

**Germany - 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 Germany. 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/m<sup>2</sup>.

**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	19	12	8.2	6.0	4.7	3.8	3.3	3.0	2.8	2.7	2.6
1	28 (25-35)	18 (16-23)	13 (11-16)	9.1 (7.2-11)	7.1 (5.2-8.9)	5.8 (4.1-7.5)	4.9 (3.3-6.6)	4.4 (2.9-6.1)	4.2 (2.7-5.8)	4.0 (2.6-5.6)	3.9 (2.5-5.4)
2	40 (32-54)	27 (22-37)	19 (14-26)	14 (9.5-19)	11 (6.7-16)	8.6 (5.0-14)	7.3 (4.0-12)	6.6 (3.5-11)	6.2 (3.3-11)	5.9 (3.1-10)	5.7 (2.9-9.9)
3	55 (41-69)	38 (28-49)	27 (19-38)	20 (13-30)	15 (8.9-25)	12 (6.6-22)	11 (5.3-19)	9.5 (4.6-18)	9.0 (4.2-17)	8.6 (4.0-16)	8.2 (3.8-16)
4	70 (53-82)	52 (37-62)	38 (26-47)	28 (19-38)	22 (15-32)	18 (11-27)	15 (8.7-24)	13 (7.5-22)	13 (6.8-21)	12 (6.4-20)	12 (6.1-20)
5	83 (74-90)	67 (56-74)	51 (41-56)	38 (30-45)	30 (23-37)	25 (19-32)	21 (16-28)	19 (14-26)	18 (13-25)	17 (12-24)	16 (11-23)
6	92	81	65	51	40	33	28	25	24	23	22

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

**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	17	11	8.1	6.1	4.7	3.9	3.2	3.0	2.8	2.6	2.5
1	25 (23-30)	17 (15-21)	12 (10-15)	9.1 (7.2-11)	7.1 (5.3-8.9)	5.8 (4.1-7.5)	4.8 (3.3-6.5)	4.4 (3.0-6.1)	4.1 (2.7-5.8)	3.9 (2.5-5.5)	3.7 (2.4-5.2)
2	36 (30-47)	25 (20-33)	18 (14-24)	13 (9.4-19)	10 (6.8-16)	8.5 (5.1-13)	7.1 (4.1-12)	6.5 (3.6-11)	6.1 (3.2-10)	5.7 (3.0-9.7)	5.4 (2.8-9.3)
3	49 (38-61)	35 (27-45)	26 (18-36)	19 (13-29)	15 (9.0-25)	12 (6.7-21)	10 (5.3-18)	9.4 (4.6-17)	8.7 (4.2-16)	8.2 (3.9-15)	7.8 (3.6-15)
4	64 (49-74)	48 (35-56)	36 (25-45)	27 (19-37)	21 (15-31)	17 (11-27)	15 (8.7-23)	13 (7.6-22)	12 (6.8-20)	12 (6.3-19)	11 (5.9-19)
5	77 (69-84)	62 (53-67)	48 (40-53)	37 (30-44)	29 (24-37)	24 (19-31)	20 (16-27)	18 (14-25)	17 (12-24)	16 (11-23)	15 (10-21)
6	88	76	61	49	39	32	27	25	23	22	21

**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	18	13	9.1	6.8	5.4	4.3	3.7	3.4	3.1	2.9	2.7
1	26 (24-30)	19 (16-21)	13 (11-16)	10 (8.0-12)	7.9 (6.0-9.9)	6.4 (4.6-8.4)	5.5 (3.8-7.4)	5.0 (3.3-6.8)	4.6 (3.0-6.4)	4.2 (2.8-5.9)	4.0 (2.6-5.6)
2	37 (31-47)	27 (22-34)	19 (15-25)	15 (11-20)	12 (7.6-17)	9.3 (5.8-14)	8.0 (4.7-13)	7.2 (4.1-12)	6.6 (3.6-11)	6.2 (3.3-10)	5.8 (3.0-9.6)
3	50 (40-59)	37 (29-47)	27 (20-38)	21 (14-31)	16 (10-26)	13 (7.6-22)	11 (6.1-20)	10 (5.3-18)	9.5 (4.7-17)	8.8 (4.3-16)	8.2 (3.9-15)
4	63 (51-72)	49 (37-57)	38 (28-47)	29 (21-39)	23 (16-33)	19 (13-28)	16 (10-25)	14 (8.6-23)	13 (7.6-22)	12 (6.9-20)	12 (6.3-19)
5	76 (70-82)	62 (55-67)	49 (43-56)	39 (33-46)	31 (26-39)	25 (21-33)	22 (17-29)	20 (15-27)	18 (13-25)	17 (12-24)	16 (11-22)
6	86	75	62	51	41	34	29	27	24	23	21

