

Kazakhstan - The probabilities of a major osteoporotic fracture in women

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 Kazakhstan. 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	30	20	14	10	8.0	6.6	5.6	5.1	4.8	4.6	4.4
1	43 (39-52)	29 (26-36)	21 (18-26)	15 (12-19)	12 (8.9-15)	9.8 (6.9-13)	8.3 (5.6-11)	7.5 (5.0-10)	7.2 (4.7-9.9)	6.8 (4.4-9.5)	6.6 (4.2-9.2)
2	58 (48-73)	42 (35-55)	30 (23-40)	22 (16-31)	17 (11-26)	14 (8.6-23)	12 (6.9-20)	11 (6.0-18)	10 (5.5-18)	10.0 (5.2-17)	9.6 (5.0-16)
3	73 (60-85)	56 (44-68)	42 (31-55)	32 (21-46)	25 (15-39)	20 (11-34)	17 (8.9-30)	16 (7.8-28)	15 (7.1-27)	14 (6.7-26)	14 (6.4-25)
4	85 (73-92)	71 (55-80)	55 (40-66)	43 (30-56)	34 (24-48)	28 (18-42)	24 (14-38)	22 (12-35)	21 (11-34)	20 (11-33)	19 (10-32)
5	93 (89-95)	83 (75-88)	69 (59-75)	56 (46-64)	46 (37-55)	38 (30-48)	33 (26-43)	30 (22-40)	28 (21-38)	27 (19-37)	26 (18-36)
6	96	92	82	70	59	50	43	40	38	36	35

Ten years probability of osteoporotic fractures (%) according to BMD, the number of clinical risk factors (CRF) and age in women from Kazakhstan.

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	30	20	14	11	8.4	6.8	5.7	5.2	4.9	4.6	4.4
1	42 (38-49)	30 (27-35)	21 (18-25)	16 (13-19)	12 (9.4-15)	10 (7.3-13)	8.5 (5.9-11)	7.8 (5.2-11)	7.2 (4.8-10.0)	6.8 (4.5-9.5)	6.5 (4.2-9.0)
2	56 (48-69)	41 (35-53)	30 (24-40)	23 (17-31)	18 (12-26)	15 (9.1-23)	12 (7.2-20)	11 (6.3-18)	11 (5.7-17)	9.9 (5.3-17)	9.4 (5.0-16)
3	71 (59-81)	55 (44-66)	42 (32-55)	32 (22-46)	25 (16-39)	21 (12-34)	18 (9.4-30)	16 (8.2-28)	15 (7.4-27)	14 (6.8-26)	13 (6.4-24)
4	83 (71-89)	69 (55-77)	55 (41-65)	43 (32-56)	35 (25-48)	29 (19-42)	24 (15-37)	22 (13-35)	21 (12-33)	20 (11-32)	19 (10-30)
5	91 (87-93)	81 (74-86)	69 (60-74)	56 (48-64)	46 (38-55)	38 (31-48)	33 (26-43)	30 (23-40)	28 (21-38)	26 (19-36)	25 (18-35)
6	95	90	81	69	59	50	43	40	37	35	34

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	30	21	15	12	9.0	7.2	6.2	5.6	5.1	4.7	4.4
1	42 (39-47)	30 (28-35)	22 (19-26)	17 (14-20)	13 (10-16)	11 (7.7-14)	9.0 (6.3-12)	8.2 (5.6-11)	7.5 (5.0-10)	7.0 (4.6-9.7)	6.5 (4.3-9.1)
2	55 (48-66)	42 (36-52)	31 (25-40)	24 (18-32)	19 (13-27)	15 (9.7-23)	13 (7.8-20)	12 (6.7-19)	11 (6.0-18)	10 (5.5-17)	9.4 (5.0-16)
3	69 (59-77)	55 (45-66)	43 (33-55)	33 (23-47)	26 (17-40)	21 (13-34)	18 (10-31)	17 (8.8-29)	15 (7.8-27)	14 (7.0-25)	13 (6.5-24)
4	81 (70-86)	68 (56-75)	55 (43-65)	44 (33-56)	36 (26-49)	29 (21-42)	25 (16-38)	23 (14-35)	21 (12-33)	20 (11-31)	18 (10-30)
5	88 (85-91)	80 (74-83)	68 (61-74)	56 (49-64)	47 (40-56)	39 (33-49)	34 (27-43)	31 (23-40)	28 (21-38)	26 (19-36)	25 (17-34)
6	93	88	79	69	59	50	44	40	37	35	33

Ten years probability of osteoporotic fractures (%) according to BMD, the number of clinical risk factors (CRF) and age in women from Kazakhstan.

