FRAX ® WHO Fracture Risk Assessment Tool

Turkey - The probabilities of a hip fracture in men

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 Turkey. 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	24	13	7.1	3.8	2.0	1.0	0.6	0.3	0.2	0.1	0.0
1	35 (25-43)	20 (14-26)	11 (7.5-15)	6.0 (4.0-7.9)	3.2 (2.1-4.2)	1.7 (1.1-2.2)	0.9 (0.6-1.2)	0.5 (0.3-0.6)	0.2 (0.2-0.3)	0.1 (0.1-0.2)	0.1 (0.1-0.1)
2	49 (33-64)	30 (19-42)	17 (10-25)	9.5 (5.6-14)	5.1 (3.0-7.7)	2.7 (1.6-4.1)	1.4 (0.8-2.2)	0.7 (0.4-1.1)	0.4 (0.2-0.6)	0.2 (0.1-0.3)	0.1 (0.1-0.2)
3	64 (46-80)	43 (27-60)	26 (15-39)	15 (8.4-23)	8.0 (4.5-13)	4.2 (2.4-6.9)	2.2 (1.3-3.7)	1.2 (0.7-1.9)	0.6 (0.4-1.0)	0.3 (0.2-0.6)	0.2 (0.1-0.3)
4	78 (64-89)	57 (42-74)	37 (25-52)	22 (14-33)	12 (7.6-19)	6.6 (4.1-10)	3.5 (2.1-5.6)	1.9 (1.1-3.0)	1.0 (0.6-1.6)	0.5 (0.3-0.9)	0.3 (0.2-0.5)
5	88 (82-93)	72 (62-84)	51 (41-65)	32 (24-43)	18 (14-26)	10 (7.4-14)	5.4 (3.9-7.8)	2.9 (2.1-4.2)	1.5 (1.1-2.2)	0.8 (0.6-1.2)	0.5 (0.3-0.7)
6	93	85	66	44	27	15	8.2	4.4	2.4	1.3	0.7

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

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	19	11	6.1	3.4	1.8	1.0	0.6	0.3	0.2	0.1	0.1
1	28 (20-34)	17 (11-20)	9.5 (6.4-12)	5.3 (3.5-6.5)	2.9 (1.9-3.6)	1.6 (1.1-2.0)	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)
2	40 (27-53)	25 (16-34)	14 (9.0-20)	8.2 (5.0-12)	4.5 (2.7-6.5)	2.5 (1.5-3.6)	1.4 (0.8-2.0)	0.7 (0.4-1.1)	0.4 (0.3-0.6)	0.2 (0.1-0.3)	0.1 (0.1-0.2)
3	54 (38-69)	35 (23-49)	21 (13-32)	12 (7.5-19)	7.0 (4.2-11)	3.9 (2.3-6.0)	2.1 (1.2-3.3)	1.2 (0.7-1.8)	0.6 (0.4-1.0)	0.4 (0.2-0.6)	0.2 (0.1-0.3)
4	68 (55-81)	48 (36-63)	31 (22-44)	18 (12-27)	11 (7.0-16)	5.9 (3.9-9.1)	3.3 (2.1-5.1)	1.8 (1.2-2.8)	1.0 (0.7-1.6)	0.6 (0.4-0.9)	0.3 (0.2-0.5)
5	80 (74-88)	62 (54-75)	43 (35-55)	27 (21-36)	16 (12-22)	8.9 (7.0-13)	5.0 (3.9-7.1)	2.7 (2.1-3.9)	1.5 (1.2-2.2)	0.9 (0.7-1.3)	0.5 (0.4-0.7)
6	89	76	57	37	23	13	7.5	4.1	2.3	1.3	0.8

