

Switzerland - 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 Switzerland. 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	22	15	11	7.9	6.3	5.3	4.5	4.1	3.9	3.8	3.6
1	33 (29-40)	22 (20-28)	16 (13-20)	12 (9.2-15)	9.5 (6.9-12)	7.9 (5.5-10)	6.8 (4.5-9.1)	6.2 (4.1-8.5)	5.9 (3.8-8.1)	5.6 (3.6-7.8)	5.4 (3.5-7.6)
2	46 (38-60)	32 (26-44)	23 (17-32)	18 (12-25)	14 (8.7-21)	12 (6.7-19)	9.9 (5.5-16)	9.1 (4.9-15)	8.6 (4.5-15)	8.3 (4.3-14)	7.9 (4.1-14)
3	61 (48-75)	45 (34-57)	33 (23-46)	25 (16-39)	20 (11-33)	17 (8.8-29)	14 (7.1-26)	13 (6.3-24)	12 (5.8-23)	12 (5.5-22)	11 (5.3-21)
4	76 (60-86)	59 (44-69)	45 (32-56)	35 (24-47)	28 (19-41)	23 (14-36)	20 (12-32)	18 (10-30)	17 (9.4-29)	17 (8.9-28)	16 (8.5-27)
5	88 (80-93)	74 (64-80)	59 (49-65)	47 (38-55)	38 (30-47)	32 (25-41)	27 (21-37)	25 (18-34)	24 (17-33)	23 (16-32)	22 (15-31)
6	95	86	73	60	50	42	37	34	32	31	30

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

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	25	18	13	11	8.7	7.3	6.3	5.8	5.5	5.2	4.9
1	36 (32-42)	26 (22-31)	20 (16-24)	16 (12-19)	13 (9.2-16)	11 (7.5-14)	9.2 (6.2-13)	8.6 (5.7-12)	8.1 (5.3-11)	7.7 (5.0-11)	7.3 (4.7-10)
2	49 (41-61)	37 (29-47)	28 (21-38)	22 (15-32)	18 (11-28)	16 (9.1-25)	13 (7.5-22)	12 (6.8-20)	12 (6.3-20)	11 (5.9-19)	11 (5.6-18)
3	63 (52-75)	50 (38-64)	39 (27-55)	31 (20-48)	26 (15-42)	22 (12-37)	19 (9.7-33)	18 (8.8-31)	17 (8.1-30)	16 (7.6-29)	15 (7.2-27)
4	77 (63-84)	64 (49-74)	52 (38-65)	42 (31-57)	35 (24-51)	30 (19-45)	26 (16-40)	24 (14-38)	23 (13-37)	22 (12-35)	21 (11-34)
5	88 (82-91)	77 (69-82)	65 (56-73)	55 (46-64)	46 (39-57)	40 (32-51)	35 (27-46)	33 (24-44)	31 (22-42)	29 (21-40)	28 (20-39)
6	94	88	78	68	59	52	46	43	41	39	37

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	27	20	16	12	10	8.5	7.4	6.8	6.3	5.9	5.6
1	38 (35-44)	29 (25-33)	23 (18-27)	18 (14-22)	15 (11-19)	12 (8.7-16)	11 (7.4-15)	10 (6.7-14)	9.3 (6.2-13)	8.7 (5.7-12)	8.2 (5.3-11)
2	52 (44-63)	40 (32-50)	32 (23-42)	26 (17-36)	21 (13-31)	18 (11-27)	16 (8.9-25)	14 (8.0-23)	13 (7.3-22)	12 (6.8-20)	12 (6.3-19)
3	66 (56-77)	53 (41-68)	43 (30-60)	35 (23-52)	29 (17-46)	25 (14-41)	22 (12-37)	20 (10-35)	19 (9.4-33)	18 (8.7-31)	16 (8.1-29)
4	78 (67-85)	67 (54-77)	56 (43-69)	46 (35-62)	39 (28-55)	33 (22-49)	29 (18-45)	27 (16-42)	26 (15-40)	24 (14-38)	23 (13-36)
5	88 (84-91)	79 (73-84)	69 (61-77)	59 (51-69)	51 (43-62)	44 (36-55)	39 (30-51)	36 (27-48)	34 (25-45)	32 (23-43)	30 (22-41)
6	94	88	80	72	63	56	50	47	44	42	40