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	31	22	17	13	9.8	7.8	6.8	6.0	5.4	5.0	4.6
1	42 (40-46)	31 (28-35)	24 (20-26)	18 (15-21)	14 (11-17)	11 (8.3-14)	9.8 (7.0-13)	8.8 (6.0-12)	7.9 (5.3-11)	7.2 (4.8-10)	6.7 (4.4-9.4)
2	55 (48-64)	43 (37-51)	33 (27-40)	25 (19-33)	20 (14-28)	16 (11-23)	14 (8.6-21)	12 (7.4-19)	11 (6.4-18)	10 (5.7-17)	9.5 (5.2-15)
3	67 (59-75)	55 (46-65)	44 (35-56)	34 (25-48)	27 (18-41)	22 (14-35)	19 (11-32)	17 (9.6-29)	16 (8.3-27)	14 (7.4-25)	13 (6.7-24)
4	78 (70-83)	67 (57-75)	55 (45-66)	45 (35-57)	37 (28-49)	30 (22-43)	26 (18-39)	24 (15-36)	21 (13-34)	20 (12-31)	18 (11-29)
5	86 (83-88)	78 (73-82)	67 (62-74)	57 (51-65)	47 (41-56)	39 (34-49)	35 (28-45)	31 (24-41)	29 (21-38)	26 (19-36)	24 (17-34)
6	90	85	77	68	59	50	45	41	37	34	32

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	32	24	18	14	11	8.7	7.5	6.6	5.9	5.3	4.8
1	43 (39-50)	33 (29-39)	25 (21-30)	19 (16-23)	15 (12-18)	12 (9.3-14)	10 (7.7-12)	9.1 (6.6-11)	8.1 (5.8-9.5)	7.2 (5.1-8.6)	6.5 (4.6-7.8)
2	57 (49-67)	45 (37-55)	35 (28-44)	27 (20-34)	21 (15-27)	17 (12-22)	14 (9.7-19)	12 (8.1-17)	11 (7.0-15)	9.8 (6.1-13)	8.8 (5.5-12)
3	70 (60-79)	58 (47-69)	47 (36-59)	37 (27-48)	29 (20-39)	23 (15-33)	19 (13-29)	17 (11-25)	15 (9.1-23)	13 (7.9-20)	12 (7.0-18)
4	80 (73-85)	71 (62-78)	59 (49-68)	48 (39-58)	38 (30-48)	31 (24-41)	26 (20-36)	22 (16-32)	20 (14-28)	17 (12-26)	16 (11-23)
5	86 (82-89)	80 (75-84)	72 (65-77)	61 (54-67)	50 (43-57)	41 (35-48)	35 (29-42)	30 (25-37)	26 (22-33)	23 (19-30)	20 (17-27)
6	89	86	81	73	62	52	45	38	33	29	26

Ten years probability of osteoporotic fractures (%) according to BMD, the number of clinical risk factors (CRF) and age in women from Kazakhstan.

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	32	24	19	15	12	9.7	8.4	7.3	6.4	5.7	5.1
1	44 (37-63)	35 (28-51)	27 (21-39)	21 (16-30)	16 (12-22)	14 (10-17)	11 (8.5-14)	9.8 (7.2-11)	8.5 (6.2-10)	7.5 (5.4-8.9)	6.6 (4.8-8.0)
2	58 (46-74)	48 (36-65)	38 (28-54)	30 (21-43)	23 (16-33)	19 (13-26)	16 (11-21)	13 (8.9-17)	11 (7.6-15)	9.9 (6.6-13)	8.6 (5.7-12)
3	70 (56-81)	61 (45-74)	51 (36-65)	41 (27-55)	33 (21-44)	27 (17-36)	22 (14-30)	18 (12-25)	15 (9.9-21)	13 (8.5-18)	11 (7.4-16)
4	79 (67-86)	73 (57-81)	64 (47-74)	54 (38-65)	44 (30-54)	36 (24-45)	30 (20-38)	25 (17-32)	20 (15-27)	17 (13-23)	15 (11-20)
5	85 (76-88)	81 (68-85)	75 (60-81)	67 (50-73)	57 (41-64)	48 (35-55)	40 (30-46)	33 (25-39)	27 (22-33)	23 (19-28)	19 (17-24)
6	88	86	83	78	70	61	52	44	36	30	25

