 (25-37)	24 (19-29)	18 (14-23)	14 (10-19)	11 (7.5-16)	8.5 (5.5-13)	6.9 (4.2-11)	5.9 (3.3-9.9)	5.3 (2.8-9.2)	4.8 (2.5-8.5)	4.4 (2.2-8.0)
4	40 (33-46)	31 (25-36)	24 (19-30)	18 (14-24)	15 (11-20)	12 (8.4-17)	9.5 (6.4-14)	8.0 (5.1-13)	7.2 (4.3-12)	6.6 (3.7-11)	6.1 (3.3-10)
5	48 (43-53)	39 (34-44)	31 (26-36)	24 (20-30)	19 (16-25)	16 (13-21)	13 (10-17)	11 (8.4-15)	9.7 (7.2-14)	8.8 (6.3-13)	8.2 (5.6-12)
6	56	47	39	31	25	20	17	14	13	12	11

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	11	8.4	6.3	4.8	3.7	3.0	2.4	2.0	1.8	1.6	1.4
1	17 (14-21)	12 (10-15)	9.2 (7.4-11)	7.0 (5.5-8.7)	5.4 (4.1-6.6)	4.2 (3.2-5.1)	3.3 (2.4-4.0)	2.8 (2.0-3.4)	2.4 (1.7-2.9)	2.2 (1.5-2.6)	1.9 (1.3-2.3)
2	23 (19-30)	18 (14-23)	13 (10-17)	10 (7.4-13)	7.7 (5.6-10)	6.0 (4.2-8.1)	4.7 (3.2-6.4)	3.9 (2.6-5.4)	3.4 (2.2-4.7)	3.0 (1.9-4.2)	2.6 (1.6-3.7)
3	32 (25-40)	25 (19-32)	19 (14-25)	14 (10-19)	11 (7.6-15)	8.4 (5.7-12)	6.6 (4.3-9.6)	5.4 (3.5-8.1)	4.6 (2.9-7.0)	4.0 (2.5-6.2)	3.6 (2.1-5.6)
4	42 (34-49)	33 (26-40)	26 (20-32)	20 (15-25)	15 (11-20)	12 (8.4-16)	9.2 (6.4-13)	7.4 (5.1-11)	6.3 (4.3-9.2)	5.4 (3.6-8.1)	4.8 (3.2-7.2)
5	52 (44-58)	43 (36-49)	35 (28-40)	27 (22-32)	21 (17-26)	16 (13-20)	13 (10-16)	10 (8.1-13)	8.6 (6.8-11)	7.3 (5.8-9.9)	6.4 (5.1-8.8)
6	61	53	44	36	29	22	17	14	12	9.8	8.4

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

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	10	7.8	6.0	4.7	3.6	2.9	2.3	2.0	1.7	1.5	1.3
1	16 (12-29)	13 (9.2-22)	9.6 (7.0-17)	7.4 (5.3-13)	5.7 (4.0-9.5)	4.4 (3.1-7.1)	3.5 (2.4-5.3)	2.9 (2.0-4.2)	2.4 (1.7-3.3)	2.1 (1.4-2.7)	1.8 (1.2-2.2)
2	24 (16-38)	19 (12-30)	15 (9.4-24)	11 (7.2-18)	8.8 (5.5-14)	6.8 (4.2-11)	5.2 (3.3-8.0)	4.2 (2.7-6.3)	3.5 (2.2-5.1)	2.9 (1.8-4.1)	2.5 (1.6-3.4)
3	34 (22-47)	28 (17-39)	22 (13-32)	17 (9.9-25)	13 (7.6-19)	10 (5.8-15)	7.8 (4.4-12)	6.3 (3.6-9.2)	5.1 (2.9-7.4)	4.2 (2.5-6.1)	3.5 (2.1-5.1)
4	46 (29-56)	38 (23-48)	31 (18-40)	25 (14-33)	20 (11-26)	15 (8.3-20)	12 (6.4-16)	9.3 (5.2-13)	7.4 (4.3-10)	6.0 (3.6-8.2)	4.9 (3.0-6.8)
5	57 (37-64)	49 (30-56)	42 (24-49)	35 (19-41)	28 (15-33)	22 (12-27)	17 (9.4-21)	14 (7.7-17)	11 (6.4-13)	8.7 (5.4-11)	7.0 (4.6-8.9)
6	67	61	53	46	38	31	24	20	16	12	10

