FRAX® WHO Fracture Risk Assessment Tool

Finland - 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 body mass index (BMI kg/m2), the number of clinical risk factors (CRF) and age. Each table provides a mean estimate and a range, based on the epidemiology of Finland. The range is not a confidence interval, but because the weight of different risk factors varies, is a true range.

Age = 50 years

Number of CRFs	BMI (kg/m²)						
	15	20	25	30	35	40	45
0	2.1	2.0	1.9	1.7	1.5	1.3	1.1
1	3.3 (2.2-5.0)	3.1 (2.1-4.5)	3.0 (2.0-4.2)	2.6 (1.8-3.6)	2.3 (1.5-3.2)	2.0 (1.3-2.8)	1.7 (1.2-2.4)
2	5.3 (2.9-8.9)	4.9 (2.6-8.4)	4.7 (2.5-8.1)	4.0 (2.1-7.1)	3.5 (1.8-6.2)	3.1 (1.6-5.4)	2.7 (1.4-4.7)
3	8.3 (4.2-14)	7.5 (3.7-13)	7.0 (3.4-13)	6.1 (2.9-11)	5.3 (2.5-9.8)	4.6 (2.2-8.5)	4.0 (1.9-7.5)
4	13 (6.9-20)	11 (6.0-18)	10 (5.5-17)	9.1 (4.7-15)	7.9 (4.1-13)	6.9 (3.5-11)	6.0 (3.0-10)
5	19 (12-25)	17 (11-22)	15 (10-21)	13 (8.9-18)	12 (7.7-16)	10 (6.7-14)	8.7 (5.9-12)
6	28	24	22	19	17	14	13

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

Age = 55 years

Number of CRFs	BMI (kg/m²)						
	15	**20**	**25**	**30**	**35**	**40**	**45**
0	2.5	2.3	2.2	1.9	1.7	1.5	1.3
1	3.9 (2.7-5.8)	3.6 (2.5-5.1)	3.5 (2.3-4.7)	3.0 (2.0-4.1)	2.6 (1.7-3.5)	2.3 (1.5-3.1)	2.0 (1.3-2.7)
2	6.2 (3.5-10)	5.6 (3.1-9.3)	5.3 (2.9-9.0)	4.6 (2.5-7.8)	4.0 (2.1-6.8)	3.4 (1.8-6.0)	3.0 (1.6-5.2)
3	9.6 (5.2-16)	8.6 (4.4-15)	8.0 (4.0-14)	6.9 (3.4-12)	6.0 (2.9-11)	5.2 (2.5-9.3)	4.5 (2.2-8.1)
4	15 (8.6-22)	13 (7.3-20)	12 (6.5-19)	10 (5.6-17)	8.8 (4.7-14)	7.6 (4.1-13)	6.6 (3.5-11)
5	22 (14-28)	19 (13-25)	17 (12-23)	15 (10-20)	13 (8.8-17)	11 (7.6-15)	9.6 (6.6-13)
6	31	27	25	21	18	16	14

Age = 60 years

Number of CRFs	BMI (kg/m²)						
	15	**20**	**25**	**30**	**35**	**40**	**45**
0	2.7	2.5	2.4	2.1	1.8	1.5	1.3
1	4.3 (3.0-6.2)	3.9 (2.7-5.4)	3.7 (2.5-5.0)	3.2 (2.2-4.3)	2.7 (1.8-3.7)	2.3 (1.6-3.1)	2.0 (1.4-2.7)
2	6.7 (4.0-10)	6.0 (3.5-9.6)	5.6 (3.1-9.3)	4.8 (2.7-8.0)	4.1 (2.3-7.0)	3.6 (1.9-6.0)	3.1 (1.7-5.2)
3	10 (6.1-16)	9.1 (5.1-15)	8.4 (4.5-14)	7.2 (3.8-12)	6.2 (3.2-11)	5.3 (2.7-9.3)	4.6 (2.3-8.0)
4	15 (9.7-22)	14 (8.3-21)	12 (7.3-19)	11 (6.1-17)	9.1 (5.1-15)	7.8 (4.3-13)	6.7 (3.7-11)
5	22 (15-29)	20 (13-26)	18 (13-24)	15 (11-21)	13 (9.2-18)	11 (7.9-15)	9.7 (6.7-13)
6	32	28	26	22	19	16	14

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

Age = 65 years

Number of CRFs	BMI (kg/m²)						
	15	**20**	**25**	**30**	**35**	**40**	**45**
0	3.5	3.2	3.1	2.6	2.2	1.9	1.6
1	5.5 (3.9-7.5)	5.0 (3.5-6.7)	4.7 (3.3-6.2)	4.0 (2.7-5.3)	3.4 (2.3-4.5)	2.9 (2.0-3.8)	2.5 (1.7-3.3)
2	8.3 (5.3-12)	7.6 (4.6-12)	7.1 (4.1-11)	6.0 (3.5-9.7)	5.1 (2.9-8.3)	4.3 (2.5-7.2)	3.7 (2.1-6.2)
3	12 (8.0-18)	11 (7.0-17)	10 (6.0-17)	8.9 (5.0-15)	7.5 (4.2-12)	6.4 (3.5-11)	5.4 (3.0-9.2)
4	18 (12-25)	16 (11-24)	15 (9.6-23)	13 (7.9-20)	11 (6.6-17)	9.3 (5.5-15)	7.9 (4.6-13)
5	25 (18-32)	23 (17-30)	22 (16-28)	18 (13-24)	16 (11-21)	13 (9.5-18)	11 (8.0-15)
6	34	32	30	26	22	18	16

