'Rotten eggs' in the blood

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Hydrogen sulphide (H_2S) is a gas most commonly associated with the smell of stink bombs, sewage and rotten eggs, but a team of researchers from the Peninsula Medical School in the South West of England and King's College London have now identified a role for this gas in regulating blood pressure, according to research published today in the leading science journal *Circulation*.

The research team has previously shown that H_2S is produced naturally within our bodies, along with other gaseous molecules such as nitric oxide and that a balance between these gases relates to good health, whereas an imbalance could indicate disease. In the case of high blood pressure, a reduction in nitric oxide results in increased blood pressure, while H_2S may counteract this.

H_2S works by relaxing vascular tissue and improving the flexibility of veins and arteries, making for a smoother flow of blood around the body. In the past, limited studies on H_2S could be performed as the only approach available to researchers was to use H_2S gas from a cylinder or the highly toxic compound sodium hydrosulphide (NaHS), often administered as a bolus.

However, the research team from the Peninsula Medical School and King's College have synthesised a new molecule which would allow H_2S to be released into the body in a more controllable and regulated manner. The result is a slow-releasing H_2S donor molecule which can be used to model the effects of naturally produced H_2S and allow researchers to further understand the role H_2S has in the body during health and

disease.

Prof. Philip K. Moore from King's College commented: "The enzymes that make H_2S in the body do so slowly. Therefore, generating H_2S in a slow and sustained manner may be a better way to study the physiology and pathophysiology of H_2S in man than previously used approaches".

Dr. Matt Whiteman from the Peninsula Medical School added: "These are exciting times. We are only just starting to unravel the surprising role H_2S has in the body not only in the cardiovascular system but also its role in inflammation, neurodegeneration and diabetes, as well as its role in health".

Source: The Peninsula College of Medicine and Dentistry