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

**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	21	15	11	8.6	6.7	5.4	4.7	4.2	3.8	3.5	3.2
1	30 (28-34)	22 (19-25)	16 (14-18)	13 (10-15)	9.8 (7.4-12)	7.8 (5.7-10)	6.8 (4.8-9.2)	6.1 (4.2-8.4)	5.5 (3.7-7.7)	5.1 (3.4-7.1)	4.7 (3.1-6.6)
2	41 (36-50)	31 (26-38)	23 (18-29)	18 (13-24)	14 (9.5-20)	11 (7.2-17)	9.8 (5.9-15)	8.8 (5.1-14)	8.0 (4.5-13)	7.3 (4.0-12)	6.7 (3.6-11)
3	54 (45-62)	41 (34-52)	32 (24-43)	25 (17-36)	20 (13-30)	16 (9.5-26)	14 (7.8-23)	12 (6.6-21)	11 (5.8-20)	10 (5.2-18)	9.5 (4.7-17)
4	66 (56-72)	54 (43-62)	42 (33-53)	34 (25-44)	27 (20-38)	22 (15-32)	19 (13-29)	17 (11-27)	16 (9.3-25)	14 (8.3-23)	13 (7.5-22)
5	78 (73-81)	66 (60-71)	54 (48-61)	44 (39-52)	36 (31-44)	29 (25-37)	26 (20-34)	23 (17-31)	21 (15-29)	19 (14-27)	18 (12-25)
6	86	77	66	55	46	38	34	31	28	26	24

**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	26	19	14	11	8.5	6.9	5.9	5.2	4.6	4.1	3.7
1	37 (33-43)	28 (24-33)	21 (17-24)	16 (13-18)	12 (9.5-14)	9.7 (7.4-11)	8.3 (6.2-9.6)	7.2 (5.2-8.4)	6.3 (4.6-7.5)	5.7 (4.0-6.7)	5.1 (3.6-6.1)
2	50 (43-61)	39 (31-48)	29 (23-37)	22 (17-29)	17 (12-22)	14 (9.4-18)	11 (7.7-15)	9.9 (6.5-13)	8.7 (5.5-12)	7.7 (4.8-11)	6.9 (4.3-9.6)
3	65 (54-75)	52 (41-63)	40 (30-52)	31 (22-42)	24 (16-33)	19 (12-27)	16 (10-23)	14 (8.4-21)	12 (7.2-18)	10 (6.3-16)	9.3 (5.5-15)
4	77 (69-83)	66 (55-74)	53 (43-62)	42 (33-51)	33 (25-42)	26 (19-34)	22 (16-30)	18 (13-26)	16 (11-23)	14 (9.9-21)	12 (8.8-19)
5	85 (81-88)	78 (71-82)	67 (60-72)	55 (48-61)	44 (37-50)	35 (30-41)	29 (25-36)	25 (21-31)	21 (18-27)	19 (16-24)	17 (14-22)
6	90	86	79	68	57	46	39	33	28	24	22

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

**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	30	23	17	13	10	8.2	7.0	6.0	5.2	4.5	4.0
1	44 (37-63)	34 (28-51)	26 (21-39)	19 (15-29)	15 (11-21)	12 (9.0-16)	9.8 (7.4-12)	8.3 (6.1-9.8)	7.0 (5.2-8.1)	6.1 (4.5-7.1)	5.3 (3.9-6.3)
2	58 (46-76)	48 (36-66)	37 (27-54)	29 (20-42)	22 (15-32)	17 (12-25)	14 (9.4-20)	12 (7.7-16)	9.6 (6.4-13)	8.2 (5.5-11)	7.1 (4.7-9.8)
3	72 (57-83)	62 (46-76)	51 (35-66)	41 (26-54)	31 (20-43)	25 (15-35)	20 (12-28)	16 (10-23)	13 (8.4-19)	11 (7.1-16)	9.4 (6.1-13)
4	81 (69-88)	74 (58-83)	65 (46-76)	55 (36-66)	44 (28-54)	35 (22-44)	28 (18-36)	23 (15-29)	18 (13-24)	15 (11-20)	13 (9.5-17)
5	87 (78-90)	83 (70-87)	77 (61-82)	69 (50-75)	58 (40-64)	48 (33-54)	39 (27-45)	32 (23-37)	25 (20-30)	21 (17-25)	17 (15-21)
6	90	88	85	80	72	62	52	43	35	28	23

