Researchers define new equation for doubly labeled water studies
19 March 2021, by Li Yuan

Advanced Technology (SIAT) of the Chinese Academy of Sciences has compiled a database of over 5500 measurements using the technique. These measurements were from the DLW database of the International Atomic Energy Agency (IAEA).

Using the raw data and the database consortium could recalculate all the measurements using one standard equation and then look at how far out the original measurements were to this standard. But the first problem was what equation to choose as standard?

To solve this problem, they used the database to derive a new equation which performed better than all the other available equations in published validation studies.

The new equation was then tested against all the original calculations. The result showed that in previous estimates, the average difference was 1-4%, but occasionally up to 20%. These differences could compromise making comparisons across studies.

"We have defined a new equation for use in all future DLW studies. This has allowed us to recalculate all the previous studies in the database to facilitate analyses of data combined across different studies, and to answer the big questions in energy balance and nutrition," said Prof. Speakman.

The study was published in Cell Reports Medicine.


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