

1. 제목: The Effects of Ginseng on Hemodynamics and Body Temperature in Healthy Young Men
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## The Effects of Ginseng on Hemodynamics and Body Temperature in Healthy Young Men

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The present study was performed to observe the effects of *Panax ginseng* (PG), *P. quinquefolium* (PQ) and Sun Ginseng on hemodynamics such as blood flow rate (BF), blood flow velocity (BV), heart rate (HR), systolic blood pressure (SBP), and diastolic blood pressure (DBP) and body temperature (BT) in healthy young men. This is a randomized, single-blind study observed during 6 hrs after orally single administration of PG, PQ and SG groups. Ninety-seven subjects were divided into ten groups, such as control (n=13), PG 2.25 (n=9), PG 4.5 (n=10), PG 9.0 (n=9), PQ 2.25 (n=11), PQ 4.5 (n=10), PQ 9.0 (n=8), SG 0.6 (n=9), SG 1.2 (n=10) and SG 3.6 (n=9). There were intergroup statistical differences except for SBP. In BF, BV and HR of PG and PQ groups versus control, no intergroup statistical differences were observed, but in BT ( $p=0.0367$ ), SBP ( $p=0.0011$ ) and DBP ( $p=0.0030$ ) were observed. We examined statistical differences between PG groups and their counterparts in PQ groups. HR ( $p=0.0024$ ) and DBP ( $p=0.0144$ ) at dose of 2.25 g, DBP ( $p=0.0440$ ) at dose of 4.5 g and BV ( $p=0.0412$ ) at dose of 9.0 g showed intergroup statistical differences. In BF, BV and HR of SG, there were no intergroup statistical differences, but in BT ( $p=0.0367$ ), SBP ( $p=0.0011$ ) and DBP ( $p=0.0030$ ). PQ tended to drop BF, BV, SBP and DBP abruptly and also to increase them suddenly. PG groups were more well-balanced than PQ groups in hemodynamics. In BT, PG 4.5, PG 9.0 and PQ 9.0 significantly reduced BT, but PG and PQ 2.25 tended to increase BT with no significance. In BT of SG, statistical differences were showed at the three points, as following; one increase ( $p=0.0235$ ) in 3 hrs at dose of 1.2 g, other decrease ( $p=0.0208$ ) in 1 hr at dose of 3.6 g and another decrease ( $p=0.0088$ ) in 4 hrs at dose of 3.6 g. In summery, PG is more effective on keeping homeostasis than PQ in the changes of hemodynamics, while PG and PQ groups showed similar tendency in BT, and SG was more efficient for SBP and DBP than for BF, BV, BT and HR.

Key words: *Panax ginseng*, *P. quinquefolium*, Sun Ginseng, Hemodynamics and Body Temperature.

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