FRAX® WHO Fracture Risk Assessment Tool

Kuwait - 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 Kuwait. 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	7.8	4.2	2.2	1.2	0.6	0.3	0.2	0.1	0.1	0.0
1	22 (15-28)	12 (8.2-16)	6.6 (4.4-8.7)	3.5 (2.3-4.6)	1.9 (1.2-2.4)	1.0 (0.6-1.3)	0.5 (0.3-0.7)	0.3 (0.2-0.4)	0.1 (0.1-0.2)	0.1 (0.1-0.1)	0.0 (0.0-0.1)
2	33 (21-46)	19 (11-28)	10 (6.1-16)	5.6 (3.3-8.5)	3.0 (1.7-4.5)	1.6 (0.9-2.4)	0.8 (0.5-1.3)	0.4 (0.2-0.7)	0.2 (0.1-0.4)	0.1 (0.1-0.2)	0.1 (0.0-0.1)
3	46 (30-64)	28 (17-42)	16 (9.2-25)	8.7 (4.9-14)	4.7 (2.6-7.6)	2.5 (1.4-4.1)	1.3 (0.7-2.1)	0.7 (0.4-1.1)	0.4 (0.2-0.6)	0.2 (0.1-0.3)	0.1 (0.1-0.2)
4	61 (45-78)	40 (27-56)	24 (15-35)	13 (8.3-21)	7.2 (4.5-11)	3.9 (2.4-6.1)	2.0 (1.2-3.3)	1.1 (0.7-1.7)	0.6 (0.3-0.9)	0.3 (0.2-0.5)	0.2 (0.1-0.3)
5	76 (66-86)	54 (44-68)	34 (27-46)	20 (15-28)	11 (8.1-16)	6.0 (4.3-8.6)	3.2 (2.3-4.6)	1.7 (1.2-2.4)	0.9 (0.6-1.3)	0.5 (0.4-0.7)	0.3 (0.2-0.4)
6	87	70	48	29	17	9.0	4.8	2.6	1.4	0.7	0.4

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

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	16	8.8	4.9	2.7	1.5	0.8	0.4	0.2	0.1	0.1	0.0
1	23 (16-28)	14 (9.2-17)	7.6 (5.1-9.4)	4.2 (2.8-5.2)	2.3 (1.5-2.9)	1.3 (0.8-1.6)	0.7 (0.5-0.9)	0.4 (0.3-0.5)	0.2 (0.1-0.3)	0.1 (0.1-0.2)	0.1 (0.0-0.1)
2	34 (22-45)	20 (13-28)	12 (7.2-17)	6.6 (4.0-9.5)	3.6 (2.2-5.3)	2.0 (1.2-2.9)	1.1 (0.7-1.6)	0.6 (0.4-0.9)	0.3 (0.2-0.5)	0.2 (0.1-0.3)	0.1 (0.1-0.2)
3	47 (32-63)	30 (19-43)	18 (11-26)	10 (6.0-15)	5.6 (3.3-8.8)	3.1 (1.8-4.9)	1.7 (1.0-2.7)	0.9 (0.5-1.5)	0.5 (0.3-0.8)	0.3 (0.2-0.5)	0.2 (0.1-0.3)
4	61 (47-76)	41 (30-56)	26 (18-37)	15 (10-23)	8.6 (5.6-13)	4.8 (3.1-7.4)	2.6 (1.7-4.1)	1.4 (0.9-2.2)	0.8 (0.5-1.3)	0.5 (0.3-0.7)	0.3 (0.2-0.4)
5	75 (67-85)	55 (47-68)	36 (30-48)	22 (18-30)	13 (10-18)	7.2 (5.6-10)	4.0 (3.1-5.7)	2.2 (1.7-3.2)	1.2 (1.0-1.8)	0.7 (0.5-1.0)	0.4 (0.3-0.6)
6	86	70	50	32	19	11	6.0	3.3	1.9	1.1	0.6

