

## Risk factors for the development of active tuberculosis among persons infected with *Mycobacterium tuberculosis*

Risk factor	Estimated risk for TB relative to persons with no known risk factor	References
<b>High risk</b>		
Acquired immunodeficiency syndrome (AIDS)	110 to 170	1,2
Human immunodeficiency virus infection (HIV)	50 to 110	3,4
Transplantation (related to immune-suppressant therapy)	20 to 74	5 to 8
Silicosis	30	9,10
Chronic renal failure requiring hemodialysis	10 to 25	11 to 14
Carcinoma of head and neck	16.0	15
Recent tuberculosis (TB) infection ( $\leq 2$ years)	15.0	16,17
Abnormal chest radiograph with apical fibronodular changes typical of healed TB (not granuloma)	6 to 19	18 to 20
Tumor necrosis factor (TNF)-alpha inhibitors	1.7 to 9	21,22,35,36
<b>Moderate risk</b>		
Treatment with glucocorticoids	4.9	23
Diabetes mellitus (all types)	2 to 3.6	24 to 27,37
Young age when infected ( $\leq 4$ years)	2.2 to 5	28
<b>Slightly increased risk</b>		
Underweight (<85 percent of ideal body weight); for most individuals this is equivalent to body mass index (BMI) $\leq 20$	2 to 3	29
Cigarette smoker (1 pack/day)	2 to 3	30,31
Chest radiograph with solitary granuloma	2	20,32
<b>Low risk</b>		
Infected person, no known risk factor, normal chest radiograph ("low-risk reactor")	1	33
<b>Very low risk</b>		
Positive booster (two-step test) with no other known risk factor and normal chest radiograph)	0.5	Extrapolated from 33 and 34

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