

National Diet and Nutrition Survey (NDNS)

Doubly Labelled Water (DLW)

How much energy do you use?

As part of NDNS, we are asking some people to allow us to measure how much energy they use by drinking some doubly labelled water and providing two small urine samples and then a sample each day for the next 13 days.



What is doubly labelled water?

Doubly labelled water is slightly different from normal tap or bottled water. Some water is slightly heavier than the rest, and doubly labelled water just has more of the heavy type in it than the water which you usually drink. It will taste just like tap water and will not have any effect on you. Doubly labelled water is lost from your body as urine in the same way as normal water.



Is the doubly labelled water harmful?

No. Doubly labelled water is like normal tap water. It is safe to drink and has been used for over thirty years in many studies involving babies, children, adults and pregnant women, with no problems.

Who can take part?

We are inviting selected participants aged 4 years and over to take part in the study.

To take part you must:

- NOT be pregnant or breastfeeding
- NOT be trying to lose or gain weight

Do I need to do anything before I drink the doubly labelled water?

Yes please. The fieldworker will take your weight measurement and ask you to give a small sample of your urine before you drink the doubly labelled water. If you take part, the weight measurement and pre-dose sample are very important for the study.

How do I drink the doubly labelled water?

The fieldworker will ask you to drink the doubly labelled water out of a bottle using the straw if you would like. They will then put a little bit of tap water in the bottle and ask you to drink that too. This is to make sure that none of the doubly labelled water is left in the bottle.

Can I add anything to the doubly labelled water?

No. The amount of doubly labelled water provided is matched to your body weight. It must be drunk as it is and at room temperature.

How long will the doubly labelled water stay in my body?

The doubly labelled water is lost from your body at the same rate as any other water. About half will have gone in 4 days. All the doubly labelled water will have gone after about 6 weeks of drinking it.

What do I do after I have drunk the doubly labelled water?

Collect a urine sample 4 - 6 hours after drinking the doubly labelled water and record the date and time the sample was taken. Even a small sample of your urine is enough. You will then be asked to collect a sample daily for 13 days. You will be asked to put your samples in small tubes. You will collect 15 urine samples in total - 1 sample before you drink the doubly labelled water, 1 sample after and then 13 daily samples. The daily samples shouldn't be the first urine of the day but any time after that is fine. After you have collected all the samples, your fieldworker will send the samples to a laboratory to find out how much doubly labelled water they contain. We can find out how much energy (i.e. how many calories) you have used during the sample collection period by measuring how quickly the doubly labelled water disappears from your urine.

What happens if I forget to take a sample?

Please try and remember to collect all 13 daily samples – these are important so we can track changes over time. Make sure to record all dates and times accurately. If you do forget to give a sample, collect a sample as soon as you can and write down the exact date and time. If you miss a whole day, leave the day's tube empty and write down which day you missed on the urine collection form. Then take next day's sample as normal.

Where should I keep the samples?

Keeping the samples cold is important so the best place to store them is in the fridge. However, if you are very uncomfortable about having the tubes in the fridge you could keep them somewhere else that is cold, like a shed or unheated garage, but it must be cold all the time.

Do not freeze the samples.



How do I collect the samples?

The fieldworker will give you a collection kit assigned to you. The kit will contain urine collection cups and small tubes to store your urine samples in. You will also be given a small box to keep the tubes in.

Do I have to provide a sample at the same time every day?

No, but we would prefer you to, if possible. Accurate dates and times of urine collection are very important.

What do I do once I've collected 15 samples?

The fieldworker will arrange a time to come and pick up your urine samples. Until then, please continue to keep the samples in a cold place. When the samples are picked up, the fieldworker will measure your weight again and give you a £30 gift card.

What if I have any other questions?

If you have any other questions about the doubly labelled water sub study, please contact NatCen.

Email: **NDNS@natcen.ac.uk**

Telephone: **0800 652 4572**

For more info have a look at

<https://natcen.ac.uk/participant-content/national-diet-and-nutrition-survey-ndns>