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	14	8.1	4.8	2.8	1.6	0.9	0.5	0.3	0.2	0.1	0.1
1	20 (14-23)	12 (8.5-14)	7.3 (5.0-8.5)	4.3 (2.9-5.0)	2.5 (1.7-2.9)	1.5 (1.0-1.7)	0.8 (0.6-1.0)	0.5 (0.3-0.6)	0.3 (0.2-0.3)	0.2 (0.1-0.2)	0.1 (0.1-0.1)
2	29 (20-37)	18 (12-24)	11 (7.1-15)	6.5 (4.2-8.9)	3.8 (2.4-5.3)	2.2 (1.4-3.1)	1.3 (0.8-1.8)	0.8 (0.5-1.0)	0.4 (0.3-0.6)	0.3 (0.2-0.4)	0.2 (0.1-0.2)
3	39 (28-51)	26 (17-35)	16 (11-23)	9.7 (6.3-14)	5.8 (3.7-8.5)	3.4 (2.1-5.0)	2.0 (1.2-3.0)	1.2 (0.7-1.7)	0.7 (0.4-1.0)	0.4 (0.3-0.6)	0.2 (0.2-0.4)
4	52 (41-65)	36 (27-48)	23 (17-32)	14 (10-21)	8.6 (6.0-13)	5.1 (3.6-7.6)	3.0 (2.1-4.5)	1.7 (1.2-2.6)	1.0 (0.7-1.6)	0.6 (0.4-1.0)	0.4 (0.3-0.6)
5	64 (59-75)	48 (42-59)	32 (28-42)	21 (17-28)	13 (11-17)	7.6 (6.3-11)	4.5 (3.7-6.3)	2.6 (2.2-3.7)	1.6 (1.3-2.2)	1.0 (0.8-1.4)	0.6 (0.5-0.8)
6	76	61	44	29	18	11	6.6	3.9	2.4	1.4	0.9

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

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	10	6.5	4.1	2.5	1.6	1.0	0.6	0.4	0.2	0.2	0.1
1	15 (11-17)	9.6 (6.9-11)	6.1 (4.3-7.0)	3.8 (2.7-4.4)	2.3 (1.7-2.7)	1.5 (1.0-1.7)	0.9 (0.6-1.0)	0.6 (0.4-0.7)	0.4 (0.3-0.4)	0.2 (0.2-0.3)	0.1 (0.1-0.2)
2	21 (15-26)	14 (9.6-18)	8.8 (6.0-11)	5.6 (3.8-7.2)	3.5 (2.3-4.5)	2.2 (1.4-2.8)	1.3 (0.9-1.8)	0.8 (0.6-1.1)	0.5 (0.4-0.7)	0.3 (0.2-0.4)	0.2 (0.1-0.3)
3	29 (22-37)	20 (14-25)	13 (9.0-17)	8.1 (5.7-11)	5.1 (3.5-7.0)	3.2 (2.2-4.4)	2.0 (1.4-2.7)	1.2 (0.8-1.7)	0.8 (0.5-1.1)	0.5 (0.3-0.7)	0.3 (0.2-0.5)
4	38 (31-48)	27 (21-35)	18 (14-24)	12 (8.9-16)	7.4 (5.6-10)	4.7 (3.5-6.6)	2.9 (2.2-4.2)	1.8 (1.4-2.6)	1.2 (0.9-1.7)	0.7 (0.6-1.1)	0.5 (0.4-0.7)
5	49 (45-58)	36 (32-45)	25 (22-32)	16 (14-22)	11 (9.2-14)	6.8 (5.8-9.2)	4.3 (3.6-5.8)	2.7 (2.3-3.7)	1.7 (1.5-2.4)	1.1 (0.9-1.5)	0.7 (0.6-1.0)
6	59	46	33	23	15	9.7	6.1	3.9	2.5	1.6	1.0

