

# Higher protein intake reduce risk of hypertension

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Hypertension remains the most important treatable risk factor for cardiac disease worldwide. In the Dietary Approaches to Stop Hypertension (DASH) trials the importance of diet patterns to reduce blood pressure (BP), were shown.

## This diet evaluated high intake of fruit and

vegetables together with increased intake of low-fat dairy products. Higher intake of fiber is also associated with a BP lowering effect.

There is a suggestion that a higher intake of protein may benefit BP levels. Previous data on the increased intake of dietary protein has only evaluated short-term studies in which a higher intake of protein was associated with a modest reduction of blood pressure.

## NEW STUDY

The aim of this new study was to evaluate the association of higher intake of protein and BP over a long time span.

The study evaluated participants of the Framingham Offspring Study who were between ages 30-54 years, men and women, and they were examined every four years with a three day diet record and BP measurements.

They were followed for a mean of 11.3 years for the development of hypertension. There were 1361 participants.

## RESULTS

The results show that protein consumption (total, animal, plant) was inversely associated with both systolic and with diastolic BP.

There were 346 cases of hypertension that developed during follow-up. Those people that consumed the highest amount of protein as compared to the lowest protein intake had a significant lower risk to develop hypertension. The hazard ratio (HR) was 0.60 (95% confidence interval [CI]: 0.45-0.78).

This implies that a high protein intake was associated with a 40% lower risk to develop hypertension and this risk can be as low as 22% but can be as high as 55%. Similar significant risk reductions to develop hypertension were seen with both plant and animal protein consumption. These results were seen in both normal weight people and in overweight people and in men and women.

Those people who consumed a high amount of protein together with a high intake of fiber had a significant risk reduction to develop hypertension of 51%. The HR was 0.49 (95%CI: 0.37-0.66) which implied that the

risk could be reduced by 34% but can be as high as 63%.

## CONCLUSIONS

- 1 In adults, men and women, normal weight and overweight, a higher protein intake reduce the risk to develop hypertension over time in middle-aged people.
- 2 Adding fiber to the protein is even more effective in reducing the risk to develop hypertension.
- 3 This study is one of a few to evaluate the intake of protein to reduce hypertension that was conducted over a long time of more than 11 years.

## REFERENCES

1. Appel LJ, Brands MW, Daniels SR *et al.* Dietary approaches to prevent and treat hypertension: a scientific statement from the American Heart Association. *Hypertension* 2006; 47: 296-308.
2. Buendia JR, Bradlee ML, Singer MR *et al.* Diets higher in protein predict lower high blood pressure risk in Framingham Offspring Study Adults. *Am J Hypertension* 2015; 28: 372-379. **SF**