

コレステロールおよび血圧の穏やかな低下の効果

血圧およびコレステロールの穏やかな低下により多くの心血管イベントが回避できる

Most cardiovascular events avoidable with modest blood pressure and cholesterol reductions

心筋梗塞(MI)、脳卒中、および心疾患死の大部分が血圧およびコレステロールの穏やかで持続的な低下により予防可能である。と ESC Congress 2019 の Hot Line Session で発表され、*Journal of the American Medical Association* に掲載された。長期にわたり低比重リポ蛋白コレステロール(LDL-C)がより低値で収縮期血圧(SBP)が低いことは、生涯における心血管疾患リスクの独立した更なる軽減と関連があった。健康な食事(DASH 食や類似の食事療法)により達成できるLDL-C およびSBP の軽度の低下であっても、将来の心血管疾患の可能性が低下した。

Full Text

The majority of myocardial infarctions (MI), strokes, and deaths from heart disease can be prevented with modest and sustained decreases in blood pressure and cholesterol. The late breaking results were presented in a Hot Line Session at ESC Congress 2019 together with the World Congress of Cardiology and published in the *Journal of the American Medical Association*.

Principal investigator Professor Brian Ference of the University of Cambridge, UK said: "Healthy eating and physical activity are effective ways to improve cardiovascular health. The best diet or exercise program differs for each person. It is the one that produces the greatest reductions in both blood pressure and cholesterol for that person AND to which he or she can adhere because the benefits of the reductions accrue overtime."

The study found that long-term exposure to the combination of both lower low-density lipoprotein cholesterol (LDL-C) and lower systolic blood pressure (SBP) was linked with independent and additive reductions in the lifetime risk of cardiovascular disease. The relationship was dose-dependent.

The study shows that even small declines in LDL-C and SBP can substantially diminish the likelihood of ever having a heart attack or stroke. For example, the combination of 0.3 mmol/L (14 mg/dL) lower LDL-C and 5 mmHg lower SBP was associated with a 50% lower lifetime risk of cardiovascular disease.

Prof. Ference said: "These small modifications in LDL-C and SBP are the kind of changes that can be achieved by eating healthily such as the DASH diet or similar diets."

Larger reductions in LDL-C and SBP with more aggressive lifestyle changes or other therapies to achieve the combination of 1 mmol/L (38.67 mg/dL) lower LDL-C and 10 mmHg lower SBP can reduce lifetime risk of cardiovascular disease by 80% and reduce lifetime risk of cardiovascular death by more than two-thirds (68%).

The study included 438,952 participants of the UK Biobank who experienced a total of 24,980 major coronary events (defined as the first occurrence of non-fatal heart attack, ischemic stroke, or coronary death). The average age was 65.2 years (range: 40.4 to 80.0) and 54% were female.

The researchers used genetic variants linked with lower LDL-C and SBP as instruments to randomly divide participants into groups with lifetime exposure to lower LDL-C, lower SBP, or both as compared to a reference group using a 2x2 factorial design. They then compared the differences in plasma LDL-C, SBP and cardiovascular event rates between the groups to estimate associations with lifetime risk of cardiovascular disease.

Prof. Ference said: "It is important to encourage patients and populations to invest in their future health. Maintaining even small reductions in both LDL-C and SBP for prolonged periods of time can pay very big health dividends by dramatically reducing the lifetime risk of cardiovascular disease."

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