

Netherlands - 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 Netherlands. 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	12	7.5	5.1	3.7	2.8	2.3	2.0	1.8	1.7	1.6	1.5
1	18 (16-23)	12 (10-15)	7.8 (6.6-9.8)	5.6 (4.4-7.1)	4.3 (3.2-5.4)	3.5 (2.4-4.5)	2.9 (2.0-4.0)	2.7 (1.8-3.7)	2.5 (1.6-3.5)	2.4 (1.5-3.4)	2.3 (1.5-3.2)
2	27 (21-38)	17 (14-25)	12 (8.9-17)	8.4 (5.9-12)	6.5 (4.1-9.9)	5.2 (3.1-8.4)	4.4 (2.4-7.3)	4.0 (2.1-6.8)	3.7 (1.9-6.5)	3.6 (1.8-6.2)	3.4 (1.7-6.0)
3	39 (28-52)	26 (18-34)	17 (12-25)	12 (7.9-19)	9.5 (5.5-16)	7.7 (4.0-14)	6.4 (3.2-12)	5.8 (2.7-11)	5.4 (2.5-10)	5.2 (2.4-10)	5.0 (2.3-9.6)
4	53 (38-66)	36 (25-45)	25 (17-32)	18 (12-25)	14 (9.0-20)	11 (6.8-17)	9.2 (5.3-15)	8.3 (4.5-14)	7.8 (4.1-13)	7.4 (3.9-13)	7.1 (3.7-12)
5	68 (57-78)	49 (40-57)	35 (27-39)	26 (20-30)	19 (15-25)	16 (12-21)	13 (9.9-18)	12 (8.4-16)	11 (7.7-15)	10 (7.1-15)	10 (6.8-14)
6	82	64	47	35	27	22	18	16	15	14	14

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

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	13	8.7	6.1	4.5	3.5	2.8	2.4	2.2	2.0	1.9	1.8
1	20 (18-24)	13 (12-16)	9.2 (7.8-11)	6.8 (5.4-8.2)	5.3 (3.9-6.5)	4.2 (3.0-5.5)	3.5 (2.4-4.7)	3.2 (2.2-4.4)	3.0 (2.0-4.2)	2.8 (1.8-4.0)	2.7 (1.7-3.8)
2	29 (23-39)	20 (16-27)	14 (11-19)	10 (7.1-14)	7.8 (5.1-12)	6.3 (3.8-9.8)	5.2 (3.0-8.5)	4.7 (2.6-7.9)	4.4 (2.4-7.5)	4.1 (2.2-7.1)	3.9 (2.0-6.7)
3	41 (31-52)	28 (21-36)	20 (14-28)	15 (9.6-22)	11 (6.7-19)	9.1 (5.0-16)	7.6 (3.9-14)	6.9 (3.4-13)	6.4 (3.1-12)	6.0 (2.8-11)	5.7 (2.6-11)
4	54 (40-65)	39 (28-47)	28 (20-36)	21 (14-29)	16 (11-24)	13 (8.4-20)	11 (6.5-17)	9.8 (5.6-16)	9.1 (5.0-15)	8.5 (4.6-14)	8.1 (4.3-14)
5	69 (60-77)	52 (44-58)	39 (32-43)	29 (23-35)	23 (18-28)	18 (14-24)	15 (12-20)	14 (10-19)	13 (9.0-18)	12 (8.2-17)	11 (7.7-16)
6	82	66	51	39	31	25	21	19	17	16	15

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	7.7	5.7	4.5	3.6	3.1	2.8	2.5	2.4	2.2
1	23 (21-26)	16 (14-18)	11 (9.7-13)	8.6 (6.8-10)	6.7 (5.0-8.3)	5.3 (3.8-6.9)	4.5 (3.2-6.1)	4.1 (2.8-5.6)	3.8 (2.5-5.2)	3.5 (2.3-4.9)	3.3 (2.1-4.6)
2	33 (27-41)	23 (19-30)	17 (13-22)	13 (9.0-17)	9.7 (6.5-14)	7.8 (4.8-12)	6.6 (3.9-11)	6.0 (3.4-9.7)	5.5 (3.0-9.1)	5.1 (2.7-8.5)	4.7 (2.5-8.0)
3	44 (35-54)	32 (25-41)	24 (17-33)	18 (12-27)	14 (8.6-22)	11 (6.4-19)	9.5 (5.1-17)	8.6 (4.4-15)	7.9 (3.9-14)	7.3 (3.5-13)	6.8 (3.2-13)
4	58 (45-67)	44 (33-51)	33 (24-41)	25 (18-34)	20 (14-28)	16 (11-24)	13 (8.4-21)	12 (7.2-19)	11 (6.3-18)	10 (5.7-17)	9.6 (5.2-16)
5	72 (65-78)	57 (50-61)	44 (38-49)	34 (29-40)	27 (22-33)	22 (18-28)	18 (14-25)	17 (12-23)	15 (11-21)	14 (9.9-20)	13 (9.1-19)
6	83	70	57	45	36	29	25	23	21	19	18

