

# KETONES HAVE NO PLACE IN HYPEREMESIS GRAVIDARUM (HG) DIAGNOSIS OR PATHWAYS

Hyperemesis gravidarum (HG) is a condition at the extreme end of the pregnancy sickness spectrum. It affects approximately 3% of people with pregnancy sickness and is incredibly debilitating for sufferers.

Intravenous fluids are an essential component to HG sufferers treatment and care and are used to correct dehydration due to many sufferers inability to keep fluids down.

Unfortunately, many Healthcare professionals and hospitals rely on assessing ketones in urine to decide the need for IV fluids, but this is not best practice or evidence based and can often lead to a barrier for treatment.

Our question is why? Assessment tools such as the The Pregnancy-Unique Quantification of Emesis (PUQE) are used to determine the severity of symptoms such as the amount of hours feeling nauseated and the amount of times a sufferer will vomit in a day, enabling Healthcare professionals to conclude that the patient is dehydrated.

## OBJECTIVE

Pregnancy Sickness Support is the only UK registered charity that supports women and birthing people with Nausea & Vomiting in Pregnancy (NVP) and Hyperemesis Gravidarum (HG). Our objective is to empower Healthcare Professionals to ditch ketones as a method of diagnosis of dehydration in sufferers of NVP and HG, through evidence based information and research.

## RESEARCH

### KETONURIA IS NOT ASSOCIATED WITH HYPEREMESIS GRAVIDARUM DISEASE SEVERITY\*

M H Koot, I J Grooten, J A M Vd Post, J M J Bais, C Ris-Stalpers, C A Naaktgeboren, M N Niemeijer, H A Bremer, D P van der Ham, W M Heidema, A Huisjes, G Kleiverda, S M Kuppens, J O E H van Laar, J Langenveld, F van der Made, D Papatsonis, M J Pelinck, P J Pernet, L van Rheenen-Flach, R J Rijnders, H C J Scheepers, T E Vogelvang, B W Mol, T J Roseboom, R C Painter \*National Library of Medicine



## FINDINGS

This study investigated the relationship between ketonuria and hyperemesis gravidarum (HG) severity in pregnant women hospitalized for HG, as part of the MOTHER trial conducted in the Netherlands from October 2013 to March 2016. Involving 215 participants, the research found no correlation between ketonuria levels at admission and HG severity, quality of life, maternal weight loss, or readmission frequency. However, a higher degree of ketonuria was linked to longer hospital stays, implying that healthcare professionals might use ketonuria levels to determine hospitalization duration. Despite this, the study concludes that ketonuria has no significant value in assessing HG severity or guiding its clinical management.

## CONCLUSION

HG sufferers who are showing signs of dehydration are unlikely to be able to rehydrate themselves sufficiently due to the ongoing and constant nature of the condition, therefore the threshold requirement for IV fluid rehydration should be low and ketones should not be used as an indicator of dehydration. The soon to be published **RCOG Greentop Guidelines on Nausea & Vomiting in Pregnancy and Hyperemesis Gravidarum has ditched the inclusion of Ketones in the diagnosis HG and you should too.**

Following on from assessment tools and diagnosis of pregnancy sickness or HG, there are other clinical indicators of dehydration that can be used.

### Some clinical indicators of dehydration are:

- Darker urine
- Not urinating as often
- Not passing as much urine as usual
- Dry mouth
- Dry lips
- Headaches
- Dizziness
- Weakness
- Confusion

Signs and symptoms of dehydration should be assessed as they would for any non-pregnant or pregnant patient with any other condition. It is illogical to demand a dehydrated person to produce a urine sample.

If you would like support in developing your HG pathways and more information about why ketones should not be used as a diagnosis tool for dehydration please contact:  
projects@pregnancysicknesssupport.org.uk