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 body mass index (BMI kg/m2), 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.

Age = 50 years

Number of CRFs	BMI (kg/m²)						
	15	20	25	30	35	40	45
0	3.6	3.3	3.1	2.7	2.4	2.1	1.8
1	6.0 (4.1-8.9)	5.2 (3.6-7.5)	4.8 (3.3-6.7)	4.2 (2.9-5.8)	3.7 (2.5-5.1)	3.2 (2.2-4.4)	2.8 (1.9-3.9)
2	9.6 (5.3-15)	8.2 (4.4-14)	7.5 (4.0-13)	6.5 (3.5-11)	5.7 (3.0-9.8)	5.0 (2.6-8.6)	4.3 (2.3-7.5)
3	15 (7.8-25)	13 (6.3-22)	11 (5.5-20)	9.9 (4.8-18)	8.6 (4.1-16)	7.5 (3.6-14)	6.6 (3.1-12)
4	23 (13-35)	19 (11-30)	17 (9.3-27)	15 (8.0-24)	13 (6.9-21)	11 (6.0-18)	9.8 (5.2-16)
5	35 (22-43)	29 (19-36)	25 (17-32)	22 (15-28)	19 (13-25)	17 (11-22)	14 (9.9-19)
6	50	41	35	31	27	24	21

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

Age = 55 years

Number of CRFs	BMI (kg/m²)						
	15	20	25	30	35	40	45
0	4.1	3.6	3.3	2.9	2.5	2.2	1.9
1	6.7 (4.8-9.7)	5.7 (4.0-8.0)	5.2 (3.6-7.1)	4.5 (3.1-6.1)	3.9 (2.7-5.3)	3.4 (2.3-4.6)	3.0 (2.0-4.0)
2	11 (6.2-17)	9.0 (5.0-14)	8.0 (4.4-13)	7.0 (3.8-12)	6.0 (3.3-10)	5.3 (2.8-8.9)	4.6 (2.5-7.8)
3	17 (9.3-27)	14 (7.3-23)	12 (6.2-21)	11 (5.3-19)	9.2 (4.5-16)	8.0 (3.9-14)	6.9 (3.4-13)
4	26 (15-37)	21 (13-32)	18 (10-28)	16 (8.9-25)	14 (7.7-22)	12 (6.6-19)	10 (5.7-17)
5	38 (26-46)	31 (21-39)	26 (18-34)	23 (16-30)	20 (14-26)	17 (12-23)	15 (11-20)
6	54	44	37	33	29	25	22

Age = 60 years

Number of CRFs	BMI (kg/m²)						
	15	20	25	30	35	40	45
0	5.4	4.6	4.1	3.6	3.1	2.7	2.3
1	8.7 (6.4-12)	7.2 (5.2-9.8)	6.4 (4.5-8.5)	5.5 (3.9-7.4)	4.8 (3.3-6.4)	4.2 (2.9-5.5)	3.6 (2.5-4.8)
2	14 (8.5-21)	11 (6.6-17)	9.8 (5.6-16)	8.5 (4.8-14)	7.4 (4.1-12)	6.4 (3.5-10)	5.5 (3.1-9.1)
3	21 (13-32)	17 (9.8-27)	15 (8.0-25)	13 (6.8-22)	11 (5.8-19)	9.6 (5.0-17)	8.3 (4.3-15)
4	32 (20-44)	26 (16-37)	22 (14-33)	19 (12-29)	16 (9.8-26)	14 (8.4-22)	12 (7.2-20)
5	46 (33-54)	37 (27-45)	31 (23-40)	27 (20-35)	24 (17-31)	21 (15-27)	18 (13-24)
6	62	52	44	39	34	29	26

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

Age = 65 years

Number of CRFs	BMI (kg/m²)						
	15	20	25	30	35	40	45
0	8.0	6.6	5.8	5.0	4.3	3.7	3.2
1	13 (9.5-17)	10 (7.5-13)	8.9 (6.4-11)	7.7 (5.5-9.9)	6.6 (4.7-8.5)	5.7 (4.0-7.3)	4.9 (3.4-6.4)
2	19 (13-28)	16 (9.8-22)	13 (8.1-20)	12 (6.9-18)	10 (5.9-16)	8.7 (5.0-14)	7.5 (4.3-12)
3	29 (20-40)	23 (15-35)	20 (12-32)	17 (9.9-28)	15 (8.4-24)	13 (7.1-21)	11 (6.0-19)
4	41 (29-54)	34 (23-47)	29 (20-42)	25 (17-37)	22 (14-32)	19 (12-29)	16 (10-25)
5	56 (44-64)	47 (37-56)	40 (31-49)	35 (27-44)	31 (23-39)	27 (20-34)	23 (18-30)
6	70	62	54	48	42	37	33