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	15	8.8	5.2	3.0	1.8	1.0	0.6	0.3	0.2	0.1	0.1
1	22 (15-25)	13 (9.2-15)	7.9 (5.4-9.2)	4.6 (3.2-5.4)	2.7 (1.8-3.2)	1.6 (1.1-1.9)	0.9 (0.6-1.1)	0.5 (0.4-0.6)	0.3 (0.2-0.4)	0.2 (0.1-0.2)	0.1 (0.1-0.1)
2	31 (21-40)	19 (13-26)	12 (7.6-16)	7.1 (4.5-9.6)	4.1 (2.6-5.7)	2.4 (1.5-3.3)	1.4 (0.9-1.9)	0.8 (0.5-1.1)	0.5 (0.3-0.7)	0.3 (0.2-0.4)	0.2 (0.1-0.2)
3	42 (30-55)	28 (19-38)	17 (11-25)	11 (6.8-15)	6.3 (4.0-9.3)	3.7 (2.3-5.5)	2.1 (1.3-3.2)	1.2 (0.8-1.9)	0.7 (0.5-1.1)	0.4 (0.3-0.7)	0.3 (0.2-0.4)
4	55 (44-68)	38 (29-51)	25 (18-35)	16 (11-22)	9.4 (6.6-14)	5.5 (3.9-8.3)	3.3 (2.2-4.9)	1.9 (1.3-2.9)	1.1 (0.8-1.7)	0.7 (0.5-1.0)	0.4 (0.3-0.6)
5	68 (62-78)	51 (45-62)	35 (30-45)	22 (19-30)	14 (11-19)	8.2 (6.9-12)	4.9 (4.0-6.9)	2.9 (2.4-4.0)	1.7 (1.4-2.4)	1.0 (0.9-1.5)	0.6 (0.5-0.9)
6	79	64	47	31	20	12	7.2	4.2	2.6	1.5	0.9

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

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	13	8.1	5.1	3.1	1.9	1.2	0.7	0.5	0.3	0.2	0.1
1	19 (13-21)	12 (8.5-14)	7.5 (5.3-8.8)	4.7 (3.3-5.5)	2.9 (2.0-3.4)	1.8 (1.3-2.1)	1.1 (0.8-1.3)	0.7 (0.5-0.8)	0.4 (0.3-0.5)	0.3 (0.2-0.3)	0.2 (0.1-0.2)
2	26 (18-33)	17 (12-22)	11 (7.5-14)	7.0 (4.7-9.1)	4.4 (2.9-5.7)	2.7 (1.8-3.5)	1.7 (1.1-2.2)	1.0 (0.7-1.4)	0.7 (0.4-0.9)	0.4 (0.3-0.6)	0.3 (0.2-0.4)
3	36 (27-45)	24 (17-32)	16 (11-21)	10 (7.0-14)	6.5 (4.4-9.0)	4.0 (2.7-5.6)	2.5 (1.7-3.5)	1.6 (1.0-2.2)	1.0 (0.7-1.4)	0.6 (0.4-0.9)	0.4 (0.3-0.6)
4	46 (38-57)	33 (26-43)	22 (17-30)	15 (11-20)	9.4 (7.0-13)	5.9 (4.4-8.5)	3.7 (2.7-5.3)	2.3 (1.7-3.3)	1.5 (1.1-2.1)	0.9 (0.7-1.4)	0.6 (0.4-0.9)
5	58 (54-67)	44 (39-54)	31 (27-40)	21 (18-27)	13 (11-18)	8.6 (7.3-12)	5.4 (4.5-7.5)	3.4 (2.8-4.7)	2.2 (1.8-3.0)	1.4 (1.2-1.9)	0.9 (0.7-1.2)
6	69	55	41	29	19	12	7.8	5.0	3.2	2.0	1.3