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	10	6.8	4.5	3.0	2.0	1.3	0.9	0.6	0.4	0.3	0.2
1	15 (14-20)	11 (9.4-14)	7.2 (6.3-9.3)	4.8 (4.2-6.3)	3.2 (2.8-4.2)	2.1 (1.8-2.8)	1.4 (1.2-1.8)	0.9 (0.8-1.2)	0.6 (0.6-0.8)	0.4 (0.4-0.6)	0.3 (0.3-0.4)
2	23 (19-28)	16 (13-20)	11 (9.1-14)	7.6 (6.2-9.9)	5.1 (4.1-6.7)	3.4 (2.7-4.5)	2.2 (1.8-3.0)	1.5 (1.2-2.0)	1.0 (0.8-1.4)	0.7 (0.6-0.9)	0.5 (0.4-0.6)
3	32 (26-38)	24 (19-29)	17 (13-21)	12 (9.1-15)	8.0 (6.2-10)	5.4 (4.2-6.8)	3.6 (2.8-4.6)	2.4 (1.9-3.1)	1.7 (1.3-2.1)	1.1 (0.9-1.5)	0.8 (0.6-1.0)
4	43 (35-49)	33 (27-39)	25 (19-29)	18 (14-21)	12 (9.4-15)	8.4 (6.3-10)	5.7 (4.2-6.9)	3.9 (2.9-4.7)	2.7 (2.0-3.2)	1.8 (1.3-2.2)	1.2 (0.9-1.5)
5	53 (45-57)	44 (36-47)	34 (27-37)	25 (20-28)	18 (14-20)	13 (9.7-14)	8.8 (6.6-9.7)	6.1 (4.5-6.7)	4.2 (3.1-4.7)	2.9 (2.2-3.2)	2.0 (1.5-2.2)
6	63	54	44	35	26	19	13	9.4	6.6	4.6	3.1

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

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	7.8	5.6	3.9	2.8	1.9	1.4	1.0	0.7	0.5	0.4
1	18 (14-35)	14 (10-28)	10 (7.5-21)	7.3 (5.4-16)	5.2 (3.8-11)	3.7 (2.7-8.1)	2.6 (1.9-5.7)	1.9 (1.4-4.2)	1.4 (1.0-3.0)	1.0 (0.7-2.2)	0.7 (0.5-1.6)
2	28 (19-45)	22 (14-37)	17 (10-29)	12 (7.5-22)	9.1 (5.4-16)	6.6 (3.8-12)	4.7 (2.7-8.7)	3.4 (2.0-6.4)	2.5 (1.4-4.7)	1.8 (1.0-3.4)	1.3 (0.7-2.5)
3	39 (25-54)	32 (19-45)	25 (14-38)	20 (10-30)	15 (7.5-23)	11 (5.4-17)	7.9 (3.8-13)	5.9 (2.8-9.5)	4.3 (2.0-7.0)	3.1 (1.5-5.2)	2.3 (1.1-3.8)
4	50 (32-61)	43 (25-54)	36 (19-46)	29 (15-38)	23 (11-30)	17 (7.9-23)	13 (5.7-17)	9.6 (4.2-13)	7.1 (3.1-9.8)	5.3 (2.2-7.3)	3.9 (1.6-5.3)
5	61 (41-67)	54 (33-61)	47 (27-54)	40 (21-46)	32 (16-38)	26 (12-30)	20 (8.4-23)	15 (6.2-18)	11 (4.6-13)	8.5 (3.4-10)	6.3 (2.5-7.4)
6	71	65	58	51	43	36	28	23	18	13	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	11	8.1	6.1	4.6	3.4	2.5	1.9	1.4	1.1	0.8	0.6
1	18 (14-35)	14 (11-28)	11 (8.0-22)	8.3 (6.0-18)	6.3 (4.5-14)	4.7 (3.3-10)	3.5 (2.5-7.8)	2.7 (1.9-6.1)	2.1 (1.4-4.7)	1.6 (1.1-3.6)	1.2 (0.8-2.7)
2	27 (17-44)	22 (13-37)	17 (10-31)	14 (7.9-25)	11 (5.9-19)	8.1 (4.5-15)	6.1 (3.4-12)	4.8 (2.6-9.0)	3.7 (2.0-7.0)	2.8 (1.5-5.4)	2.2 (1.2-4.1)
3	37 (23-53)	31 (18-46)	26 (14-39)	21 (11-32)	17 (8.3-26)	13 (6.2-21)	10 (4.7-16)	7.9 (3.6-13)	6.1 (2.8-10)	4.8 (2.1-8.0)	3.7 (1.6-6.2)
4	48 (29-60)	42 (24-54)	36 (19-47)	30 (15-40)	24 (12-33)	20 (8.8-27)	16 (6.8-22)	12 (5.3-18)	9.8 (4.1-14)	7.7 (3.2-11)	6.0 (2.4-8.6)
5	59 (38-66)	53 (32-60)	47 (26-53)	40 (21-47)	34 (17-40)	28 (13-33)	23 (10-27)	19 (7.8-22)	15 (6.1-18)	12 (4.7-14)	9.4 (3.7-11)
6	69	64	58	52	45	38	32	27	22	18	14

