FRAX® WHO Fracture Risk Assessment Tool

Romania - 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 Romania. 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	6.9	4.7	3.5	2.7	2.2	1.9	1.7	1.6	1.5
1	26 (21-32)	16 (14-21)	11 (9.3-14)	7.2 (5.9-9.2)	5.3 (4.0-6.7)	4.1 (2.9-5.2)	3.3 (2.3-4.3)	2.8 (1.9-3.8)	2.5 (1.6-3.5)	2.4 (1.5-3.3)	2.3 (1.4-3.2)
2	36 (28-48)	24 (18-33)	16 (12-22)	11 (8.1-15)	7.8 (5.4-11)	6.0 (3.8-9.4)	4.9 (2.9-8.0)	4.1 (2.3-7.0)	3.7 (2.0-6.4)	3.5 (1.8-6.2)	3.4 (1.7-6.0)
3	49 (37-61)	33 (24-43)	23 (16-29)	16 (11-22)	11 (7.3-18)	8.8 (5.1-15)	7.1 (3.8-13)	6.0 (3.0-11)	5.3 (2.6-10)	5.1 (2.4-9.6)	4.8 (2.2-9.3)
4	61 (48-71)	45 (32-55)	32 (22-38)	22 (15-28)	16 (11-23)	12 (8.3-19)	10 (6.1-16)	8.5 (4.8-14)	7.6 (4.1-13)	7.1 (3.7-12)	6.8 (3.5-12)
5	73 (64-79)	57 (47-65)	42 (33-48)	31 (23-35)	23 (17-28)	17 (13-23)	14 (11-19)	12 (8.8-17)	11 (7.6-15)	9.9 (6.9-14)	9.5 (6.5-14)
6	81	69	54	41	31	24	19	16	14	13	13

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

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	17	11	7.4	5.2	3.8	3.0	2.4	2.0	1.8	1.7	1.6
1	25 (21-30)	16 (15-20)	11 (9.7-14)	7.8 (6.4-9.6)	5.7 (4.4-7.1)	4.4 (3.2-5.5)	3.6 (2.5-4.7)	3.0 (2.0-4.0)	2.7 (1.8-3.7)	2.5 (1.6-3.5)	2.4 (1.5-3.4)
2	35 (28-45)	24 (19-31)	16 (13-22)	11 (8.6-15)	8.4 (5.9-12)	6.5 (4.2-9.9)	5.2 (3.1-8.4)	4.4 (2.5-7.3)	3.9 (2.1-6.7)	3.7 (1.9-6.4)	3.5 (1.8-6.1)
3	46 (36-56)	33 (25-41)	23 (17-29)	16 (12-23)	12 (8.0-18)	9.3 (5.6-15)	7.5 (4.2-13)	6.3 (3.3-11)	5.6 (2.8-10)	5.2 (2.5-9.8)	5.0 (2.3-9.4)
4	58 (46-66)	43 (33-51)	31 (23-37)	23 (16-29)	17 (12-23)	13 (9.0-19)	11 (6.6-16)	8.8 (5.1-14)	7.9 (4.4-13)	7.3 (3.9-12)	6.9 (3.6-12)
5	68 (61-74)	55 (46-61)	41 (34-46)	31 (24-36)	23 (18-28)	18 (14-23)	14 (11-20)	12 (9.3-17)	11 (7.9-15)	10 (7.1-15)	9.5 (6.5-14)
6	76	65	52	40	31	24	19	16	15	14	13

