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## **RepleniX: Proportion of Blood Pressure Category Related on Hypertension PreParticipation Examination on Indonesian Road-Race Runners**

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**Objectives:** RepleniX (Replenish fluid during eXercise) is a pilot design study to investigate health problem in hydration practice during exercise. One of the important procedure during strenuous exercise is measuring blood pressure. It aims to prevent cardiac event during work among young adults in Indonesia as part of hypertension and cardiac preparticipation examination.

**Methods:** Road race-runners were recruited to participate the examination during exercise in the heat. The examinations were the blood pressure examination and fitness test (anthropometry, sit reach test, handgrip test, push up test and also bleep test). Analyzing based on the age and also blood pressure categories were done to physical capacity.

**Results:** 85 Indonesian road race runners participated in this test. The average age were 24-35 years old. Based on the blood pressure test, there were 42,35% normal blood pressure, 44,71% prehypertension, 12,94% hypertension-I. Based on cardiorespiratory endurance (VO2Max), most of the subjects were in good category (57,65%), excellent (5,88%), fair (24,71%) and poor (11,76%). Based on BMI, most of the subjects were in normoweight (62,35%) and the second highest category was overweight (17,65%). The flexibility that was represented by sit reach test, most of the participant in good category (90,59%) but strength, which was measured by handgrip test, most of the participant in poor category (76,47%). On further analysis was found that highest number of the participant who had good cardiorespiratory endurance was found on prehypertension category (27,06%), other category were 22,35% for normal blood pressure and 5,88% for hypertension-I.

**Conclusions:** Highest proportions of Indonesian road-race runner who has good endurance of cardiorespiratory was found in prehypertension category. Further prevention strategy for monitoring the blood pressure and manage to prevent worsen blood pressure condition are needed to prevent complication of hypertension and cardiac events.