Age = 70 years

Number of CRFs	BMI (kg/m²)						
	15	20	25	30	35	40	45
0	12	9.8	8.4	7.2	6.1	5.3	4.5
1	19 (15-23)	15 (12-19)	13 (9.5-16)	11 (8.0-13)	9.1 (6.8-12)	7.8 (5.7-9.9)	6.6 (4.9-8.5)
2	29 (20-38)	23 (15-31)	19 (12-25)	16 (10-22)	13 (8.6-19)	11 (7.3-16)	9.8 (6.2-14)
3	42 (30-56)	34 (23-47)	27 (18-39)	23 (15-34)	20 (13-29)	17 (11-25)	14 (8.9-22)
4	58 (46-70)	48 (37-62)	39 (29-53)	34 (25-46)	29 (21-40)	25 (18-35)	21 (15-30)
5	72 (66-79)	64 (57-72)	54 (47-63)	47 (40-56)	41 (34-50)	35 (29-43)	30 (24-37)
6	81	78	70	63	56	49	42

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

Age = 75 years

Number of CRFs	BMI (kg/m²)						
	15	**20**	**25**	**30**	**35**	**40**	**45**
0	17	14	12	9.8	8.3	7.0	5.9
1	28 (21-39)	22 (16-30)	18 (13-22)	15 (11-18)	12 (9.3-15)	10 (7.8-13)	8.8 (6.5-11)
2	41 (28-57)	34 (22-46)	27 (17-36)	22 (15-30)	19 (12-25)	16 (10-21)	13 (8.4-18)
3	56 (40-71)	48 (33-63)	39 (26-54)	33 (22-47)	28 (18-40)	24 (15-34)	20 (12-29)
4	69 (54-80)	64 (48-76)	55 (40-69)	48 (34-62)	41 (28-55)	35 (24-48)	29 (20-41)
5	79 (69-84)	76 (65-83)	71 (58-79)	64 (51-73)	57 (45-66)	49 (38-59)	42 (33-51)
6	85	84	82	78	72	65	58

Age = 80 years

Number of CRFs	BMI (kg/m²)						
	15	**20**	**25**	**30**	**35**	**40**	**45**
0	22	19	17	14	12	10	8.4
1	33 (25-47)	29 (22-40)	25 (19-32)	21 (16-26)	17 (13-22)	15 (11-18)	12 (8.9-15)
2	46 (33-61)	41 (29-54)	35 (24-46)	30 (20-39)	25 (17-33)	21 (14-28)	18 (12-23)
3	58 (44-72)	54 (40-67)	48 (35-61)	42 (29-54)	36 (25-47)	30 (20-40)	25 (17-34)
4	69 (55-79)	66 (52-76)	62 (48-73)	55 (42-67)	48 (35-60)	41 (30-53)	35 (25-47)
5	78 (67-82)	76 (65-82)	73 (62-80)	68 (55-75)	61 (49-70)	54 (42-63)	47 (36-57)
6	82	83	82	78	73	67	60

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

Age = 85 years

Number of CRFs	BMI (kg/m²)						
	15	**20**	**25**	**30**	**35**	**40**	**45**
0	24	22	21	17	15	12	10
1	35 (26-49)	32 (24-43)	29 (22-37)	25 (18-31)	21 (15-26)	17 (13-22)	15 (10-18)
2	47 (35-62)	43 (31-57)	40 (28-51)	34 (24-44)	29 (20-38)	24 (16-32)	20 (14-27)
3	59 (44-72)	55 (41-69)	52 (38-65)	46 (32-58)	39 (27-51)	34 (23-44)	28 (19-38)
4	69 (56-78)	67 (53-76)	64 (51-74)	58 (44-69)	51 (38-63)	45 (32-56)	38 (27-49)
5	75 (67-79)	75 (65-80)	74 (63-80)	69 (57-76)	63 (51-71)	56 (44-65)	50 (38-59)
6	77	80	81	77	73	67	61

Age = 90 years

Number of CRFs	BMI (kg/m²)						
	15	**20**	**25**	**30**	**35**	**40**	**45**
0	21	19	18	15	13	11	8.9
1	30 (22-43)	28 (20-38)	26 (19-34)	22 (16-28)	18 (13-23)	15 (11-19)	13 (8.9-16)
2	41 (30-56)	38 (27-52)	36 (25-47)	30 (21-40)	26 (17-34)	21 (14-29)	18 (12-24)
3	53 (38-66)	50 (35-64)	47 (33-60)	41 (28-53)	35 (23-47)	29 (19-40)	25 (16-34)
4	63 (49-73)	61 (47-71)	59 (45-69)	52 (39-63)	46 (33-57)	40 (28-51)	34 (23-44)
5	69 (60-73)	70 (59-75)	69 (58-75)	63 (51-71)	57 (45-66)	51 (39-60)	44 (33-53)
6	70	74	76	72	67	62	56