Ethnic differences in pulmonary function have been frequently reported. In Algeria, there are no normal values of pulmonary function healthy Algerian children. This study was performed to produce reference standards for spirometric lung function in white Algerian children and to compare this results with other data sets. The children were initially recruited from 14 schools in Algiers. Informed consent was obtained from all parents who also completed a detailed questionnaire concerning the family’s smoking history, and any previous respiratory symptoms. Spirometric values were measured with one spirometer (9 litre dry rolling seal) in 274 children, asymptomatic, nonsmoking Algerian children (132 girls, 142 boys) 8 to 18 years of age. Spirometric variables measured were forced vital capacity (FVC), forced expiratory volume in one second (FEV1) and the maximum mid expiratory flow (MMEF 25-75%) for both sexes. Measurements data from the 274 children were analysed using single and multiple regression techniques to derive prediction equations for spirometric variable. Natural logarithmic values of lung function and standing height were used in the final regression models. Our data show a significant increase in lung function with standing height in both sexes. Comparing our results with data, values of spirometric parameters in the present study are similar to those in European, white US and Asian children whereas our values are higher than the black US. The spirometric reference values in healthy Algerian children showed similar compared to European, white US and Asian children. Thus, these standards of spirometric lung function could also be used in Algeria.