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	7.2	4.8	3.2	2.1	1.4	0.9	0.6	0.4	0.3	0.2
1	17 (15-21)	12 (10-15)	7.7 (6.7-9.9)	5.1 (4.4-6.6)	3.4 (2.9-4.4)	2.2 (1.9-2.9)	1.5 (1.3-1.9)	1.0 (0.8-1.3)	0.7 (0.6-0.8)	0.4 (0.4-0.6)	0.3 (0.3-0.4)
2	26 (22-32)	18 (15-23)	12 (10-16)	8.2 (6.7-11)	5.5 (4.4-7.3)	3.6 (2.9-4.9)	2.4 (1.9-3.2)	1.6 (1.3-2.2)	1.1 (0.9-1.5)	0.7 (0.6-1.0)	0.5 (0.4-0.7)
3	37 (30-44)	27 (22-33)	19 (15-23)	13 (10-16)	8.8 (6.7-11)	5.9 (4.5-7.4)	3.9 (2.9-4.9)	2.6 (2.0-3.3)	1.8 (1.3-2.3)	1.2 (0.9-1.5)	0.8 (0.6-1.0)
4	49 (41-56)	38 (31-44)	28 (22-33)	20 (15-23)	14 (10-16)	9.3 (6.9-11)	6.2 (4.6-7.5)	4.2 (3.1-5.1)	2.9 (2.1-3.5)	1.9 (1.4-2.4)	1.3 (1.0-1.6)
5	62 (54-65)	51 (43-54)	40 (32-43)	29 (23-32)	21 (16-23)	14 (11-16)	9.8 (7.5-11)	6.7 (5.1-7.6)	4.6 (3.5-5.2)	3.1 (2.4-3.6)	2.1 (1.6-2.4)
6	72	63	52	41	31	22	15	11	7.3	5.1	3.5

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

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	9.1	6.4	4.5	3.1	2.2	1.5	1.1	0.7	0.5	0.4	0.3
1	16 (13-32)	12 (9.0-24)	8.5 (6.3-18)	6.0 (4.4-13)	4.2 (3.1-9.1)	3.0 (2.2-6.4)	2.1 (1.5-4.5)	1.5 (1.1-3.2)	1.1 (0.8-2.3)	0.8 (0.5-1.6)	0.5 (0.4-1.2)
2	26 (17-43)	20 (12-34)	15 (8.9-26)	11 (6.3-20)	7.6 (4.4-14)	5.4 (3.1-10)	3.8 (2.1-7.3)	2.7 (1.5-5.3)	2.0 (1.1-3.8)	1.4 (0.8-2.7)	1.0 (0.6-2.0)
3	38 (23-54)	31 (17-45)	24 (13-36)	18 (9.1-28)	13 (6.4-21)	9.3 (4.5-15)	6.6 (3.2-11)	4.8 (2.3-7.9)	3.5 (1.6-5.7)	2.5 (1.2-4.2)	1.8 (0.8-3.0)
4	51 (32-63)	43 (25-54)	35 (18-45)	27 (13-36)	21 (9.6-27)	15 (6.8-20)	11 (4.8-15)	8.2 (3.4-11)	6.0 (2.5-8.3)	4.3 (1.8-6.1)	3.1 (1.3-4.4)
5	64 (42-70)	56 (34-63)	48 (26-54)	39 (20-45)	31 (14-36)	24 (10-27)	18 (7.5-20)	13 (5.5-15)	9.9 (4.0-12)	7.2 (2.9-8.5)	5.3 (2.1-6.2)
6	74	68	61	53	44	35	27	21	16	12	8.7

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	7.8	5.8	4.3	3.2	2.4	1.7	1.3	1.0	0.7	0.6	0.4
1	14 (10-28)	10 (7.6-22)	7.9 (5.6-17)	5.9 (4.2-13)	4.4 (3.1-9.7)	3.3 (2.3-7.2)	2.4 (1.7-5.4)	1.8 (1.3-4.1)	1.4 (1.0-3.1)	1.1 (0.7-2.4)	0.8 (0.5-1.8)
2	22 (13-37)	17 (10-30)	13 (7.7-24)	10 (5.8-19)	7.7 (4.3-14)	5.8 (3.2-11)	4.3 (2.4-8.3)	3.3 (1.8-6.4)	2.5 (1.4-4.9)	1.9 (1.0-3.8)	1.5 (0.8-2.9)
3	32 (18-47)	26 (14-39)	21 (11-32)	16 (8.0-26)	13 (6.0-21)	9.6 (4.5-16)	7.3 (3.4-12)	5.6 (2.6-9.5)	4.3 (2.0-7.3)	3.3 (1.5-5.6)	2.5 (1.1-4.3)
4	43 (24-55)	37 (19-48)	30 (15-41)	25 (12-34)	19 (8.8-27)	15 (6.7-21)	12 (5.0-17)	9.2 (3.9-13)	7.1 (3.0-10)	5.5 (2.3-7.9)	4.2 (1.7-6.0)
5	55 (33-61)	48 (27-55)	41 (21-47)	35 (17-40)	28 (13-33)	23 (9.9-27)	18 (7.5-21)	14 (5.8-17)	11 (4.5-14)	8.8 (3.4-11)	6.8 (2.6-8.3)
6	66	60	53	46	39	33	26	22	17	14	11

