

Germany - 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 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/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	19	10	5.5	2.9	1.5	0.8	0.4	0.2	0.1	0.1	0.0	
1	28 (19-35)	16 (11-20)	8.6 (5.7-11)	4.6 (3.0-6.1)	2.5 (1.6-3.2)	1.3 (0.8-1.7)	0.7 (0.4-0.9)	0.4 (0.2-0.5)	0.2 (0.1-0.3)	0.1 (0.1-0.1)	0.1 (0.0-0.1)	
2	40 (26-54)	24 (15-34)	13 (8.1-20)	7.3 (4.3-11)	3.9 (2.3-5.9)	2.1 (1.2-3.1)	1.1 (0.6-1.7)	0.6 (0.3-0.9)	0.3 (0.2-0.5)	0.2 (0.1-0.3)	0.1 (0.1-0.1)	
3	54 (37-71)	35 (22-50)	20 (12-31)	11 (6.5-18)	6.1 (3.5-9.8)	3.2 (1.8-5.3)	1.7 (1.0-2.8)	0.9 (0.5-1.5)	0.5 (0.3-0.8)	0.3 (0.1-0.4)	0.1 (0.1-0.2)	
4	69 (54-83)	48 (34-64)	30 (20-43)	17 (11-26)	9.4 (5.8-15)	5.0 (3.1-7.9)	2.7 (1.6-4.2)	1.4 (0.9-2.2)	0.7 (0.5-1.2)	0.4 (0.3-0.7)	0.2 (0.1-0.4)	
5	81 (73-89)	62 (52-75)	42 (33-54)	25 (19-34)	14 (10-20)	7.7 (5.6-11)	4.1 (3.0-6.0)	2.2 (1.6-3.2)	1.2 (0.8-1.7)	0.6 (0.5-0.9)	0.3 (0.3-0.5)	
6	89	77	56	36	21	12	6.3	3.3	1.8	1.0	0.5	

Ten year probability of hip fractures (%) according to BMD, the number of clinical risk factors (CRF) and age in men 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	15	8.7	4.8	2.7	1.5	0.8	0.4	0.2	0.1	0.1	0.0
1	23 (16-28)	13 (9.1-16)	7.5 (5.1-9.3)	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	33 (22-43)	20 (13-27)	11 (7.1-16)	6.4 (4.0-9.2)	3.6 (2.2-5.1)	2.0 (1.2-2.8)	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	44 (31-58)	28 (19-40)	17 (11-25)	9.7 (6.0-15)	5.5 (3.3-8.3)	3.0 (1.8-4.7)	1.7 (1.0-2.6)	0.9 (0.5-1.4)	0.5 (0.3-0.8)	0.3 (0.2-0.5)	0.2 (0.1-0.3)
4	58 (45-71)	39 (29-53)	25 (17-35)	14 (9.8-21)	8.3 (5.5-12)	4.6 (3.0-7.0)	2.5 (1.7-3.9)	1.4 (0.9-2.2)	0.8 (0.5-1.2)	0.4 (0.3-0.7)	0.3 (0.2-0.4)
5	70 (63-79)	52 (44-64)	34 (28-45)	21 (17-29)	12 (9.6-17)	6.9 (5.4-9.8)	3.9 (3.0-5.5)	2.1 (1.6-3.1)	1.2 (0.9-1.7)	0.7 (0.5-1.0)	0.4 (0.3-0.6)
6	80	65	47	30	18	10	5.8	3.2	1.8	1.0	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	13	7.9	4.7	2.7	1.6	0.9	0.5	0.3	0.2	0.1	0.1
1	19 (14-22)	12 (8.3-14)	7.1 (4.9-8.3)	4.2 (2.9-4.9)	2.4 (1.7-2.9)	1.4 (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	27 (19-35)	17 (12-23)	11 (6.9-14)	6.3 (4.1-8.6)	3.7 (2.4-5.1)	2.2 (1.4-3.0)	1.3 (0.8-1.7)	0.7 (0.5-1.0)	0.4 (0.3-0.6)	0.3 (0.2-0.4)	0.2 (0.1-0.2)
3	37 (27-48)	25 (17-33)	15 (10-21)	9.3 (6.1-13)	5.6 (3.6-8.0)	3.3 (2.1-4.8)	1.9 (1.2-2.8)	1.1 (0.7-1.7)	0.7 (0.4-1.0)	0.4 (0.3-0.6)	0.2 (0.2-0.4)
4	49 (39-61)	34 (26-45)	22 (16-30)	14 (9.8-19)	8.2 (5.8-12)	4.9 (3.4-7.2)	2.9 (2.0-4.3)	1.7 (1.2-2.5)	1.0 (0.7-1.5)	0.6 (0.4-0.9)	0.4 (0.3-0.6)
5	61 (55-71)	45 (39-55)	31 (26-40)	20 (16-26)	12 (10-16)	7.2 (6.0-10)	4.3 (3.5-6.0)	2.5 (2.1-3.5)	1.5 (1.3-2.2)	0.9 (0.8-1.3)	0.6 (0.5-0.8)
6	72	57	41	27	17	11	6.3	3.7	2.3	1.4	0.8