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

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	30	22	17	14	11	9.0	7.9	7.2	6.6	6.0	5.6
1	41 (37-45)	31 (27-35)	25 (20-29)	19 (15-24)	16 (12-20)	13 (9.3-17)	12 (8.0-16)	10 (7.1-14)	9.6 (6.4-13)	8.8 (5.8-12)	8.1 (5.4-11)
2	54 (47-63)	43 (35-51)	34 (26-44)	27 (19-37)	22 (15-32)	18 (11-27)	16 (9.7-25)	15 (8.5-23)	14 (7.6-22)	13 (6.9-20)	12 (6.3-19)
3	67 (58-78)	55 (44-69)	45 (33-61)	37 (25-53)	30 (19-46)	25 (15-41)	23 (13-37)	21 (11-35)	19 (9.8-33)	17 (8.9-30)	16 (8.1-29)
4	79 (69-85)	68 (57-78)	57 (46-70)	48 (38-63)	40 (30-55)	34 (24-49)	30 (20-45)	28 (17-43)	26 (16-40)	24 (14-37)	22 (13-35)
5	87 (84-90)	79 (75-85)	70 (64-77)	60 (54-70)	52 (45-62)	44 (36-55)	40 (31-51)	37 (28-48)	34 (25-45)	32 (23-43)	30 (21-40)
6	92	88	81	72	64	56	51	47	44	41	39

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	36	28	22	18	14	12	11	9.4	8.5	7.7	7.0
1	49 (44-56)	39 (33-45)	31 (25-35)	25 (20-28)	20 (15-23)	16 (12-19)	14 (11-17)	13 (9.3-15)	12 (8.3-14)	10 (7.4-12)	9.5 (6.7-11)
2	63 (54-73)	51 (42-62)	41 (32-51)	33 (25-42)	27 (19-34)	22 (15-29)	20 (13-26)	17 (11-23)	16 (9.9-21)	14 (8.8-19)	13 (7.9-18)
3	76 (65-85)	65 (52-77)	54 (41-68)	44 (32-58)	36 (24-49)	30 (20-42)	26 (17-38)	23 (14-34)	21 (13-31)	19 (11-29)	17 (10-26)
4	85 (79-90)	77 (68-84)	67 (56-77)	56 (45-68)	46 (36-59)	39 (30-51)	34 (26-46)	30 (22-42)	27 (20-38)	24 (18-35)	22 (16-33)
5	91 (88-92)	86 (82-89)	79 (73-84)	69 (62-76)	59 (52-67)	50 (44-59)	44 (38-53)	39 (34-48)	35 (30-44)	31 (27-40)	29 (24-37)
6	93	91	87	80	71	62	55	49	44	40	36

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

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	46	38	30	24	20	17	15	13	12	11	9.5
1	60 (52-76)	50 (42-64)	41 (33-53)	33 (26-42)	27 (21-32)	23 (18-26)	20 (15-23)	17 (13-20)	15 (11-18)	14 (10-16)	12 (9.0-15)
2	73 (62-85)	64 (52-79)	54 (41-69)	45 (33-58)	36 (26-47)	31 (22-39)	26 (18-33)	23 (16-30)	20 (14-27)	18 (12-25)	16 (11-22)
3	83 (72-90)	76 (62-86)	67 (51-80)	57 (41-71)	48 (33-61)	40 (27-53)	35 (23-46)	30 (20-40)	26 (18-35)	23 (15-31)	20 (14-28)
4	88 (81-92)	84 (74-90)	78 (64-86)	70 (54-79)	60 (45-70)	52 (39-62)	45 (34-55)	38 (30-48)	33 (26-43)	29 (22-38)	25 (19-34)
5	91 (87-92)	89 (83-91)	86 (77-89)	81 (69-85)	73 (60-79)	65 (53-71)	57 (47-64)	49 (42-57)	42 (38-50)	37 (32-44)	32 (28-39)
6	91	91	90	88	83	77	69	61	53	46	40

