FEATURED PUBLICATIONS

Blood Pressure Lowering Treatment Trialists'

(BPLTTC)

BPLTTC has produced **high-impact research** published in leading journals.

Featured Publications from Cycle 3 (Current Phase)

"**Pharmacological blood pressure lowering for primary and secondary prevention of cardiovascular disease across different levels of blood pressure: an individual participant-level data meta-analysis**" – *The Lancet (2021)*. This study concluded that a 5 mm Hg reduction in systolic blood pressure reduces the risk of major cardiovascular events by about 10%, regardless of prior cardiovascular disease diagnosis.
https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(21)00590-0/fulltext

"**Age-stratified and blood-pressure-stratified effects of blood-pressure-lowering pharmacotherapy for the prevention of cardiovascular disease and death: an individual participant-level data meta-analysis**" – *The Lancet (2021)*. This study demonstrated that blood pressure-lowering treatment effectively reduces the risk of cardiovascular events across all age groups and baseline blood pressure levels, supporting a broad approach to treatment.
https://www.thelancet.com/article/S0140-6736(21)01921-8/fulltext

"**Antihypertensive drug effects on long-term blood pressure: an individual-level data meta-analysis of randomised clinical trials**" – *Heart (2022)*. This analysis showed that antihypertensive drugs provide sustained reductions in blood pressure over the long term, reinforcing their role in long-term cardiovascular disease prevention.
https://heart.bmj.com/content/108/16/1281

"Antihypertensive treatment and risk of cancer: an individual participant data meta-analysis" – *The Lancet Oncology (2021)*. This study found no strong evidence linking blood pressure-lowering treatment to an increased risk of cancer, addressing concerns regarding potential long-term adverse effects.
https://www.thelancet.com/journals/lanonc/article/PIIS1470-2045(21)00033-4/fulltext

"Blood pressure lowering and risk of new-onset type 2 diabetes: an individual participant data meta-analysis" – *The Lancet (2021)*. This research concluded that blood pressure-lowering treatment modestly reduces the risk of developing type 2 diabetes, highlighting additional metabolic benefits of treatment.
https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(21)01920-6/fulltext

"Blood pressure-lowering treatment for prevention of major cardiovascular diseases in people with and without type 2 diabetes: an individual participant-level data meta-analysis" – *The Lancet Diabetes & Endocrinology (2022)*. This analysis confirmed that blood pressure-lowering treatment reduces the risk of cardiovascular events in both individuals with and without type 2 diabetes, supporting its widespread use.
https://www.thelancet.com/journals/landia/article/PIIS2213-8587(22)00172-3/fulltext

"Blood pressure-lowering treatment for the prevention of cardiovascular events in patients with atrial fibrillation: An individual participant data meta-analysis" – *PLOS Medicine (2021)*. This study found that blood pressure-lowering therapy reduces the risk of major cardiovascular events in individuals with atrial fibrillation, reinforcing its role in this high-risk group.
https://journals.plos.org/plosmedicine/article?id=10.1371/journal.pmed.1003599

"Sex-Specific Effects of Blood Pressure Lowering Pharmacotherapy for the Prevention of Cardiovascular Disease: An Individual Participant-Level Data Meta-Analysis" – *Hypertension (2023)*. This research found that the cardiovascular benefits of blood pressure-lowering therapy are consistent across sexes, with no major differences in treatment effects between men and women.
https://www.ahajournals.org/doi/10.1161/HYPERTENSIONAHA.123.21496

"The Blood Pressure Lowering Treatment Trialists' Collaboration: methodological clarifications of recent reports" – *Journal of Hypertension (2022)*. This paper addressed concerns and provided methodological clarifications on recent findings from the BPLTTC, reinforcing the robustness of the collaboration's research.
https://journals.lww.com/jhypertension/abstract/2022/05000/the_blood_pressure_lowering_treatment_trialists_.2.aspx

Featured Publications from previous cycles

"Effects of blood pressure lowering on cardiovascular risk according to baseline body-mass index: a meta-analysis of randomised trials" – *The Lancet (2015)*. This study showed that blood pressure-lowering treatment is effective in reducing cardiovascular risk across different BMI categories, with no significant variation in benefit.
https://www.sciencedirect.com/science/article/abs/pii/S0140673614611715

"Blood pressure-lowering treatment based on cardiovascular risk: a meta-analysis of individual patient data" – *The Lancet (2014)*. This analysis demonstrated that targeting blood pressure-lowering treatment based on an individual's cardiovascular risk rather than baseline blood pressure alone leads to greater reductions in major cardiovascular events.
https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(14)61212-5/abstract