Age = 70 years

Number of CRFs	BMI (kg/m²)						
	15	**20**	**25**	**30**	**35**	**40**	**45**
0	4.7	4.3	3.9	3.3	2.8	2.4	2.0
1	7.2 (5.1-9.2)	6.5 (4.6-8.3)	5.9 (4.2-7.6)	4.9 (3.5-6.4)	4.1 (2.9-5.4)	3.4 (2.4-4.5)	2.9 (2.0-3.8)
2	11 (7.2-16)	9.8 (6.3-14)	8.7 (5.5-13)	7.3 (4.6-11)	6.0 (3.8-8.8)	5.0 (3.1-7.4)	4.2 (2.6-6.2)
3	17 (10-25)	15 (9.4-21)	13 (8.3-19)	11 (6.8-16)	8.9 (5.6-13)	7.4 (4.6-11)	6.1 (3.8-9.3)
4	24 (16-33)	22 (14-30)	19 (13-27)	16 (10-23)	13 (8.6-19)	11 (7.0-16)	8.9 (5.7-13)
5	34 (28-42)	31 (25-39)	27 (22-35)	23 (18-29)	19 (15-25)	16 (12-21)	13 (9.9-17)
6	45	42	38	32	27	22	19

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

Age = 75 years

Number of CRFs	BMI (kg/m²)						
	15	20	25	30	35	40	45
0	6.0	5.4	4.9	4.0	3.3	2.7	2.3
1	9.8 (6.6-15)	8.6 (5.9-13)	7.5 (5.3-10)	6.1 (4.3-8.1)	5.0 (3.5-6.5)	4.1 (2.9-5.2)	3.4 (2.3-4.2)
2	16 (9.3-25)	14 (8.2-21)	12 (7.2-17)	9.5 (5.8-14)	7.7 (4.7-11)	6.2 (3.8-9.2)	5.1 (3.1-7.5)
3	24 (13-37)	21 (12-32)	18 (11-26)	15 (8.6-22)	12 (6.9-18)	9.5 (5.5-14)	7.7 (4.5-12)
4	34 (20-46)	31 (18-42)	27 (16-38)	22 (13-32)	18 (11-26)	14 (8.5-21)	12 (6.8-17)
5	46 (32-56)	42 (29-52)	38 (27-48)	32 (22-41)	26 (18-34)	22 (15-28)	17 (12-23)
6	59	55	51	44	38	31	26

Age = 80 years

Number of CRFs	BMI (kg/m²)						
	15	20	25	30	35	40	45
0	7.2	6.5	6.1	4.9	4.0	3.3	2.7
1	12 (8.0-19)	10 (7.1-16)	9.3 (6.5-13)	7.5 (5.2-11)	6.1 (4.2-8.5)	4.9 (3.4-6.7)	3.9 (2.7-5.3)
2	18 (11-29)	16 (10-25)	14 (8.9-21)	11 (7.1-17)	9.2 (5.7-13)	7.4 (4.5-11)	5.9 (3.6-8.5)
3	27 (16-39)	24 (14-35)	21 (13-30)	17 (10-25)	14 (8.1-20)	11 (6.4-16)	8.8 (5.1-13)
4	38 (23-49)	34 (21-45)	30 (19-41)	25 (16-34)	20 (13-28)	16 (10-23)	13 (7.9-19)
5	50 (34-58)	45 (31-54)	41 (28-50)	35 (23-43)	29 (19-37)	24 (15-31)	19 (12-25)
6	61	58	54	47	40	33	27

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

Age = 85 years

Number of CRFs	BMI (kg/m²)						
	15	**20**	**25**	**30**	**35**	**40**	**45**
0	8.2	7.5	7.2	5.8	4.7	3.8	3.1
1	13 (9.1-22)	12 (8.1-19)	11 (7.6-16)	8.8 (6.1-13)	7.1 (4.8-10)	5.7 (3.9-8.0)	4.6 (3.1-6.3)
2	20 (13-32)	18 (11-28)	16 (10-24)	13 (8.3-20)	11 (6.6-16)	8.5 (5.2-13)	6.8 (4.1-10)
3	30 (18-43)	27 (16-39)	24 (14-35)	20 (11-29)	16 (9.1-23)	13 (7.2-19)	10 (5.7-15)
4	41 (26-53)	37 (23-48)	34 (22-44)	28 (18-38)	23 (14-31)	19 (11-26)	15 (8.9-21)
5	52 (37-60)	49 (34-58)	45 (31-54)	38 (26-47)	32 (21-40)	27 (17-34)	22 (14-28)
6	62	60	57	50	43	37	31

Age = 90 years

Number of CRFs	BMI (kg/m²)						
	15	**20**	**25**	**30**	**35**	**40**	**45**
0	8.3	7.5	7.1	5.7	4.6	3.7	3.0
1	13 (9.3-22)	12 (8.2-19)	11 (7.5-16)	8.7 (6.0-13)	7.0 (4.8-10)	5.6 (3.8-8.0)	4.5 (3.0-6.3)
2	21 (13-33)	18 (12-29)	16 (10-25)	13 (8.2-20)	11 (6.5-16)	8.5 (5.2-13)	6.7 (4.1-10)
3	30 (18-43)	27 (16-39)	24 (15-35)	20 (12-29)	16 (9.1-24)	13 (7.2-19)	10 (5.7-15)
4	40 (26-52)	37 (23-49)	34 (22-45)	28 (18-38)	23 (14-32)	19 (11-26)	15 (9.0-21)
5	51 (37-59)	49 (34-57)	45 (31-54)	39 (26-47)	32 (21-41)	27 (17-34)	22 (14-28)
6	59	59	57	50	44	37	31