PAT and PTT are considered one of the effective methods for cuffless blood pressure estimation. On the other hand, the arterial properties are extremely sensitive to measurement position. For this reason, PAT and PTT may also be affected by the arm position. The aim of this study was to verify the effect of the arm position changes on monitoring PAT and PTT. Eleven healthy volunteers participated in this experiment. Subjects were asked to put their right arm down and up. The results showed that the changes of PTT during the arm position change revealed the effect of blood pressure change. From a standpoint of estimating blood pressure, PPT was more useful than PAT.