First Author Year N Age Range in Years (Mean±SD)	Fractures	Risk Factors
Comarr 1962 N = 1,363 Age - 19-58	109 post-SCI incident lower extremity fractures occurred among 81 out of 1363 participants with traumatic SCI (57% paraplegia, 75% complete). Most common fractures were distal femur (37%), proximal femur (11%)	Motor complete SCI, paraplegia
Ragnarsson 1981 Study 1 N = 578 Age = 4-77 Study 2 N = 3,027 Age = 13-77	33 lower extremity fractures occurred among 23 out of 578 participants (15 men and 8 women) with chronic SCI (78% paraplegia, 91% complete). Most common fractures were supracondylar fractures of femur (33%), femoral shaft (30%) and tibial shaft (18%)	Motor complete SCI
	(National SCI Data Research Centre); 52 lower extremity fractures occurred among 44 out of 3027 participants (37 men and 7 women) with chronic SCI (70% paraplegia, 64% complete). Most common fractures were ankle (24%, tibial shaft (20%) and femoral neck (17%)	N/A

First Author Year N Age Range in Years (Mean±SD)	Fractures	Risk Factors
Frisbie 1997 N = 120 Age = 20-77	103 fractures (82% lower extremity) occurred among 40 out of 120 men with chronic SCI (91% traumatic, 30% paraplegia, 80% complete). Most common fracture sites were hip, femoral shaft, supracondylar femur, and tibia. Fracture incidence per age group: 15 fractures/1000 participants years (20-39 years) 31 fractures/1000 participants years (40-59 years) 46 fractures/1000 participants years (60-79 years)	Ageing; with fracture incidence rising with age
Vestergaard 1998 N = 438 Age = 10-80	Overall fracture rate among 438 participants (309 men and 129 women) with SCI (94% traumatic, 55% paraplegia, 68% complete) was 2%/year. cumulative fracture incidence=21%	Women > men; men with a family history of fracture; TPI ≥3 years; level of SCI (cervical lesions with more fractures)*

First Author Year N Age Range in Years (Mean±SD)	Fractures	Risk Factors
McKinley 1999 N = 20,804 population-based all ages	*20,804 participants over a 20-year timeframe* Total number of participants involved in study: 1yr post-SCI, 6,776; 2yrs post-SCI, 5,744; 5 years post-SCI, 4,100; 10yrs post-SCI, 2,399; 15yrs post-SCI, 1,285; 20yrs post-SCI, 500 *Prevalence of lower extremity fractures in women* 1% (5 years post-SCI) 2% (10 years post-SCI) 3% (15 years post-SCI) 6% (20 years post-SCI)	Women > men; TPI
	Prevalence of lower extremity fractures in men 1% (5 years post-SCI) 1% (10 years post-SCI) 2% (15 years post-SCI) 2% (20 years post-SCI)	
Lazo 2001 N = 41 Age = 56±13	41 men with traumatic or Ischemic chronic SCI (57% paraplegia, 93% complete) 26 fractures (82% lower extremity) in 14 participants Most common fracture site was above knee (35%)	Low femoral neck BMD (OR = 2.1, 95% CI = 1.27-3.43; per t-score decrement)

First Author Year N Age Range in Years (Mean±SD)	Fractures	Risk Factors
Nelson 2003 N = 23 Age = 39-85	23 participants (22 men and 1 woman) with SCI (44% paraplegia) over 10 years (2.7% of the group). 31 fall-related fractures (97% lower extremity. Most common fracture sites were tibia/fibula (55%) and femoral fractures (35%)	Falls among those age 39-59 years
Morse 2009b N = 315 Age = 55.0±14.4	39 fractures occurred among 30 men with SCI (50% paraplegia, 83% motor complete) during the first-year post-injury. Most common fracture sites were tibia/fibula (47.5%), distal femoral metaphysis (20%) and proximal femur (15%)	Motor complete SCI; post-injury alcohol consumption > 5 servings*/day
Garland 2004 N = 152 Age = 20-71	9 out of 152 participants with post-SCI fractures (130 men and 22 women) with SCI (54% paraplegia, 67% motor complete). TPI: 12.9 ± 9.3 (range: 1.1 to 44.4) years.	Motor complete SCI; increasing age; low BMI

First Author Year N Age Range in Years (Mean±SD)	Fractures	Risk Factors
Zehnder 2004a N = 98 Age = 18-60	39 fractures occurred among 15 paraplegic men with traumatic motor complete SCI. Overall fracture incidence was 2%/year.	TPI strata; 1%/year < 1-year post-SCI 1%/year 1-9 years post-SCI 3%/year 10-19 years post-SCI 5%/year (20-29 years post-SCI) Low knee region BMD;
Eser 2005 N = 99 Age = 19-83	21 out of 99 participants (89 men and 10 women) with traumatic motor complete SCI (72% paraplegia) with lower extremity fractures	TPI; trabecular vBMD less than: 114g/cm^3 distal femur 4% site; 72g/cm^3 distal tibia 4% site;
Garland 2005 N = 168 Age = 26-52	27 of 168 participants with chronic SCI (61% complete) with post-injury lower extremity fracture	Low BMD <25kg/m^2; increasing age; low BMI;
Carbone 2013a, 2013b N = 7,447 Age = 58±13	892 out of 7447 men with chronic traumatic SCI (56% paraplegia, 37% complete) had incident lower extremity fragility fractures over 5 years (12% of the cohort)	motor complete SCI; use of anticonvulsants;(use of benzodiazepine or use of multiple anticonvulsants), heparin use, opioid analgesia use 28mg of morphine equivalent
Tan et. al 2014 N = 27 Age = 21 - 64	27 men with chronic traumatic SCI (70% paraplegia, 82% complete) 6/27 men with post-SCI osteoporotic fractures	Higher level of adiponectin among wheelchair users Range of values 5657 ± 3003 (wheelchair users with history of fractures)

First Author Year N Age Range in Years (Mean±SD)	Fractures	Risk Factors
Akhigbe et. al 2015 N = 140 Age = 56.5±12	140 participants (137 men, 2 women, and 1 unknown) with chronic traumatic SCI (67% paraplegia, 51% complete) with 155 incident lower extremity fractures. Common fracture sites were tibia/fibula (54%) and femur (33%)	Transfers account for 1/3 of fractures
Bethel et. al 2016 N = 22,516 Age = 55±13	3365 participants (3,246 men and 119 women) with chronic SCI and incident fractures (66% traumatic, 44% non-traumatic, 38% with paraplegia, 42% motor complete) A majority ((80%) were lower extremity fractures; tibia/fibula (26%), femur (18%), and the hip (13%)	White race; Traumatic etiology of SCI; paraplegia; Motor complete SCI; TPI; Use of anticonvulsants, Use of opioids Use of benzodiazepines; History of prevalent fractures; higher Charlson Comorbidity Index score; Women aged ≥ 50 years