Adherence is a determinant of viral suppression and fundamental to successful antiretroviral therapy. It is a complex health behavior that is influenced by the regimen prescribed, patient and family factors, and characteristics of health care providers. Adherence behavior in children is more complex than in adults. In our setting there are some small scale studies conducted on ART adherence among adults but there is no a single study conducted in children. This study therefore aimed to measure the prevalence and factors associated with adherence to ART among HIV-infected children who are receiving ART in Mekelle, Ethiopia.