Ten year probability of hip fractures (%) according to BMD, the number of clinical risk factors (CRF) and age in men 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	12	7.8	4.9	3.1	1.9	1.2	0.7	0.5	0.3	0.2	0.1
1	17 (13-20)	11 (8.2-13)	7.2 (5.1-8.2)	4.5 (3.2-5.2)	2.8 (2.0-3.2)	1.7 (1.2-2.0)	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	24 (18-30)	16 (11-20)	10 (7.2-13)	6.6 (4.5-8.5)	4.2 (2.8-5.4)	2.6 (1.7-3.4)	1.6 (1.1-2.1)	1.0 (0.7-1.3)	0.6 (0.4-0.8)	0.4 (0.3-0.5)	0.3 (0.2-0.3)
3	32 (25-41)	22 (17-29)	15 (11-19)	9.6 (6.8-13)	6.1 (4.3-8.1)	3.8 (2.7-5.2)	2.4 (1.6-3.2)	1.5 (1.0-2.0)	1.0 (0.7-1.3)	0.6 (0.4-0.8)	0.4 (0.3-0.5)
4	42 (35-51)	30 (24-38)	21 (16-27)	14 (10-18)	8.7 (6.6-12)	5.5 (4.2-7.7)	3.5 (2.6-4.9)	2.2 (1.6-3.1)	1.4 (1.0-2.0)	0.9 (0.7-1.3)	0.6 (0.4-0.8)
5	52 (48-60)	39 (35-48)	28 (25-35)	19 (17-25)	12 (11-17)	7.9 (6.9-11)	5.0 (4.3-6.9)	3.2 (2.7-4.4)	2.1 (1.7-2.8)	1.3 (1.1-1.8)	0.8 (0.7-1.2)
6	61	49	37	26	17	11	7.2	4.6	3.0	1.9	1.2

