

Fracture Risk Assessment Calculator

Based on FRAX: www.shef.ac.uk/FRAX

No BMD Measurement Available

STEP 1

Assess patient for presence of Clinical Risk Factors.

Clinical risk factors	
<ul style="list-style-type: none"> ▪ Previous fragility fracture, particularly of the hip, wrist and spine including radiographic evidence of 20% loss of height of a vertebral body ▪ Parental history of hip fracture ▪ Current glucocorticoid treatment (any dose, by mouth for 3 months or more) ▪ Current smoking ▪ Alcohol intake of 3 or more units daily 	<ul style="list-style-type: none"> ▪ Secondary causes of osteoporosis including: <ul style="list-style-type: none"> • Rheumatoid arthritis • Untreated hypogonadism in men and women • Prolonged immobility • Organ transplantation • Type 1 diabetes • Hyperthyroidism • Gastrointestinal disease • Chronic liver disease • Chronic obstructive pulmonary disease

STEP 2

Use the tables to calculate the 10 year probability (%) of major osteoporotic fracture risk based on age, gender, BMI and number of clinical risk factors.

MEN with or without previous fracture

No. of CRFs	Age 50					No. of CRFs	Age 60					No. of CRFs	Age 70					No. of CRFs	Age 80				
0	2.9	2.8	2.8	2.4	2.1	0	4.2	4.0	3.9	3.4	2.9	0	6.0	5.8	5.7	4.8	4.1	0	7.8	7.4	7.2	5.9	4.8
1	4.5	4.3	4.3	3.7	3.3	1	6.5	6.1	6.0	5.2	4.5	1	9.0	8.5	8.2	6.9	5.9	1	12	11	11	8.7	7.1
2	7.1	6.7	6.5	5.7	4.9	2	10	9.3	8.9	7.7	6.7	2	13	12	12	9.9	8.4	2	19	17	16	13	10
3	11	10	9.7	8.5	7.4	3	15	14	13	11	9.9	3	20	18	17	14	12	3	27	25	23	19	15
	15	20	25	30	35		15	20	25	30	35		15	20	25	30	35		15	20	25	30	35
	BMI						BMI						BMI						BMI				

WOMEN with no previous fracture*

No. of CRFs	Age 50					No. of CRFs	Age 60					No. of CRFs	Age 70					No. of CRFs	Age 80				
0	3.9	3.6	3.5	3.0	2.6	0	7.4	6.5	6.0	5.2	4.6	0	14	12	11	9.5	8.2	0	22	19	17	15	12
1	6.3	5.7	5.4	4.7	4.1	1	12	10	9.3	8.1	7.0	1	21	18	16	14	12	1	32	28	25	21	18
2	9.9	8.8	8.2	7.2	6.3	2	18	15	14	12	11	2	31	26	23	20	17	2	44	40	35	30	25
3	15	13	12	11	9.5	3	27	23	20	18	16	3	44	37	32	28	24	3	56	52	47	41	35
	15	20	25	30	35		15	20	25	30	35		15	20	25	30	35		15	20	25	30	35
	BMI						BMI						BMI						BMI				

STEP 3

Intervention thresholds

■ Reassure

■ Consider BMD test

■ Consider Treatment

* Women with a prior fragility fracture should be considered for treatment without the need for further risk assessment. BMD measurement may still be appropriate particularly in younger postmenopausal women.

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BMD Measurement Available

STEP 1

Assess patient for presence of Clinical Risk Factors.

Clinical risk factors	
<ul style="list-style-type: none"> ▪ Previous fragility fracture, particularly of the hip, wrist and spine including radiographic evidence of 20% loss of height of a vertebral body ▪ Parental history of hip fracture ▪ Current glucocorticoid treatment (any dose, by mouth for 3 months or more) ▪ Current smoking ▪ Alcohol intake of 3 or more units daily 	<ul style="list-style-type: none"> ▪ Secondary causes of osteoporosis including: <ul style="list-style-type: none"> • Rheumatoid arthritis • Untreated hypogonadism in men and women • Prolonged immobility • Organ transplantation • Type 1 diabetes • Hyperthyroidism • Gastrointestinal disease • Chronic liver disease • Chronic obstructive pulmonary disease

STEP 2

Use the tables to calculate the 10 year probability (%) of major osteoporotic fracture risk based on age, gender, BMD and number of clinical risk factors.

MEN with or without previous fracture

No. of CRFs	Age 50					No. of CRFs	Age 60					No. of CRFs	Age 70					No. of CRFs	Age 80				
1	30	14	7.5	5.1	4.0	1	31	16	9.6	6.4	5.0	1	28	17	11	7.2	5.6	1	23	16	10	7.0	5.3
2	43	20	11	7.5	5.9	2	41	23	14	9.2	7.1	2	37	24	15	9.9	7.5	2	32	22	15	10	7.3
3	57	29	16	11	8.4	3	53	31	19	13	10	3	48	32	20	13	10	3	42	31	21	14	10
	-4	-3	-2	-1	0		-4	-3	-2	-1	0		-4	-3	-2	-1	0		-4	-3	-2	-1	0
	BMD						BMD						BMD						BMD				

WOMEN with no previous fracture*

No. of CRFs	Age 50					No. of CRFs	Age 60					No. of CRFs	Age 70					No. of CRFs	Age 80				
1	26	13	7.6	5.5	4.8	1	32	18	11	8.0	6.8	1	41	25	15	11	8.9	1	45	29	19	13	9.6
2	37	19	11	8.1	7.0	2	44	25	16	12	9.8	2	54	34	21	15	12	2	57	40	26	18	13
3	51	27	16	12	10	3	58	35	23	16	14	3	67	45	29	20	16	3	67	51	35	25	17
	-4	-3	-2	-1	0		-4	-3	-2	-1	0		-4	-3	-2	-1	0		-4	-3	-2	-1	0
	BMD						BMD						BMD						BMD				

STEP 3

Intervention thresholds

■ Reassure

■ Consider Treatment

■ Strongly Recommend Treatment

* Women with a prior fragility fracture should be considered for treatment without the need for further risk assessment. BMD measurement may still be appropriate particularly in younger postmenopausal women.