

The heart rate variability (HRV) analysis is used in different medicine branches as a sensitive diagnostic method of disorders of autonomic nervous system and heart, in adults and children. We would contribute to creation HRV reference values that are necessary for evaluation of measuring at clinical practice. We measured 256 R-R intervals in ECG of 149 health children (63 boys and 86 girls) at age of 4-18 years in a rest supine and standing position, using the system for short records VariaPulse TF-3. Next time domain and spectral analysis of HRV was performed and basic statistic characteristics was calculated in 5 different groups of age, and in boys and girls separately. Parameters of HRV are very interindividual variable, and its do not a normal distribution. The autonomic neural activity of the children is higher at standing position than at supine position. The heart rate variability increases after age (total power, very low and low frequency). The girls have higher HRV in standing position than boys. We present medians, 10th, 25th, 75 th and 90th percentiles, averages and standard deviations, separately in boys and girls and groups of different age, in tables and graphs, for using as reference values of 5-minute ECG record. The percentile bands could be use as reference values for health children at age of 6-18 years.