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	29	23	18	14	12	9.9	8.5	7.3	6.4	5.6	4.9
1	40 (32-57)	32 (25-47)	26 (20-38)	20 (15-29)	16 (12-23)	14 (10-18)	12 (8.4-15)	9.9 (7.1-12)	8.5 (6.1-9.8)	7.3 (5.2-8.4)	6.4 (4.5-7.4)
2	51 (40-67)	43 (32-58)	35 (26-49)	28 (20-40)	23 (16-33)	19 (13-27)	16 (11-22)	13 (8.9-18)	11 (7.5-15)	9.7 (6.4-12)	8.3 (5.5-11)
3	62 (49-74)	55 (41-67)	46 (33-59)	38 (26-50)	31 (20-41)	26 (17-35)	22 (14-29)	18 (12-25)	15 (9.8-21)	13 (8.4-18)	11 (7.2-15)
4	72 (58-79)	65 (50-74)	57 (41-67)	49 (34-59)	41 (27-50)	35 (23-43)	29 (20-37)	24 (17-31)	20 (14-26)	17 (12-22)	14 (11-19)
5	79 (66-83)	74 (59-79)	68 (52-74)	60 (44-67)	53 (37-59)	45 (32-52)	38 (27-45)	32 (23-38)	27 (20-33)	23 (18-28)	19 (15-24)
6	83	81	76	70	64	57	49	42	35	30	25

Ten years probability of osteoporotic fractures (%) according to BMD, the number of clinical risk factors (CRF) and age in women from Kazakhstan.

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	25	20	16	13	11	9.1	7.7	6.6	5.7	4.9	4.3
1	34 (26-49)	28 (21-41)	22 (17-33)	18 (13-27)	15 (11-22)	13 (9.0-18)	11 (7.6-15)	9.1 (6.4-12)	7.8 (5.4-10.0)	6.6 (4.6-8.2)	5.7 (4.0-6.8)
2	43 (33-58)	37 (27-50)	31 (21-43)	25 (17-36)	21 (14-30)	18 (12-25)	15 (9.8-21)	12 (8.2-17)	11 (6.9-14)	8.9 (5.8-12)	7.6 (4.9-10)
3	54 (41-66)	47 (34-59)	40 (28-52)	33 (22-44)	28 (18-38)	24 (15-32)	20 (13-28)	17 (11-23)	14 (9.1-20)	12 (7.6-17)	10 (6.5-14)
4	63 (49-72)	57 (42-67)	50 (35-60)	43 (29-53)	37 (25-46)	32 (21-40)	27 (18-35)	23 (15-30)	19 (13-25)	16 (11-21)	14 (9.2-18)
5	71 (57-77)	66 (50-72)	60 (43-67)	54 (37-61)	47 (32-55)	42 (28-49)	36 (24-43)	31 (20-37)	26 (18-32)	22 (15-27)	18 (13-23)
6	77	74	70	64	58	52	46	40	34	29	24

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	19	16	13	10	8.8	7.5	6.4	5.5	4.7	4.0	3.4
1	27 (20-40)	22 (16-34)	18 (13-28)	15 (11-23)	13 (8.9-20)	11 (7.5-17)	9.1 (6.3-14)	7.8 (5.3-12)	6.6 (4.5-9.6)	5.6 (3.8-8.0)	4.7 (3.2-6.6)
2	35 (25-49)	30 (21-43)	25 (17-36)	21 (14-31)	18 (12-26)	15 (10.0-22)	13 (8.4-19)	11 (7.0-16)	9.3 (5.9-14)	7.8 (5.0-11)	6.6 (4.2-9.5)
3	45 (32-57)	39 (27-51)	33 (22-45)	29 (18-39)	25 (16-34)	21 (13-29)	18 (11-25)	15 (9.4-21)	13 (7.9-18)	11 (6.7-15)	9.3 (5.6-13)
4	55 (40-64)	49 (34-59)	43 (29-53)	38 (24-47)	33 (21-42)	29 (18-37)	25 (15-32)	21 (13-28)	18 (11-24)	15 (9.2-20)	13 (7.8-17)
5	64 (48-70)	59 (42-65)	53 (36-60)	48 (31-54)	43 (27-49)	38 (23-44)	33 (20-39)	29 (17-35)	25 (15-30)	21 (13-26)	18 (11-22)
6	71	67	63	58	53	48	43	38	33	29	24