



STATIN TREATMENT FOR PREVENTING HEART ATTACKS



Statins are the most commonly prescribed medicines in the UK. They work to lower the level of cholesterol in your blood.

Cholesterol is essential for your body to work well, but too much 'bad cholesterol' (or low-density lipoprotein - LDL) is unhealthy and can lead to fatty deposits building up in your arteries. This can greatly increase your risk of developing heart attacks and strokes. Prior to work part-funded by the BHF and carried out by the University of Oxford's Clinical Trial Service Unit (CTSU), there was limited evidence regarding the effectiveness of statins, particularly in patients at high risk of cardiovascular disease, and it was unclear whether the benefits outweighed the risk of side effects.



Impact

Pioneering research undertaken by the University of Oxford's Clinical Trial Service Unit (CTSU) and part-funded by the BHF has shown that statins significantly reduce the risk of cardiovascular events such as heart attack and stroke. Between 2000 and 2014, the UK saw a 40 per cent reduction in death from heart disease, and statins are estimated to save over 7,000 lives each year in the UK. BHF-funded researchers have played a central role in generating evidence for the use of statins to reduce the risk of death from cardiovascular disease, with over 7 million people in the UK now prescribed daily statin therapy.

With your help, we can fund more research into improving cholesterol-lowering drugs and finding ways of predicting which patients are most likely to suffer from side effects.

**FIGHT
FOR EVERY
HEARTBEAT**

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1993

The BHF provides £736,000 towards a joint funding scheme with the Medical Research Council to fund the Heart Protection Study (HPS), led by Professor Rory Collins



1994

The University of Oxford's Clinical Trial Service Unit (CTSU) launches the HPS, enrolling over 20,000 patients aged 40-80 taking either statins or a placebo. The CTSU sets up the Cholesterol Treatment Trialists' (CTT) Collaboration to conduct large-scale analyses of cholesterol-lowering treatments as a means of providing robust information.



1996

Professor Rory Collins is appointed BHF Chair of Medicine and Epidemiology



1998

The CTSU launches a trial to analyse differences between high- and low-intensity statin treatments



1999

The BHF provides £441,000 in further funding to CTSU for continuation of the HPS



2002

Findings from the HPS are published, showing that treatment with a statin significantly reduced the risk of heart attacks, strokes and the need for surgical reopening of block blood vessels in people at high risk of cardiovascular disease (CVD)



2002

North American guidelines on statin use are updated to reflect the HPS results



2003

The BHF provides £233,000 in funding for a study of the long-term safety and effectiveness of statin treatment in the HPS



2003

The CTSU launches the Study of Heart and Renal Protection (SHARP) trial to test the effectiveness of statins in preventing CVD in over 9,000 kidney patients across 18 countries



2005

A large-scale analysis of several statin trials (encompassing around 90,000 patients) is published by the CTT Collaboration, and provides strong evidence that statins reduce the risk of death and cardiovascular events in patients at risk of CVD; the analysis also shows that statins are not in fact linked to increased cancer risk



2008/2014

NICE, a public body of the UK Department of Health, update their guidelines on the prevention of CVD in line with the results of the CTSU trials. Simvastatin (40 mg) is recommended as the first-line treatment for CVD prevention in high-risk patients



2010

The CTSU publishes the results of a clinical trial showing that higher doses of statins further reduce the risk of death and major cardiovascular events in heart attack survivors



2010

The CTT publishes another large-scale analysis, incorporating recent trial results, which supports the finding that more intensive statin therapy offers increased benefits



2011

Results from the SHARP trial of kidney patients show that combining statins with a drug that blocks cholesterol absorption can reduce heart attacks and strokes by approximately 25 per cent. This is the first reliable evidence that lowering cholesterol reduces the risk of heart attacks and strokes in patients with kidney disease



2011

European Society of Cardiology guidelines for the management of high cholesterol are updated to reflect CTSU and CTT publications



Research



Funding



Medical Milestone



Impact



2011

The US Food & Drug Administration (FDA) and the UK Medicines and Healthcare Products Regulatory Agency (MHRA) update their guidance for Simvastatin based on the results of CTSU trials

2013

International guidelines on cholesterol management in chronic kidney disease (CKD) are updated in response to the results of the SHARP trial. SHARP has also strongly influenced other guidelines, most particularly by helping to identify CKD as an important risk factor for CVD

2015

The CTSU publishes the results of large-scale study, part-funded by the BHF, analysing data from 27 clinical trials involving over 170,000 people. This is the largest database of statin clinical trial results in the world. A key conclusion is that statins significantly reduce the risk of heart disease in women.



2012

The CTT publish a large-scale analysis showing definitively that the benefits of statin therapy outweigh the hazards in people at low risk of CVD. This suggests that statins are effective at preventing first-time heart attacks and strokes in apparently healthy people, as well as further events in heart attack and stroke survivors

2013

There has been a 40 per cent reduction in deaths from heart disease in people under 75 since 2000, and it's estimated that statins save more than 7,000 lives per year in the UK.



Research



Funding



Medical
Milestone



Impact