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	7.4	5.4	4.1	3.2	2.6	2.1	1.9	1.8	1.7
1	22 (20-26)	15 (14-18)	11 (9.3-13)	7.9 (6.5-9.4)	6.0 (4.6-7.1)	4.7 (3.4-5.8)	3.8 (2.6-4.9)	3.1 (2.1-4.2)	2.8 (1.9-3.9)	2.6 (1.7-3.7)	2.4 (1.5-3.5)
2	30 (24-38)	22 (17-28)	16 (13-20)	11 (8.7-15)	8.6 (6.2-12)	6.7 (4.5-10)	5.4 (3.4-8.5)	4.5 (2.6-7.3)	4.1 (2.3-6.8)	3.8 (2.0-6.4)	3.5 (1.8-6.0)
3	40 (32-48)	30 (23-36)	22 (17-28)	16 (12-22)	12 (8.3-18)	9.5 (6.0-15)	7.7 (4.5-13)	6.4 (3.5-11)	5.8 (3.0-10)	5.3 (2.6-9.7)	4.9 (2.4-9.1)
4	50 (41-58)	39 (30-45)	29 (22-35)	22 (16-28)	17 (12-23)	13 (9.3-19)	11 (7.0-16)	8.8 (5.4-14)	8.0 (4.6-13)	7.4 (4.1-12)	6.9 (3.7-12)
5	60 (54-65)	49 (42-53)	38 (32-43)	29 (24-34)	23 (18-28)	18 (14-23)	14 (11-20)	12 (9.4-17)	11 (8.0-15)	10 (7.1-14)	9.3 (6.4-14)
6	69	58	47	37	29	24	19	16	14	13	12

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

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	10	7.3	5.5	4.2	3.3	2.6	2.2	2.0	1.8	1.7
1	20 (18-22)	14 (13-16)	10 (8.9-12)	7.8 (6.4-9.0)	6.0 (4.7-7.1)	4.7 (3.5-5.9)	3.8 (2.7-4.9)	3.2 (2.2-4.3)	2.9 (1.9-3.9)	2.6 (1.7-3.6)	2.4 (1.5-3.4)
2	27 (22-32)	20 (16-24)	15 (12-18)	11 (8.6-14)	8.5 (6.3-12)	6.7 (4.6-9.7)	5.4 (3.5-8.2)	4.6 (2.8-7.2)	4.1 (2.4-6.6)	3.7 (2.1-6.1)	3.4 (1.9-5.7)
3	35 (28-41)	27 (21-32)	20 (16-26)	15 (12-21)	12 (8.5-17)	9.4 (6.2-14)	7.6 (4.7-12)	6.4 (3.7-11)	5.7 (3.1-9.9)	5.2 (2.7-9.2)	4.8 (2.4-8.6)
4	44 (37-50)	34 (28-40)	27 (21-32)	21 (16-27)	16 (12-22)	13 (9.5-18)	10 (7.2-16)	8.7 (5.6-14)	7.8 (4.7-13)	7.1 (4.1-12)	6.5 (3.6-11)
5	53 (48-57)	43 (38-48)	34 (30-40)	27 (23-32)	21 (18-27)	17 (14-22)	14 (11-19)	12 (9.3-16)	10 (7.9-15)	9.5 (6.9-14)	8.8 (6.1-13)
6	61	52	42	34	28	22	18	15	14	13	12

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	12	9.3	7.0	5.4	4.2	3.3	2.7	2.3	2.0	1.8	1.6
1	18 (15-22)	14 (11-17)	10 (8.2-13)	7.8 (6.1-9.6)	6.0 (4.6-7.3)	4.7 (3.5-5.7)	3.7 (2.7-4.5)	3.1 (2.2-3.8)	2.7 (1.9-3.3)	2.4 (1.7-2.9)	2.2 (1.5-2.6)
2	26 (20-32)	19 (15-25)	15 (11-19)	11 (8.3-15)	8.5 (6.2-11)	6.6 (4.7-9.0)	5.2 (3.6-7.2)	4.4 (2.9-6.1)	3.8 (2.4-5.3)	3.3 (2.1-4.7)	3.0 (1.8-4.2)
3	35 (28-43)	27 (21-34)	21 (15-27)	16 (11-21)	12 (8.4-17)	9.3 (6.3-13)	7.3 (4.8-11)	6.0 (3.9-9.0)	5.2 (3.2-7.9)	4.5 (2.8-7.0)	4.0 (2.4-6.3)
4	45 (37-52)	36 (29-43)	28 (22-35)	22 (16-28)	17 (12-22)	13 (9.4-17)	10 (7.2-14)	8.3 (5.7-12)	7.0 (4.8-10)	6.1 (4.1-9.1)	5.4 (3.6-8.1)
5	55 (48-61)	46 (39-52)	38 (31-43)	30 (24-35)	23 (19-28)	18 (14-22)	14 (11-18)	11 (9.0-15)	9.5 (7.6-13)	8.2 (6.5-11)	7.1 (5.7-9.9)
6	65	56	48	39	31	25	19	15	13	11	9.4