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	7.7	6.1	4.9	4.0	3.2	2.6	2.3	2.0	1.7	1.5
1	15 (11-26)	12 (8.4-21)	9.5 (6.7-17)	7.6 (5.3-13)	6.1 (4.2-11)	4.9 (3.3-8.2)	3.9 (2.7-6.4)	3.3 (2.2-5.2)	2.8 (1.9-4.3)	2.4 (1.6-3.5)	2.1 (1.4-2.9)
2	22 (14-35)	18 (11-29)	14 (9.0-23)	11 (7.2-19)	9.1 (5.7-15)	7.3 (4.5-12)	5.8 (3.6-9.2)	4.9 (3.0-7.5)	4.1 (2.5-6.2)	3.5 (2.2-5.1)	3.0 (1.8-4.2)
3	30 (18-43)	25 (15-36)	21 (12-30)	17 (9.6-25)	13 (7.7-20)	11 (6.1-16)	8.6 (4.9-13)	7.1 (4.1-10)	5.9 (3.4-8.5)	4.9 (2.9-7.0)	4.2 (2.5-5.9)
4	40 (24-51)	34 (19-44)	29 (16-38)	24 (13-32)	19 (10-26)	16 (8.4-21)	13 (6.8-17)	10 (5.6-14)	8.5 (4.7-11)	7.1 (4.0-9.5)	5.9 (3.4-7.9)
5	50 (31-57)	44 (26-51)	38 (21-44)	32 (17-38)	27 (14-32)	22 (11-27)	18 (9.2-22)	15 (7.7-18)	12 (6.6-15)	10 (5.6-13)	8.3 (4.8-11)
6	61	55	49	42	36	30	25	21	17	14	12

FRAX® WHO Fracture Risk Assessment Tool

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

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	10	8.3	6.9	5.8	4.8	4.0	3.4	3.0	2.7	2.4	2.1
1	15 (10-25)	12 (8.6-21)	10 (7.1-17)	8.6 (5.8-14)	7.1 (4.8-12)	5.9 (4.0-9.6)	5.0 (3.3-8.0)	4.3 (2.9-6.8)	3.8 (2.5-5.7)	3.3 (2.2-4.9)	2.9 (1.9-4.2)
2	21 (14-33)	18 (11-28)	15 (9.4-24)	12 (7.7-20)	10 (6.4-16)	8.6 (5.3-13)	7.2 (4.4-11)	6.2 (3.9-9.4)	5.4 (3.3-8.0)	4.7 (2.9-6.8)	4.1 (2.5-5.8)
3	29 (18-40)	25 (15-35)	21 (12-30)	18 (10-26)	15 (8.6-21)	12 (7.1-18)	10 (6.0-15)	8.9 (5.2-13)	7.7 (4.5-11)	6.6 (3.9-9.3)	5.7 (3.4-8.0)
4	38 (23-48)	33 (19-42)	29 (16-37)	24 (14-32)	21 (12-28)	17 (9.6-23)	15 (8.1-20)	13 (7.0-17)	11 (6.0-15)	9.3 (5.2-13)	8.0 (4.5-11)
5	48 (30-54)	43 (25-49)	38 (22-44)	33 (18-39)	28 (15-34)	24 (13-29)	21 (11-25)	18 (9.6-22)	15 (8.3-19)	13 (7.3-17)	11 (6.4-14)
6	58	53	48	42	37	32	28	24	21	18	16

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	9.1	7.7	6.5	5.5	4.6	3.9	3.4	3.0	2.7	2.4	2.1
1	13 (9.4-22)	11 (8.0-19)	9.7 (6.7-16)	8.2 (5.7-14)	6.9 (4.7-11)	5.8 (4.0-9.6)	5.1 (3.5-8.3)	4.5 (3.0-7.2)	3.9 (2.7-6.2)	3.5 (2.3-5.4)	3.0 (2.0-4.6)
2	19 (13-29)	17 (11-25)	14 (9.0-22)	12 (7.6-19)	10 (6.4-16)	8.6 (5.4-13)	7.5 (4.7-12)	6.6 (4.1-10)	5.7 (3.6-8.8)	5.0 (3.1-7.6)	4.4 (2.7-6.6)
3	27 (17-37)	23 (14-33)	20 (12-29)	17 (10-25)	15 (8.7-21)	13 (7.3-18)	11 (6.3-16)	9.6 (5.6-14)	8.4 (4.8-12)	7.3 (4.2-11)	6.4 (3.7-9.2)
4	36 (22-45)	32 (19-41)	28 (16-36)	24 (14-32)	21 (12-28)	18 (10-24)	16 (8.7-21)	14 (7.7-18)	12 (6.7-16)	11 (5.9-14)	9.2 (5.2-12)
5	45 (28-52)	41 (25-48)	37 (21-43)	33 (18-39)	29 (16-34)	25 (14-30)	22 (12-27)	19 (10-24)	17 (9.2-21)	15 (8.1-19)	13 (7.2-16)
6	55	51	47	43	38	34	30	27	24	21	19