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	13	8.6	5.7	3.8	2.5	1.7	1.1	0.7	0.5	0.3	0.2
1	19 (17-24)	13 (12-17)	9.1 (8.0-12)	6.1 (5.4-7.9)	4.1 (3.5-5.3)	2.7 (2.3-3.5)	1.8 (1.5-2.3)	1.2 (1.0-1.5)	0.8 (0.7-1.0)	0.5 (0.5-0.7)	0.4 (0.3-0.5)
2	28 (24-35)	20 (17-26)	14 (12-18)	9.6 (7.9-13)	6.5 (5.3-8.6)	4.3 (3.5-5.7)	2.9 (2.3-3.8)	1.9 (1.6-2.6)	1.3 (1.1-1.8)	0.9 (0.7-1.2)	0.6 (0.5-0.8)
3	39 (33-46)	29 (24-35)	21 (17-26)	15 (12-18)	10 (7.9-13)	6.9 (5.3-8.7)	4.6 (3.5-5.8)	3.1 (2.4-4.0)	2.1 (1.6-2.7)	1.4 (1.1-1.8)	1.0 (0.7-1.3)
4	51 (43-57)	40 (33-46)	30 (24-36)	22 (17-26)	16 (12-19)	11 (8.1-13)	7.2 (5.4-8.7)	4.9 (3.7-6.0)	3.4 (2.5-4.1)	2.3 (1.7-2.8)	1.6 (1.2-1.9)
5	61 (54-65)	52 (44-55)	41 (34-45)	31 (25-34)	23 (18-25)	16 (12-18)	11 (8.5-12)	7.8 (5.9-8.6)	5.4 (4.1-6.0)	3.7 (2.8-4.2)	2.5 (1.9-2.9)
6	70	62	53	42	33	24	17	12	8.4	5.8	4.0

Ten year probability of hip fractures (%) according to BMD, the number of clinical risk factors (CRF) and age in men 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	13	9.0	6.4	4.5	3.2	2.2	1.5	1.1	0.8	0.6	0.4
1	21 (17-40)	16 (12-31)	12 (8.9-24)	8.4 (6.3-18)	6.0 (4.5-13)	4.2 (3.1-9.2)	3.0 (2.2-6.5)	2.2 (1.6-4.7)	1.6 (1.1-3.4)	1.1 (0.8-2.5)	0.8 (0.6-1.8)
2	32 (22-51)	25 (17-42)	19 (12-33)	14 (8.8-25)	10 (6.3-19)	7.6 (4.4-14)	5.4 (3.1-10)	3.9 (2.2-7.4)	2.8 (1.6-5.4)	2.0 (1.2-3.9)	1.5 (0.8-2.9)
3	44 (29-60)	37 (22-52)	29 (17-43)	23 (12-34)	17 (8.8-27)	13 (6.3-20)	9.2 (4.5-15)	6.8 (3.2-11)	4.9 (2.3-8.1)	3.6 (1.7-5.9)	2.6 (1.2-4.3)
4	57 (38-68)	49 (30-60)	41 (23-52)	33 (17-43)	26 (13-34)	20 (9.3-27)	15 (6.7-20)	11 (4.9-15)	8.3 (3.5-11)	6.1 (2.6-8.3)	4.4 (1.9-6.1)
5	68 (48-74)	61 (39-68)	54 (32-60)	46 (24-52)	37 (18-43)	30 (14-34)	23 (10-27)	18 (7.4-20)	13 (5.4-15)	9.9 (4.0-12)	7.3 (2.9-8.5)
6	77	72	66	58	50	41	33	26	20	16	12

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	8.6	6.5	4.9	3.6	2.7	2.0	1.5	1.1	0.9	0.7
1	19 (15-37)	15 (11-30)	11 (8.4-24)	8.8 (6.3-19)	6.6 (4.7-14)	5.0 (3.5-11)	3.7 (2.6-8.2)	2.9 (2.0-6.4)	2.2 (1.5-4.9)	1.7 (1.1-3.7)	1.3 (0.9-2.8)
2	29 (19-47)	23 (14-39)	18 (11-32)	14 (8.4-26)	11 (6.4-20)	8.5 (4.8-16)	6.5 (3.6-12)	5.0 (2.7-9.5)	3.9 (2.1-7.4)	3.0 (1.6-5.7)	2.3 (1.2-4.4)
3	40 (24-56)	34 (19-49)	28 (15-41)	22 (12-34)	18 (8.8-28)	14 (6.7-22)	11 (5.0-17)	8.3 (3.9-14)	6.5 (3.0-11)	5.0 (2.3-8.5)	3.9 (1.7-6.5)
4	52 (32-64)	45 (26-57)	38 (21-50)	32 (16-43)	26 (13-36)	21 (9.6-29)	17 (7.3-23)	13 (5.7-19)	10 (4.4-15)	8.1 (3.4-12)	6.3 (2.6-9.1)
5	63 (42-69)	57 (35-63)	50 (28-57)	43 (23-49)	37 (18-42)	30 (14-35)	25 (11-29)	20 (8.4-23)	16 (6.6-19)	13 (5.1-15)	10 (3.9-12)
6	72	68	62	56	49	41	35	29	24	19	15

