Author Year; Country Score Research Design Total Sample Size	Methods	Outcome
Chen et al. 2001 USA Case series Level 4 N=21	**Population:** 21 participants (17 men, 4 women) with acute SCI; age: 34 (range, 16- 78) years; TPI: 26 days (range: 6 to 122); AIS A (n = 17), AIS B (n = 2), AIS C or D (n = 2). **Treatment:** 0.5 µg calcitriol daily x 6 days; 1250 mg calcium carbonate BID x 6 days; 30 mg pamidronate intravenous daily x 3 days (administered on days 4, 5, and 6 of study) **Outcome measures:** Within 2 weeks prior to baseline, and again within 2 weeks following study completion: 24-hour urine calcium and creatinine; spot urine NTX; serum calcium, phosphorus, intact PTH, 25-D, 1,25-D.	1. Calcitriol-pamidronate therapy decreased urinary NTx excretion by 71% ($p < 0.001$), and urinary calcium excretion by 73% ($p < 0.001$). 2. Calcitriol-pamidronate therapy increased serum PTH ($p < 0.05$) and 1,25-D ($p < 0.005$). 3. Post-therapy hypocalcemia or hypophosphatemia occurred in 44% ($p < 0.01$) and 53% ($p < 0.01$) of participants, respectively.
Mechanick et al. 2006 USA Case series Level 4 N=32	**Population:** 32 adults (25 men, 7 women) with acute traumatic SCI; age: 42 years; paraplegia (n=8), tetraplegia (n=13); AIS A (n=22), AIS B (n=5), AIS C (n=5). **Treatment:** calcium 1000 mg daily and calcitriol 0.25 µg daily x 17 days, pamidronate 90 mg intravenous on day 4 **Outcome measures:** Serum calcium, phosphorus, and albumin; urinary calcium and NTX, serum intact PTH, 25-D, 1,25-D	1. Single-dose calcitriol-pamidronate therapy decreased urinary NTX excretion by 64% ($p<0.001$) and urinary calcium excretion by 50% ($p<0.002$) in acute SCI. 2. Post-therapy hypocalcemia or hypophosphalemia occurred in 75% ($p<0.02$) and 22% ($p<0.02$) of participants, respectively. 3. Single-dose pamidronate is associated with

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		increased incidence of fever (78%) compared to 30 mg daily x 3 days dosing regimen (20%).
Bauman et al. 2009 USA Case series Level 4 N = 8	**Population:** 8 men with chronic SCI; age: 34 ± 7 years (range: 23–43); TPI: 12 ± 8 years (range: 3–27); paraplegia (n=6), tetraplegia (n=2); low vitamin D (25[OH]D ≤ 20 ng/mL) and/or elevated serum PTH (>55 pg/mL). **Treatment:** Calcium gluconate bolus (0.025 mmol elemental calcium/kg) over 20 min followed by calcium gluconate infusion (0.025 mmol/kg/hr) for 6 hours. **Outcome measures:** Serum total calcium, creatinine, NTX, and PTH at baseline, 2, 4, and 6 hours post-infusion.	1. At 2 hr time point, PTH dropped from 70 ± 25 pg/mL to 18 ± 12 pg/mL, and NTx dropped from 21 ± 8 nM bone collagen equivalent (BCE) to 17 ± 5 nM BCE. 2. Calcium gluconate infusion reduced bone collagen catabolism during calcium infusion.

* All data expressed as mean±SD, unless expressed otherwise.