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

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	18	13	9.6	7.2	5.6	4.5	3.9	3.5	3.1	2.9	2.6
1	26 (24-30)	19 (17-21)	14 (12-16)	11 (8.5-13)	8.2 (6.3-10)	6.6 (4.8-8.5)	5.7 (4.0-7.7)	5.1 (3.5-7.0)	4.6 (3.1-6.4)	4.2 (2.8-5.9)	3.9 (2.5-5.5)
2	36 (31-44)	27 (22-33)	20 (16-25)	15 (11-20)	12 (8.1-17)	9.5 (6.1-14)	8.3 (5.0-13)	7.4 (4.3-12)	6.7 (3.7-11)	6.1 (3.3-9.9)	5.6 (3.0-9.2)
3	48 (40-57)	37 (30-47)	28 (21-38)	21 (15-31)	17 (11-26)	13 (8.0-22)	12 (6.5-20)	10 (5.6-18)	9.5 (4.9-17)	8.6 (4.3-16)	7.9 (3.9-14)
4	61 (50-68)	48 (38-56)	38 (29-47)	29 (22-39)	23 (17-33)	19 (13-28)	16 (11-25)	15 (9.0-23)	13 (7.8-21)	12 (6.9-20)	11 (6.3-18)
5	74 (68-78)	61 (55-66)	49 (43-55)	39 (34-46)	31 (27-39)	25 (21-33)	22 (17-29)	20 (15-27)	18 (13-25)	16 (12-23)	15 (10-21)
6	83	73	61	50	41	34	29	26	24	22	20

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	22	16	12	9.0	7.0	5.7	4.9	4.3	3.8	3.4	3.1
1	31 (28-37)	23 (20-27)	17 (14-20)	13 (10-15)	9.9 (7.8-12)	8.0 (6.1-9.3)	6.8 (5.1-7.9)	6.0 (4.3-7.0)	5.3 (3.8-6.2)	4.7 (3.3-5.6)	4.2 (3.0-5.1)
2	43 (36-54)	33 (26-41)	24 (19-32)	18 (14-24)	14 (10-19)	11 (7.8-15)	9.5 (6.3-13)	8.2 (5.3-11)	7.2 (4.6-9.9)	6.5 (4.0-8.9)	5.8 (3.6-8.0)
3	58 (47-69)	45 (34-56)	34 (25-45)	26 (18-36)	20 (13-28)	16 (10-23)	13 (8.3-20)	11 (7.0-17)	9.9 (6.0-15)	8.7 (5.2-14)	7.8 (4.6-12)
4	72 (62-79)	59 (48-67)	47 (36-55)	36 (27-44)	28 (21-36)	22 (16-29)	18 (13-25)	15 (11-22)	13 (9.5-20)	12 (8.3-18)	10 (7.3-16)
5	83 (77-86)	73 (65-77)	60 (53-65)	48 (41-54)	38 (32-43)	30 (25-36)	25 (21-30)	21 (18-26)	18 (15-23)	16 (13-21)	14 (12-19)
6	89	83	74	62	50	40	33	28	24	21	18

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

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	25	19	14	11	8.4	7.0	6.0	5.2	4.5	4.0	3.5
1	37 (31-55)	28 (23-42)	21 (17-32)	16 (13-23)	12 (9.4-17)	10 (7.6-13)	8.3 (6.2-10)	7.1 (5.3-8.1)	6.1 (4.5-7.1)	5.3 (3.9-6.3)	4.6 (3.4-5.6)
2	52 (39-71)	41 (30-59)	32 (22-47)	24 (17-36)	18 (12-27)	14 (9.7-21)	12 (7.9-16)	9.8 (6.5-13)	8.3 (5.5-11)	7.1 (4.7-9.8)	6.1 (4.1-8.7)
3	66 (50-80)	56 (39-71)	45 (29-59)	35 (22-47)	26 (16-37)	21 (13-29)	17 (10-23)	14 (8.6-19)	11 (7.2-16)	9.5 (6.2-13)	8.1 (5.3-11)
4	78 (62-86)	70 (51-80)	59 (40-70)	48 (31-58)	37 (23-46)	30 (19-37)	24 (16-30)	19 (13-25)	16 (11-21)	13 (9.5-17)	11 (8.3-15)
5	86 (75-89)	81 (65-85)	73 (55-78)	63 (44-68)	51 (35-57)	41 (29-47)	33 (24-38)	27 (20-31)	21 (17-26)	18 (15-21)	15 (12-18)
6	90	87	83	76	66	55	45	37	30	24	20