"Blood pressure lowering and major cardiovascular events in people with and without chronic kidney disease: meta-analysis of randomised controlled trials" – *BMJ (2013)*. This study confirmed that blood pressure-lowering treatment reduces cardiovascular risk in individuals with and without chronic kidney disease, supporting its use in this population.
https://www.bmj.com/content/347/bmj.f5680

"The effects of blood pressure reduction and of different blood pressure-lowering regimens on major cardiovascular events according to baseline blood pressure: meta-analysis of randomized trials" – *Journal of Hypertension (2011)*. This study found that blood pressure-lowering treatment is beneficial across all baseline blood pressure levels, with no clear lower threshold for benefit.
https://journals.lww.com/jhypertension/abstract/2011/01000/the_effects_of_blood_pressure_reduction_and_of.2.aspx

"Do men and women respond differently to blood pressure-lowering treatment? Results of prospectively designed overviews of randomized trials" – *European Heart Journal (2008)*. This study found no significant differences in the cardiovascular benefits of blood pressure-lowering treatment between men and women.
https://academic.oup.com/eurheartj/article-abstract/29/21/2669/530745?redirectedFrom=fulltext&login=false

"Effects of different regimens to lower blood pressure on major cardiovascular events in older and younger adults: meta-analysis of randomised trials" – *BMJ (2008)*. This analysis showed that blood pressure-lowering treatment effectively reduces cardiovascular risk in both older and younger adults, supporting treatment across all age groups.
https://www.bmj.com/content/336/7653/1121

"Blood pressure-dependent and independent effects of agents that inhibit the renin-angiotensin system" – *Journal of Hypertension (2007)*. This study demonstrated that renin-angiotensin system inhibitors provide cardiovascular benefits beyond blood pressure reduction alone.
https://pubmed.ncbi.nlm.nih.gov/17414657/

"Effects of different blood pressure-lowering regimens on major cardiovascular events in individuals with and without diabetes mellitus: results of prospectively designed overviews of randomized trials" – *Archives of Internal Medicine (2005)*. This analysis confirmed that blood pressure-lowering treatment effectively reduces cardiovascular risk in both individuals with and without diabetes mellitus.

https://jamanetwork.com/journals/jamainternalmedicine/fullarticle/486624

"Effects of different blood-pressure-lowering regimens on major cardiovascular events: results of prospectively-designed overviews of randomised trials" – *The Lancet (2003)*. This meta-analysis demonstrated that blood pressure-lowering treatment significantly reduces major cardiovascular events across different drug classes.

https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(03)14739-3/abstract

"Effects of ACE inhibitors, calcium antagonists, and other blood-pressure-lowering drugs: results of prospectively designed overviews of randomised trials" – *The Lancet (2000)*. This study compared the effects of different antihypertensive drug classes, showing that all major drug types effectively reduce cardiovascular risk.

https://www.sciencedirect.com/science/article/abs/pii/S0140673600033079

"The World Health Organization–International Society of Hypertension Blood Pressure Lowering Treatment Trialists' Collaboration: prospective collaborative overviews of major randomized trials of blood pressure-lowering treatments" – *Current Hypertension Reports (1999)*. This paper outlined the methodology and objectives of BPLTTC's collaborative overviews of blood pressure-lowering trials.

https://link.springer.com/article/10.1007/s11906-999-0045-2

"An overview of 37 randomised trials of blood pressure lowering agents among 270,000 individuals" – *Clinical and Experimental Hypertension (1999)*. This large-scale overview provided strong evidence supporting the widespread use of antihypertensive therapy to prevent cardiovascular disease.

https://www.tandfonline.com/doi/pdf/10.3109/10641969909060985

"Effects of blood pressure lowering on cardiovascular events, in the context of regression to the mean: a systematic review of randomized trials" – *Journal of Hypertension (2019)*. This study assessed how regression to the mean influences the effects of blood pressure-lowering treatment on cardiovascular events, confirming that treatment benefits persist beyond statistical artefacts.

https://journals.lww.com/jhypertension/abstract/2019/01000/effects_of_blood_pressure_lowering_on.7.aspx

"Blood pressure-lowering treatment strategies based on cardiovascular risk versus blood pressure: A meta-analysis of individual participant data" – *PLoS Medicine (2018)*. This analysis found that treatment decisions based on overall cardiovascular risk rather than blood pressure alone may provide greater benefits in preventing cardiovascular events.

https://journals.plos.org/plosmedicine/article?id=10.1371/journal.pmed.1002538