

# Studying Metformin for Patients with Type 2 Diabetes in Trinidad & Tobago

## Why is this study needed?

Metformin is a drug given to newly diagnosed patients with Type 2 diabetes. Most patients react positively to metformin, but some do not. In some cases, patients do not follow metformin treatment properly. However, another cause for a lack of response to metformin may be genetic variants in patients. This study observes if there are variations in single base pairs in a DNA sequence (single nucleotide polymorphisms) associated with a response to metformin.

## Who was involved?

Participants will include more than two hundred and sixteen adults who have been diagnosed with Type 2 diabetes and who have been involved in metformin therapy for at least six months. This study will take place in Trinidad and Tobago, where diabetes has a very high prevalence rate, especially among Caribbean Black and South Asian populations.



## Expected study methods and results:

- The researchers will sequence patient DNA samples to look for genetic variants that might impact metformin response.
- The researchers are specifically looking at single nucleotide polymorphisms related to glucose transport and regulation. Several cellular transporters in the body are critical for the absorption of metformin. This research could show if some patients have genetic variations that affect the way their body processes metformin.

## Future Impact:

*This study is recruiting participants from a Caribbean region where more than 95% of the population has African or South Asian ancestry. The results might highlight the need to employ tailored treatments that are more relevant to a patient's background. To inform health care policy, the results of the study will be shared with regional health authorities, the national Ministry of Health, and non-profit organizations working on diabetes.*

Citation: Clement Y, Singh S, Motilal S, Maharaj R, Nunez-Smith M. A Protocol for the Study of Polymorphisms and Response to Metformin in Patients with Type 2 Diabetes in Trinidad. *Ethn Dis.* 2020 Apr 2;30(Suppl 1):211-216.