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	26	20	15	12	9.4	7.8	6.5	5.6	4.8	4.1	3.6
1	37 (31-56)	29 (24-45)	23 (18-35)	18 (14-26)	14 (10-20)	11 (8.5-16)	9.3 (6.9-12)	7.7 (5.7-9.7)	6.5 (4.8-7.8)	5.5 (4.1-6.4)	4.8 (3.5-5.5)
2	50 (39-68)	41 (31-59)	33 (23-48)	26 (18-38)	20 (14-30)	16 (11-24)	13 (8.9-19)	11 (7.3-15)	9.0 (6.0-12)	7.5 (5.1-10)	6.4 (4.3-8.4)
3	63 (48-77)	54 (39-69)	45 (31-59)	36 (24-49)	29 (18-39)	23 (15-32)	19 (12-26)	15 (9.6-21)	12 (7.9-17)	10 (6.6-14)	8.6 (5.6-12)
4	74 (58-82)	66 (49-76)	58 (39-69)	48 (31-59)	40 (25-49)	33 (20-40)	26 (17-33)	21 (14-27)	17 (12-22)	14 (9.7-19)	12 (8.3-16)
5	81 (69-85)	76 (61-81)	70 (52-76)	61 (43-68)	52 (35-58)	44 (29-50)	36 (25-42)	30 (21-34)	24 (17-28)	20 (15-23)	16 (13-19)
6	86	83	79	73	65	57	49	40	33	27	22

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

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	23	18	14	11	9.3	7.8	6.5	5.5	4.7	4.0	3.4
1	33 (26-50)	27 (21-41)	21 (16-33)	17 (13-25)	14 (10-20)	11 (8.3-16)	9.3 (6.8-13)	7.8 (5.7-11)	6.5 (4.7-8.5)	5.5 (4.0-6.9)	4.7 (3.3-5.6)
2	45 (34-61)	37 (27-53)	30 (21-44)	24 (17-36)	20 (13-30)	16 (11-24)	13 (8.9-20)	11 (7.3-16)	9.2 (6.1-13)	7.6 (5.0-11)	6.4 (4.2-8.7)
3	57 (42-70)	49 (35-63)	41 (28-55)	34 (22-46)	28 (18-39)	23 (14-32)	19 (12-26)	16 (9.7-22)	13 (8.0-18)	11 (6.7-15)	8.8 (5.6-12)
4	67 (51-76)	61 (43-71)	53 (36-64)	45 (29-55)	38 (24-48)	32 (20-40)	27 (16-34)	22 (14-28)	18 (11-23)	15 (9.6-19)	12 (8.1-16)
5	76 (61-81)	71 (54-76)	64 (46-71)	57 (38-64)	50 (33-57)	43 (28-49)	37 (23-42)	31 (20-36)	25 (17-30)	21 (14-25)	17 (12-21)
6	82	79	74	68	62	55	48	41	35	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	18	15	12	9.5	8.1	6.9	5.8	5.0	4.2	3.6	3.1
1	26 (19-39)	21 (15-32)	17 (12-26)	14 (9.9-21)	12 (8.3-18)	9.8 (7.0-15)	8.3 (5.9-12)	7.0 (4.9-9.9)	5.9 (4.1-8.2)	5.0 (3.5-6.7)	4.2 (3.0-5.6)
2	35 (25-49)	29 (20-42)	24 (16-35)	20 (13-29)	17 (11-25)	14 (9.2-21)	12 (7.7-17)	9.9 (6.5-15)	8.3 (5.4-12)	7.0 (4.5-10)	5.9 (3.8-8.3)
3	45 (32-58)	39 (26-51)	33 (21-44)	27 (17-38)	23 (15-33)	20 (12-28)	17 (10-23)	14 (8.6-20)	12 (7.2-16)	9.9 (6.0-14)	8.3 (5.1-12)
4	56 (40-66)	50 (34-60)	43 (28-53)	37 (23-47)	32 (20-41)	28 (17-35)	24 (14-30)	20 (12-26)	17 (10-22)	14 (8.6-18)	12 (7.3-15)
5	66 (49-72)	60 (42-67)	54 (36-61)	48 (31-55)	43 (27-49)	37 (23-43)	32 (20-38)	27 (17-33)	23 (14-28)	20 (12-24)	16 (10-20)
6	74	70	65	59	54	48	43	37	32	27	23