

Body clock's key to helping pills cut heart attack risk

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People with high blood pressure who take their medication in time with their body clock could reduce the risk of a heart attack, researchers have found.

Research from the University of Dundee found that a person's chronotype — the time they want to wake up, go to sleep and take part in activities — could affect how they interact with blood pressure medication.

More than 5,000 people completed a questionnaire to assess their chronotype, with about half taking their usual antihypertensive medication in the morning and half in the evening.

Scientists from Dundee's School of Medicine found that "early birds" who took their medication in the morning were less likely to have a heart attack than those who took it in the evening.

But for night owls, the opposite was true: if they took their medication in the evening they were less likely to have a heart attack than the night owls who took it in the morning.

Dr Filippo Pigazzani, clinical senior lecturer and honorary consultant cardiologist from the University of Dundee's School of Medicine, said: "Our research has shown for the first time that considering chronotype when deciding dosing time of antihy-

pertensives — personalised chronotherapy — could reduce the risk of heart attack. However, before any patients change when they are taking their antihypertensive medications, our findings first need to be confirmed in new randomised clinical trials of personalised chronotherapy."

The results suggest that taking antihypertensive medication at a time aligned with personal chronotype could provide extra protection for the heart, the researchers said in the study published in the journal *eClinicalMedicine*.

The researchers, in collaboration with Helmholtz Munich, a research centre, and in partnership with a team of researchers from Italy, UK and the USA, randomly assigned patients to take their medication in either the morning or the evening, and assessed their chronotype.

Dr Kenneth Dyar, a circadian biologist from Helmholtz Munich, who helped to design the study, added: "We all have an internal biological clock which determines our chronotype — whether we are more of a 'morning' or 'evening' person.

"Humans show wide inter-individual differences in their chronotype, and these personal differences are known to affect disease risk."

