

Effect of 5-A-Day fruit and vegetable consumption on hypertension in adults



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Background:

- Hypertension increases the risk of causing different diseases such as cardiovascular diseases, kidney diseases and stroke.
- In Sri Lanka 8% of the total population have been affected by high blood pressure.

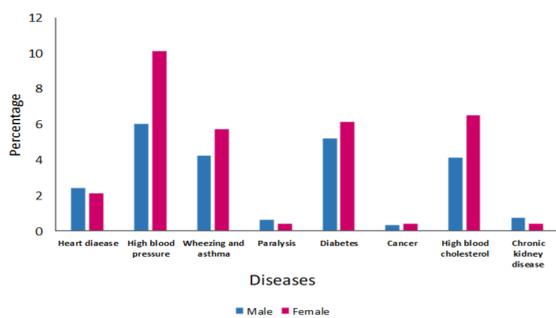


Figure 1 :People suffering from type of NCDs during 2016
(Department of Census and Statistics, 2017)

- Phytochemicals in fruits and vegetables have anti-inflammatory properties, anti-cancer properties, anti-hypertensive and they can reduce the risk of obesity and cardiovascular diseases (Slavin & Lloyd Beate, 2012).
- Potassium content of fruits also can reduce the high blood pressure.



- Recommendations for fruit and vegetable intake are ranged from 400 g/day by the WHO, and in England, to 500 g/day in Sweden, to 600 g/day in Denmark, 650–750 g/day in Norway, and 640–800 g/day in the USA.
- WHO has recommended that eating 5 or more servings of fruits and vegetables (minimally 400g of them) for a healthy life.
- Normally one serving is considered as 80g of fruit or vegetable 5 servings equal to 400g of them (NHS,2004).

Hypothesis:

Adherence to 5-A-Day fruit and vegetable portions can reduce the risk of hypertension in adults.

Objectives:

- To determine the association between 5-A-Day fruit and vegetable portions consumption and hypertension risk in adults.
- To assess the fruit and vegetable intake in adults.

Methodology:

- Study design is a cross sectional study.
- Sample size was 308 .
- Sample was adults within the range of 18-60 years old.
- Sampling method is convenient sampling method.
- The subjects were given all the information about the study and their verbal consent was taken.
- Then a sheet of screening questions was given.
- Participants' data were collected.
- Height was measured using stadiometer and weight was measured with scale as anthropometric measurements.
- Blood pressure measured with the digital sphygmomanometer.
- An interviewer administered semi-quantitative food frequency questionnaire was given to assess their fruit and vegetable consumption.
- These data were collected via individual interviews with the subjects at their places.
- The data were analyzed and statistical analysis was done with SPSS 16 software (Logistic regression).

Results:

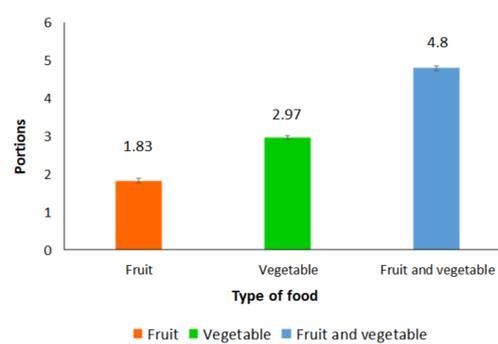


Figure 2: Mean fruit and vegetable portions consumed by adults

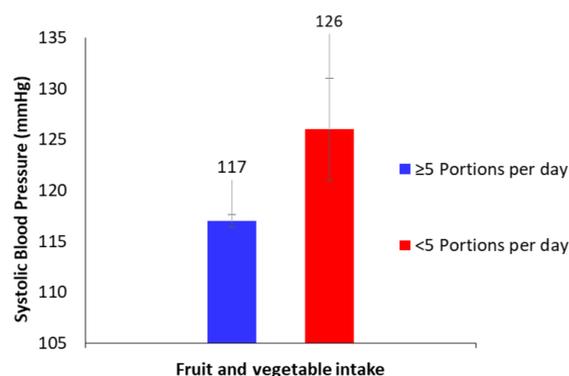


Figure 3: Mean systolic blood pressure comparison between the subjects who eat 5 or more portions of fruit and vegetable per day and who eat less than 5 portions per day.

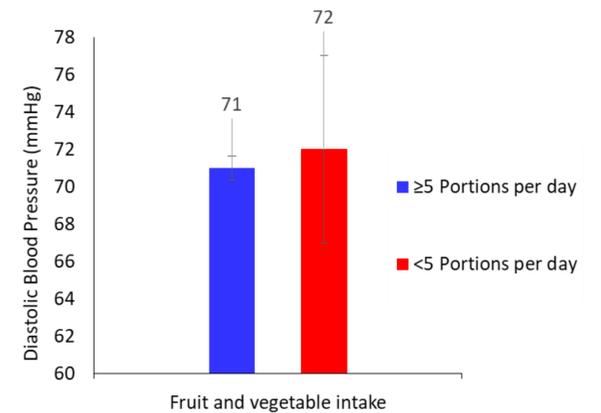


Figure 3: : Mean diastolic blood pressure comparison between the subjects who eat 5 or more portions of fruit and vegetable per day and who eat less than 5 portions per day.

- The group who eat less than 5 portions of fruit and vegetables per day has 10.7 times higher risk of having high systolic blood pressure. (Sig(0.002) <0.05)
- Number of fruit and vegetable portions and diastolic blood pressure did not show any significant as-



Conclusion:

- Eating 5 or more portions of fruits and vegetables can reduce the risk of having high systolic blood pressure.
- Only 32% of the population consumed 5 or more portions of fruit and vegetables.
- Mean fruit consumption, vegetable consumption and both fruit and vegetable consumption per day are 1.83, 2.97 and 4.8 portions respectively.

References:

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