



# Can dark chocolate reduce hypertension ?

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## The Hypertension Burden

Hypertension or high blood pressure, is a global public health issue , affects 67 million US adults, and another 85 million have prehypertension, and its accounts for approximately 17 million death a year (1).



## Another Benefits

Good for brain

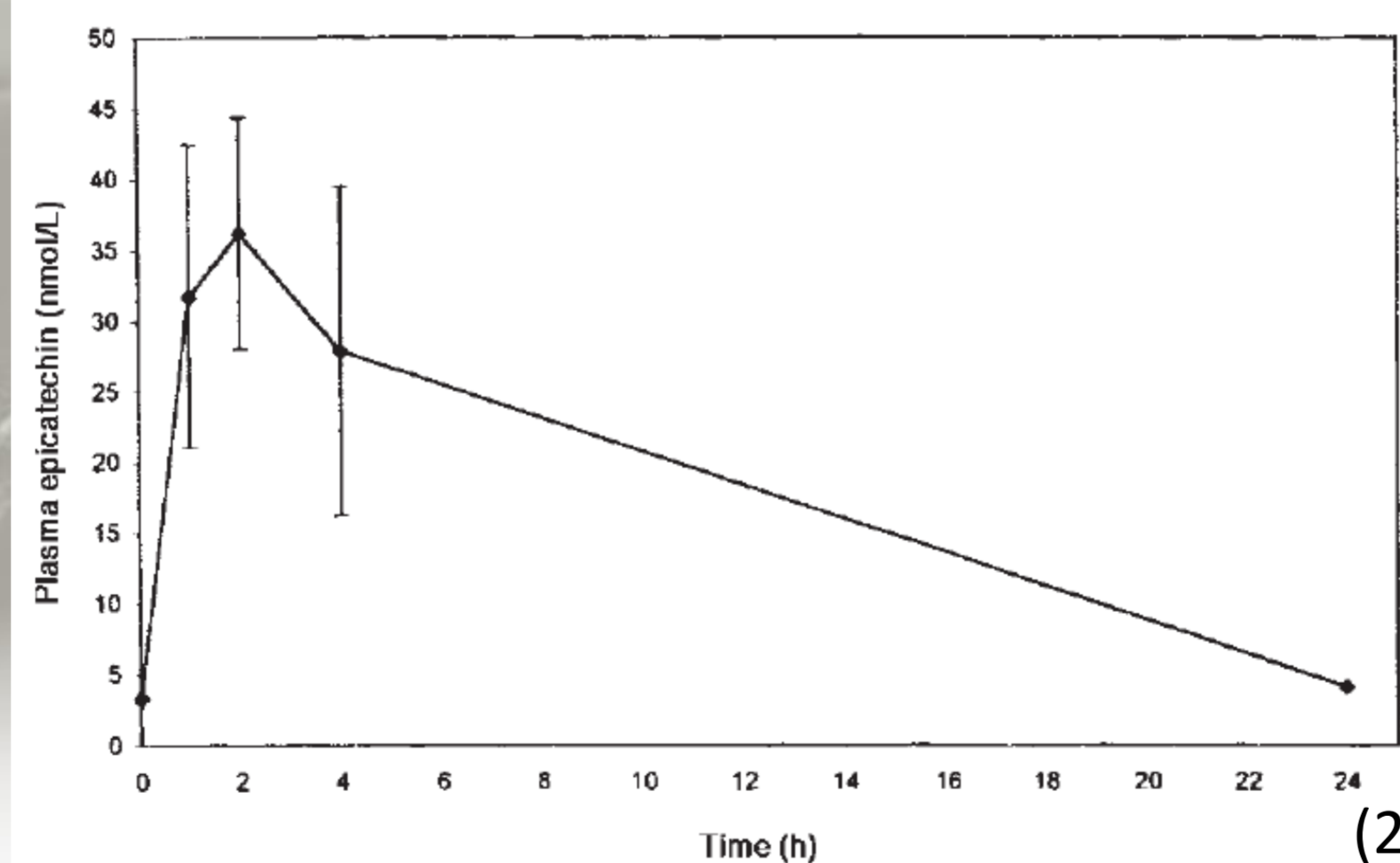
antidepressants

protection from disease (3)

## How does effect ?

A small study was performed to know the bioavailability of flavonoids that is present .in dark chocolate  
After that a long term study was performed on a group of healthy , 2 period , crossover design was used (2) .

## Short-term study result :



## Conclusions

More research should be done to confirm that dark chocolate is actually a healthy food, but so far from the available researches, dark chocolate reduces hypertension and it could be used as medicine in people susceptible to getting hypertension .

## Result

In short-term study the result indicate a very slow clearance of the bromine from the plasma .compartment  
And in a long -term study the result indicate all subjects maintained their weight during the study , serum total antioxidant capacity was 4.2% higher when subjects consumed the CP-DC diet than when they consumed the AAD (2).

## Long-term study result:

Effect of dietary treatment on serum lipids and lipoproteins<sup>1</sup>

	AAD (n = 23)	CP/DC diet (n = 23)
	mmol/L	
Total cholesterol (mmol/L)	5.29 ± 0.2	5.53 ± 0.2
Triacylglycerol (mmol/L)	1.18 ± 0.1	1.19 ± 0.2
LDL (mmol/L)	3.47 ± 0.1	3.63 ± 0.2
HDL (mmol/L)	1.28 ± 0.1	1.33 ± 0.1 <sup>2</sup>
VLDL (mmol/L)	0.53 ± 0.1	0.54 ± 0.1
TC:HDL cholesterol	4.33 ± 0.3	4.39 ± 0.3
LDL:HDL cholesterol	2.85 ± 0.2	2.89 ± 0.2 (2)

## References

- 1-www.who.int/cardiovascular-diseases .
- 2-wan, Ying, et al. "Effect of cocoa powder and dark chocolate on LDL oxidative susceptibility and prostaglandin concentration in human -." *The American journal of clinical nutrition* 74.5(2001):596-602 .
- 3-https://draxe.com/benefits-of-dark-chocolate .