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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 Romania.

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	11	8.4	6.5	5.1	4.0	3.2	2.6	2.2	2.0	1.7	1.6
1	17 (13-29)	13 (9.6-23)	10 (7.3-17)	7.9 (5.6-13)	6.1 (4.4-9.8)	4.8 (3.4-7.4)	3.8 (2.7-5.6)	3.2 (2.2-4.5)	2.7 (1.9-3.6)	2.4 (1.6-3.0)	2.1 (1.4-2.5)
2	25 (17-38)	20 (13-31)	16 (9.9-24)	12 (7.6-19)	9.3 (5.9-14)	7.2 (4.6-11)	5.6 (3.6-8.4)	4.6 (2.9-6.7)	3.9 (2.5-5.5)	3.3 (2.1-4.5)	2.9 (1.8-3.8)
3	35 (23-48)	29 (18-40)	23 (14-32)	18 (10-26)	14 (8.0-20)	11 (6.2-16)	8.3 (4.8-12)	6.7 (3.9-9.8)	5.6 (3.3-8.1)	4.6 (2.8-6.7)	3.9 (2.4-5.7)
4	47 (30-57)	39 (24-49)	32 (19-41)	26 (15-34)	20 (11-27)	16 (8.9-21)	12 (6.9-16)	9.8 (5.7-13)	8.0 (4.7-11)	6.5 (4.0-8.9)	5.4 (3.5-7.5)
5	58 (39-65)	51 (32-58)	43 (26-50)	36 (20-42)	29 (16-34)	23 (13-27)	18 (10-22)	14 (8.4-17)	11 (7.1-14)	9.3 (6.1-12)	7.6 (5.3-9.7)
6	69	62	55	47	39	32	25	20	16	13	11

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	8.8	7.0	5.6	4.5	3.6	2.9	2.4	2.1	1.8	1.6	1.4
1	14 (9.8-24)	11 (7.8-19)	8.7 (6.1-15)	6.9 (4.8-12)	5.5 (3.8-9.3)	4.4 (3.0-7.2)	3.6 (2.5-5.7)	3.0 (2.1-4.6)	2.6 (1.8-3.8)	2.2 (1.5-3.1)	1.9 (1.3-2.6)
2	20 (13-32)	16 (10-26)	13 (8.3-21)	10 (6.6-17)	8.3 (5.2-13)	6.6 (4.1-10)	5.3 (3.3-8.2)	4.4 (2.8-6.7)	3.7 (2.3-5.5)	3.2 (2.0-4.6)	2.7 (1.7-3.8)
3	28 (17-40)	23 (14-34)	19 (11-28)	15 (9.0-23)	12 (7.1-18)	9.8 (5.7-14)	7.8 (4.5-11)	6.5 (3.8-9.3)	5.4 (3.2-7.6)	4.5 (2.7-6.4)	3.8 (2.3-5.4)
4	38 (23-48)	32 (19-42)	27 (15-35)	22 (12-29)	18 (9.7-24)	14 (7.8-19)	11 (6.3-15)	9.4 (5.3-13)	7.7 (4.4-10)	6.4 (3.8-8.6)	5.4 (3.2-7.2)
5	49 (30-55)	42 (25-49)	36 (20-42)	30 (16-36)	25 (13-30)	20 (11-24)	16 (8.7-20)	13 (7.3-17)	11 (6.2-14)	9.2 (5.3-11)	7.6 (4.6-9.6)
6	59	53	47	40	34	28	23	19	16	13	11