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	49	40	33	26	22	18	16	14	12	11	9.3
1	62 (54-77)	53 (45-68)	44 (36-57)	36 (29-47)	29 (23-38)	25 (19-31)	21 (16-25)	18 (14-21)	16 (12-18)	14 (10-16)	12 (9.0-14)
2	73 (64-84)	65 (54-79)	57 (45-72)	47 (36-62)	40 (29-53)	34 (24-45)	29 (20-38)	24 (17-32)	21 (15-27)	18 (13-24)	16 (11-21)
3	81 (73-88)	76 (64-85)	69 (54-80)	60 (45-72)	51 (37-64)	44 (31-56)	38 (26-49)	32 (22-42)	28 (19-37)	24 (16-32)	20 (14-27)
4	86 (80-90)	83 (73-88)	78 (65-85)	72 (56-80)	64 (47-73)	56 (41-66)	49 (35-59)	42 (31-51)	36 (27-45)	31 (23-39)	26 (20-34)
5	89 (85-90)	87 (81-90)	85 (76-88)	80 (69-85)	75 (61-80)	68 (55-74)	61 (49-68)	53 (43-60)	46 (38-53)	40 (34-47)	34 (30-41)
6	89	89	88	86	83	78	72	65	58	50	43

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

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	43	35	29	23	19	16	14	12	9.9	8.4	7.2
1	55 (47-72)	47 (39-64)	39 (32-55)	32 (25-45)	27 (21-37)	23 (17-31)	19 (14-25)	16 (12-21)	14 (10-17)	11 (8.5-14)	9.8 (7.2-11)
2	67 (56-80)	59 (48-74)	51 (40-67)	43 (32-59)	37 (27-51)	31 (22-44)	26 (18-37)	22 (15-31)	19 (13-26)	16 (11-21)	13 (9.0-18)
3	76 (66-84)	70 (58-81)	63 (49-76)	55 (41-69)	48 (34-61)	42 (29-54)	36 (24-47)	30 (20-40)	25 (17-34)	21 (14-29)	18 (12-24)
4	82 (73-87)	78 (67-85)	73 (59-81)	67 (50-76)	61 (44-70)	54 (37-64)	47 (32-56)	40 (27-49)	34 (23-43)	29 (20-36)	24 (17-31)
5	85 (79-88)	84 (75-87)	81 (69-85)	76 (62-81)	71 (56-77)	66 (50-72)	59 (44-66)	52 (38-59)	45 (33-52)	39 (28-45)	33 (24-38)
6	86	86	85	83	80	76	71	64	57	50	43

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	35	29	23	19	16	14	12	9.7	8.2	7.0	5.9
1	46 (38-63)	39 (31-55)	32 (25-47)	27 (21-40)	23 (17-34)	19 (15-28)	16 (12-24)	14 (10-20)	12 (8.6-16)	9.8 (7.2-13)	8.3 (6.0-11)
2	57 (46-72)	50 (39-66)	43 (32-59)	37 (27-52)	32 (23-46)	27 (19-40)	23 (16-34)	20 (13-29)	17 (11-24)	14 (9.3-20)	12 (7.8-17)
3	67 (55-78)	61 (48-74)	55 (41-68)	48 (34-62)	43 (29-56)	37 (25-49)	32 (21-43)	27 (18-37)	23 (15-32)	20 (12-27)	16 (10-23)
4	75 (64-82)	71 (57-79)	66 (50-75)	60 (43-70)	54 (38-65)	49 (33-59)	43 (28-52)	37 (24-46)	32 (20-40)	27 (17-34)	23 (14-29)
5	80 (71-84)	78 (66-82)	75 (60-80)	70 (54-76)	66 (48-72)	61 (43-67)	55 (38-61)	49 (33-55)	43 (28-49)	37 (24-43)	32 (21-37)
6	82	82	81	78	75	71	67	61	55	49	43