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

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	9.4	7.5	5.9	4.7	3.7	2.9	2.3	1.8	1.5	1.2	0.9
1	16 (12-31)	13 (9.4-26)	10 (7.5-22)	8.3 (6.0-18)	6.6 (4.7-14)	5.3 (3.7-12)	4.2 (3.0-9.3)	3.4 (2.4-7.6)	2.8 (1.9-6.2)	2.2 (1.6-5.0)	1.8 (1.2-4.0)
2	24 (15-40)	20 (12-35)	16 (9.7-29)	14 (7.7-25)	11 (6.2-20)	8.8 (4.9-17)	7.2 (3.9-14)	5.9 (3.2-11)	4.8 (2.6-9.1)	3.9 (2.1-7.5)	3.1 (1.7-6.0)
3	33 (20-48)	29 (16-43)	24 (13-37)	20 (11-32)	17 (8.5-27)	14 (6.8-22)	11 (5.5-19)	9.5 (4.4-16)	7.8 (3.6-13)	6.4 (2.9-11)	5.2 (2.4-8.7)
4	44 (26-56)	39 (21-50)	34 (18-45)	29 (14-39)	25 (12-34)	21 (9.4-29)	17 (7.6-24)	15 (6.2-21)	12 (5.1-17)	10 (4.1-14)	8.3 (3.4-12)
5	55 (34-61)	50 (29-56)	45 (24-51)	39 (20-45)	34 (17-40)	29 (14-34)	25 (11-30)	21 (9.2-25)	18 (7.6-22)	15 (6.2-18)	13 (5.0-15)
6	65	61	56	51	45	40	35	30	26	22	19

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	7.9	6.5	5.4	4.4	3.6	2.9	2.4	2.1	1.7	1.4	1.2
1	14 (10-27)	11 (8.4-24)	9.5 (7.0-20)	7.9 (5.7-17)	6.5 (4.7-14)	5.4 (3.8-12)	4.5 (3.2-10)	3.8 (2.7-8.5)	3.2 (2.3-7.2)	2.7 (1.9-6.1)	2.3 (1.6-5.1)
2	21 (13-37)	18 (11-32)	15 (9.0-28)	13 (7.5-24)	11 (6.2-20)	9.1 (5.1-17)	7.8 (4.3-15)	6.6 (3.6-12)	5.6 (3.0-11)	4.7 (2.6-9.0)	4.0 (2.2-7.6)
3	31 (18-45)	27 (15-40)	23 (12-36)	20 (10-31)	17 (8.6-27)	15 (7.1-23)	12 (6.0-20)	11 (5.1-18)	9.2 (4.3-15)	7.8 (3.6-13)	6.7 (3.0-11)
4	41 (23-53)	37 (20-48)	33 (17-44)	29 (14-39)	25 (12-35)	22 (10-30)	19 (8.5-27)	17 (7.3-23)	14 (6.2-20)	12 (5.2-18)	11 (4.4-15)
5	52 (32-59)	48 (27-55)	44 (24-50)	40 (20-46)	35 (17-41)	31 (15-36)	28 (12-32)	24 (11-29)	21 (9.1-25)	19 (7.8-22)	16 (6.6-19)
6	62	59	55	51	46	42	38	34	30	27	24