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

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	6.8	5.3	4.2	3.3	2.5	2.0	1.6	1.2	1.0	0.8	0.6
1	12 (8.7-24)	9.4 (6.9-20)	7.5 (5.4-16)	6.0 (4.3-13)	4.7 (3.3-10)	3.7 (2.6-8.2)	2.9 (2.0-6.5)	2.3 (1.6-5.3)	1.9 (1.3-4.2)	1.5 (1.0-3.4)	1.2 (0.8-2.7)
2	19 (11-33)	15 (8.9-27)	12 (7.1-23)	10 (5.6-19)	8.0 (4.4-15)	6.4 (3.5-12)	5.1 (2.8-9.7)	4.1 (2.2-7.9)	3.3 (1.8-6.3)	2.7 (1.4-5.1)	2.1 (1.1-4.1)
3	27 (15-41)	23 (12-35)	19 (9.8-30)	16 (7.8-25)	13 (6.2-21)	10 (4.9-17)	8.4 (3.9-14)	6.8 (3.1-11)	5.6 (2.5-9.3)	4.5 (2.0-7.6)	3.6 (1.6-6.2)
4	38 (20-49)	33 (17-43)	28 (13-37)	23 (11-32)	19 (8.7-27)	16 (6.9-22)	13 (5.5-19)	11 (4.5-15)	8.9 (3.7-13)	7.3 (3.0-10)	5.9 (2.4-8.5)
5	49 (28-55)	43 (23-50)	38 (19-44)	33 (16-38)	28 (13-33)	23 (10-28)	20 (8.2-23)	16 (6.7-19)	14 (5.5-16)	11 (4.5-13)	9.3 (3.6-11)
6	60	55	49	44	38	33	28	24	20	17	14

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	5.9	4.8	4.0	3.3	2.7	2.2	1.8	1.6	1.3	1.1	0.9
1	10 (7.4-21)	8.5 (6.1-18)	7.1 (5.1-15)	5.9 (4.2-13)	4.9 (3.5-11)	4.0 (2.8-9.0)	3.4 (2.4-7.6)	2.9 (2.0-6.5)	2.4 (1.7-5.5)	2.1 (1.4-4.7)	1.7 (1.2-3.9)
2	16 (9.5-29)	14 (7.9-25)	12 (6.6-22)	9.8 (5.5-18)	8.2 (4.5-16)	6.9 (3.7-13)	5.8 (3.1-11)	5.0 (2.7-9.6)	4.2 (2.2-8.2)	3.6 (1.9-6.9)	3.0 (1.6-5.9)
3	24 (13-36)	21 (11-32)	18 (9.1-28)	15 (7.6-24)	13 (6.3-21)	11 (5.2-18)	9.4 (4.4-15)	8.1 (3.7-13)	6.9 (3.2-11)	5.9 (2.7-9.8)	5.0 (2.3-8.4)
4	34 (17-44)	30 (15-40)	26 (12-35)	23 (10-31)	20 (8.7-27)	17 (7.3-23)	14 (6.2-20)	13 (5.3-18)	11 (4.5-16)	9.3 (3.8-13)	8.0 (3.2-12)
5	44 (24-51)	40 (21-46)	36 (18-42)	32 (15-37)	28 (13-33)	24 (11-29)	21 (9.1-25)	19 (7.8-22)	16 (6.7-19)	14 (5.7-17)	12 (4.8-15)
6	55	51	47	42	38	34	30	27	23	21	18