**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	33	26	20	16	13	11	9.0	7.7	6.6	5.7	5.0
1	45 (38-64)	37 (30-53)	29 (23-43)	23 (18-34)	18 (14-26)	15 (11-21)	13 (9.3-16)	11 (7.7-13)	8.9 (6.5-11)	7.7 (5.6-8.8)	6.6 (4.8-7.6)
2	58 (46-74)	49 (37-66)	40 (30-56)	32 (23-47)	26 (18-38)	21 (15-31)	18 (12-25)	15 (9.8-20)	12 (8.2-16)	10 (6.9-14)	8.8 (5.9-11)
3	69 (56-80)	61 (47-74)	52 (38-66)	44 (30-57)	36 (24-47)	29 (19-39)	24 (16-33)	20 (13-27)	17 (11-23)	14 (9.0-19)	12 (7.7-16)
4	77 (65-84)	71 (56-80)	64 (47-74)	56 (38-66)	47 (31-57)	40 (26-49)	33 (22-41)	27 (18-34)	23 (15-29)	19 (13-24)	16 (11-21)
5	83 (73-87)	80 (66-84)	74 (58-80)	67 (50-73)	59 (42-66)	52 (36-58)	44 (30-50)	37 (26-43)	31 (22-36)	25 (19-30)	21 (16-26)
6	86	85	82	77	71	64	56	48	41	34	28

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

**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	32	26	21	17	14	12	10	8.9	7.7	6.6	5.7
1	43 (35-59)	36 (28-51)	29 (22-42)	24 (18-34)	20 (15-28)	17 (12-23)	14 (10-19)	12 (8.7-16)	10 (7.4-13)	8.8 (6.3-11)	7.6 (5.4-8.9)
2	54 (43-68)	47 (35-61)	39 (29-54)	32 (23-45)	27 (19-39)	23 (16-33)	20 (13-27)	17 (11-23)	14 (9.3-19)	12 (7.9-16)	10 (6.7-13)
3	64 (52-76)	57 (44-70)	50 (36-63)	43 (30-55)	37 (25-48)	31 (21-41)	27 (17-35)	23 (15-30)	19 (12-26)	16 (10-22)	14 (8.8-19)
4	73 (60-80)	68 (53-76)	61 (45-71)	54 (38-64)	47 (32-57)	41 (28-50)	35 (24-44)	30 (20-38)	26 (17-33)	22 (15-28)	18 (13-24)
5	79 (68-83)	76 (62-80)	71 (55-76)	65 (48-71)	59 (42-65)	52 (37-59)	46 (32-53)	40 (28-46)	34 (24-40)	29 (21-35)	24 (18-30)
6	82	81	78	74	69	63	57	50	44	38	32

**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	25	20	17	14	12	9.9	8.4	7.2	6.1	5.3	4.5
1	34 (26-48)	28 (21-40)	23 (17-34)	19 (14-28)	16 (12-24)	14 (9.9-20)	12 (8.4-16)	10 (7.1-14)	8.5 (6.0-11)	7.2 (5.1-9.4)	6.1 (4.3-7.8)
2	44 (33-57)	37 (27-51)	31 (22-44)	26 (18-37)	23 (15-32)	19 (13-28)	16 (11-23)	14 (9.2-20)	12 (7.7-17)	10 (6.5-14)	8.4 (5.5-12)
3	54 (41-66)	48 (34-60)	41 (28-53)	35 (24-47)	31 (20-41)	26 (17-36)	23 (14-31)	19 (12-26)	16 (10-22)	14 (8.6-19)	12 (7.3-16)
4	63 (49-72)	58 (43-67)	52 (36-62)	46 (31-55)	40 (27-50)	35 (23-44)	31 (20-39)	26 (17-33)	22 (14-29)	19 (12-25)	16 (10-21)
5	71 (58-76)	67 (52-73)	62 (45-68)	56 (40-63)	51 (35-58)	46 (31-53)	40 (27-47)	35 (23-41)	30 (20-36)	26 (17-31)	22 (15-27)
6	76	74	71	66	62	57	51	46	40	35	30