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

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	6.7	5.5	4.5	3.7	3.0	2.5	2.1	1.8	1.6	1.4	1.2
1	10 (7.3-19)	8.5 (5.9-15)	7.0 (4.8-12)	5.7 (3.9-10)	4.6 (3.2-8.1)	3.8 (2.6-6.5)	3.2 (2.2-5.3)	2.7 (1.8-4.5)	2.4 (1.6-3.7)	2.0 (1.4-3.1)	1.8 (1.2-2.6)
2	16 (9.8-25)	13 (8.1-21)	11 (6.6-17)	8.7 (5.3-14)	7.1 (4.3-11)	5.8 (3.5-9.2)	4.8 (2.9-7.6)	4.1 (2.5-6.4)	3.5 (2.1-5.4)	3.0 (1.8-4.5)	2.5 (1.6-3.8)
3	23 (13-33)	19 (11-28)	16 (8.9-23)	13 (7.3-19)	11 (6.0-16)	8.6 (4.9-13)	7.1 (4.0-11)	6.0 (3.4-9.0)	5.1 (2.9-7.5)	4.3 (2.5-6.3)	3.7 (2.1-5.3)
4	31 (18-41)	27 (15-35)	22 (12-30)	19 (9.9-25)	15 (8.1-21)	13 (6.7-17)	11 (5.6-14)	8.9 (4.8-12)	7.5 (4.1-10)	6.3 (3.5-8.6)	5.3 (3.0-7.2)
5	41 (23-48)	36 (20-42)	31 (16-37)	26 (14-31)	22 (11-26)	18 (9.2-22)	15 (7.7-19)	13 (6.5-16)	11 (5.6-13)	9.2 (4.8-11)	7.7 (4.2-9.7)
6	52	47	41	36	30	26	22	19	16	13	11

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	4.7	4.0	3.3	2.8	2.4	2.0	1.7	1.5	1.3	1.2	1.1
1	7.3 (5.1-13)	6.1 (4.2-11)	5.1 (3.5-8.9)	4.3 (2.9-7.4)	3.6 (2.5-6.1)	3.0 (2.0-5.1)	2.6 (1.8-4.3)	2.3 (1.5-3.7)	2.0 (1.3-3.2)	1.7 (1.2-2.7)	1.5 (1.0-2.4)
2	11 (6.9-18)	9.2 (5.7-15)	7.8 (4.8-12)	6.5 (4.0-10)	5.4 (3.3-8.7)	4.5 (2.8-7.3)	3.9 (2.4-6.2)	3.4 (2.1-5.4)	3.0 (1.8-4.6)	2.6 (1.6-4.0)	2.2 (1.4-3.4)
3	16 (9.3-24)	14 (7.8-20)	12 (6.6-17)	9.7 (5.5-15)	8.2 (4.6-12)	6.8 (3.9-10)	5.9 (3.3-8.8)	5.1 (2.9-7.6)	4.4 (2.5-6.5)	3.8 (2.2-5.6)	3.3 (1.9-4.8)
4	23 (13-30)	20 (11-26)	17 (9.0-23)	14 (7.6-19)	12 (6.3-16)	10 (5.3-14)	8.7 (4.6-12)	7.6 (4.0-10)	6.5 (3.5-8.9)	5.7 (3.0-7.7)	4.9 (2.7-6.6)
5	31 (17-37)	28 (14-33)	24 (12-29)	21 (10-25)	18 (8.8-21)	15 (7.4-18)	13 (6.4-16)	11 (5.6-14)	9.6 (4.9-12)	8.3 (4.3-10)	7.2 (3.7-8.9)
6	41	37	33	29	25	21	19	16	14	12	11