Ten year probability of hip fractures (%) according to BMD, the number of clinical risk factors (CRF) and age in men 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	9.3	7.3	5.8	4.5	3.5	2.7	2.2	1.7	1.4	1.1	0.9
1	16 (12-31)	13 (9.5-26)	10 (7.5-21)	8.1 (5.9-17)	6.4 (4.6-14)	5.1 (3.6-11)	4.0 (2.8-8.9)	3.3 (2.3-7.2)	2.6 (1.8-5.8)	2.1 (1.5-4.7)	1.7 (1.2-3.8)
2	25 (15-41)	20 (12-35)	17 (9.8-30)	14 (7.8-24)	11 (6.1-20)	8.7 (4.8-16)	7.0 (3.8-13)	5.7 (3.1-11)	4.6 (2.5-8.7)	3.7 (2.0-7.0)	3.0 (1.6-5.7)
3	35 (21-50)	30 (17-44)	25 (13-38)	21 (11-33)	17 (8.5-27)	14 (6.7-22)	11 (5.4-19)	9.3 (4.3-15)	7.6 (3.5-13)	6.2 (2.8-10)	5.0 (2.3-8.4)
4	47 (28-59)	41 (23-53)	36 (19-47)	30 (15-41)	26 (12-35)	21 (9.7-29)	18 (7.8-25)	15 (6.3-21)	12 (5.1-17)	9.9 (4.1-14)	8.1 (3.3-12)
5	58 (37-64)	53 (31-59)	47 (26-54)	42 (21-48)	36 (17-41)	31 (14-35)	26 (11-30)	22 (9.4-26)	18 (7.6-22)	15 (6.2-18)	13 (5.0-15)
6	68	64	59	54	48	42	36	31	27	23	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	6.1	5.0	4.1	3.3	2.7	2.2	1.9	1.6	1.3	1.1	0.9
1	11 (7.9-22)	9.0 (6.5-19)	7.4 (5.3-16)	6.1 (4.4-13)	5.0 (3.6-11)	4.1 (2.9-9.1)	3.5 (2.4-7.7)	2.9 (2.0-6.5)	2.4 (1.7-5.5)	2.1 (1.4-4.6)	1.7 (1.2-3.9)
2	17 (10-31)	15 (8.5-26)	12 (7.0-23)	10 (5.8-19)	8.6 (4.8-16)	7.1 (3.9-13)	6.0 (3.3-11)	5.1 (2.8-9.6)	4.3 (2.3-8.2)	3.6 (1.9-6.9)	3.0 (1.6-5.8)
3	26 (14-39)	22 (12-35)	19 (9.7-30)	16 (8.1-26)	14 (6.7-22)	12 (5.5-19)	9.8 (4.6-16)	8.4 (3.9-14)	7.1 (3.3-12)	6.1 (2.7-10)	5.1 (2.3-8.6)
4	36 (19-47)	32 (16-43)	28 (14-38)	24 (11-33)	21 (9.5-29)	18 (7.9-25)	15 (6.7-22)	13 (5.7-19)	11 (4.8-16)	9.7 (4.0-14)	8.3 (3.4-12)
5	47 (27-54)	43 (23-49)	39 (20-44)	34 (17-40)	30 (14-35)	26 (12-30)	23 (9.9-27)	20 (8.4-23)	17 (7.1-20)	15 (6.1-18)	13 (5.1-15)
6	58	54	50	46	41	36	32	29	25	22	19