



POSTER PRESENTATION

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# Comparing wheat flour and commercial wheat extract skin prick testing in Wheat Dependent Exercise Induced Anaphylaxis

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## Background

Wheat Dependent Exercise Induced Anaphylaxis (WDEIA) is a form of Food Dependent Exercise Induced Anaphylaxis. WDEIA occurs when there is an allergic reaction following the ingestion of wheat, coupled with exercise [1]. The suspected allergen that is responsible for WDEIA is omega-5-gliadin [2].

We report a series of adult clinical cases of WDEIA recorded between 2006-2009 at Health Sciences Centre (Winnipeg). The purpose of this study was to compare the results of Skin Prick Test (SPT) to commercial wheat extract and wheat flour in patients with WDEIA.

## Materials and methods

We performed a retrospective chart review of 8 patients with WDEIA. We recorded response to SPT for commercial wheat extract (Omega, Allergy Canada) and wheat flour.

## Results

The patients were 25-63 years old, 5/8 were female. All patients had histories of wheat consumption followed by exercise (or stress) resulting in allergic reactions. 5/8 cases were SPT negative to commercial wheat extract but positive to wheat flour. 1/8 was SPT negative with both commercial wheat extract and wheat flour, but positive with the wheat product (bun), which by history provoked a reaction. 1/8 was SPT positive to both. 1/8 was positive to wheat extract but SPT to wheat flour was not done. When patients adhered to wheat avoidant diets no reactions occurred.

## Conclusion

In the 8 adults reviewed with WDEIA, SPT with wheat flour was much more sensitive than SPT with commercial wheat extract. Therefore, both commercial wheat extract and wheat flour should be used for SPT to diagnose WDEIA.

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