Attention-deficit hyperactivity disorder (ADHD) is associated with higher risk for fracture. Whether the medical treatment for ADHD would mitigate the risk remains unclear. In this study, we sought to investigate the effect of methylphenidate treatment on risk for fracture, as well the moderation role of treatment duration on the risk of fracture, in a large national sample. Cases less than 18 years old were identified from Taiwan's National Health Insurance Research Database with a new primary diagnosis of ADHD (ICD-9:314) between 1996 and 2013. A total of 6201 cases with ADHD were included as the study cohort. The cases were divided into 3 groups according to the duration of methylphenidate treatment (0, 1-180, and more than 180 days). All groups were followed until the end of 2013 for first diagnoses of fracture (ICD-9 codes 800 to 829). Cox proportional hazards models were applied. Compared to the group without methylphenidate treatment, the risk of fracture was lower among the group treated for more than 180 days. The adjusted hazard ratio was 0.77 (95% Confidence interval: 0.63-0.94). The groups treated for 180 days or fewer had no significant difference in the risk for fracture. In conclusion, methylphenidate treatment was associated with lower risk for fracture among ADHD patients. The association was evident only in the cohort treated for more than 180 days.