

Spice up your health this barbecue season

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A new study at The University of Western Ontario finds the sauces you use when firing up the barbecue this summer may provide unforeseen health benefits.

The research, led by Western biology and psychology postdoctoral fellow Raymond Thomas, shows common marinades may be more than just tasty sauces - they can also provide a major source of natural antioxidants. The paper was co-authored by Mark Bernards and Christopher Guglielmo in Western's department of biology.

Foods rich in antioxidants play an essential role in preventing cardiovascular diseases, cancers, [neurodegenerative diseases](#) like Alzheimer's and Parkinson's, inflammation and problems associated with cutaneous aging.

"Herbs and spices are excellent sources of antioxidants, but estimating consumption rates can be difficult considering they are not generally consumed in large quantities, compared to fruits and [vegetables](#)," says Thomas. "Instead, they are used in relatively small amounts as ingredients in recipes and formulations such as spice mixes and marinating sauces that enhance food flavour."

Diverse processing methods during manufacture, length of marinating time and exposure to various modes of cooking can significantly alter the antioxidant status of these products and, consequently, the amount of antioxidants available to consumers.

Thomas was able to show for the first time the impact of marinating and cooking meat on the antioxidant status of seven different popular brands and flavours of marinade containing herbs and spices as primary ingredients. Each is readily available at local grocery stores and included jerk sauce, garlic and [herb](#), honey garlic, roasted red pepper, lemon pepper garlic, sesame ginger teriyaki and green seasoning.

His research found very good quantities of antioxidants in all seven sauces, but that marinating meat prior to cooking reduced antioxidant levels by 45-70 percent. Both Grace Jerk Sauce and Renée's Sesame Ginger Teriyaki outperformed the other five sauces tested before and after cooking because they contain substantial quantities of ingredients like hot peppers, allspice, sesame and ginger - all of which have high antioxidant properties.

Despite the high percentage of antioxidant loss following marinating and cooking, the sauces still provide benefits over cooking meat without them.

"Consumers can maximize their intake of the antioxidants available in these sauces by choosing those with the highest antioxidant levels prior to marinating and cooking," says Thomas. "Alternatively, you can brush the sauce on just before serving the meat, or consume it without cooking - like as a salad dressing - where it is permissible to do so."

Published in the *Journal of Food Composition and Analysis*, the findings are particularly relevant given concerns about the potential health risks and toxicity associated with the use of some synthetic antioxidants. This concern has resulted in an ongoing search for safe and inexpensive [antioxidants](#) of natural origins, including those found in herbs and spices.

Provided by University of Western Ontario

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