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Project Information?

5R21ES025788-02

Project **392** of **2071**[Back to Query Form](#) [Back to Search Results](#) [Print Version](#)[DESCRIPTION](#) [DETAILS](#) [RESULTS](#) [HISTORY](#) [SUBPROJECTS](#) [SIMILAR PROJECTS](#) [NEARBY PROJECTS](#) [BETA](#) [LINKS](#) [NEWS AND MORE](#)**Project Number:** 5R21ES025788-02**Title:** A FISH CONSUMPTION ADVISORY TO PROMOTE ANISHINABE ENVIRONMENTAL HEALTH LITERACY**Contact PI / Project Leader:** [DELLINGER, MATTHEW J](#)**Awardee Organization:** MEDICAL COLLEGE OF WISCONSIN

Abstract Text:

DESCRIPTION (provided by applicant): Anishinabe refers to the Ojibwe (Chippewa) bands of Native Americans that inhabit the Upper Laurentian Great Lakes. Although they are traditionally a fishing culture [1] they now only consume one third of the daily fish intake recommended by many federal agencies [2-4]. Fish are an essential source of nutrients such as omega-3 poly-unsaturated fatty acids (PUFA-3), but the risk of exposure to persistent bioaccumulative toxics (PBTs) remains a serious concern. Cultural implications complicate the issue since the Anishinabe signed a series of treaties in the 1800s with the United States government that ceded their territories but maintained the right to subsist off the land and waters. This work addresses the need to identify best practices in fish consumption advice for the tribal fisheries in the territories ceded by the Anishinabe in 1836 (the waters surrounding the Upper Peninsula of Michigan). In order to adequately increase Environmental Health Literacy (EHL) for the Anishinabe two key needs must be addressed: 1) to gather data on PUFA-3s and PBTs on regional dietary fish options including fish from the 1836 treaty waters and 2) develop best practices for personalized culturally-tailored advice for tribal members. Recent work [6, 7, 12] confirms that many PBTs in Anishinabe fisheries are declining relative to historically high contamination, but further investigation is needed to guide monitoring. Reducing dietary exposure to PBTs while maximizing nutritional benefits decreases the risk of cancer, diabetes, heart disease, metabolic disorders, and childhood developmental deficits [6-12, 31, 34]. Building on 11 years of collaboration, the team will work with tribal consortia to fill the data gaps preventing progress on EHL improvement. The Sault Ste. Marie Tribe of Chippewa Indians (represented by the Inter-Tribal Fisheries Assessment Program (ITFAP)) will collect data that update previous monitoring efforts in collaboration with grant objectives. In addition, the team will design software for a mobile application (app) to provide personalized risk assessments that include benefit quantifications for fish species. In collaboration with the Inter-Tribal Council of Michigan (ITCM) the team will engage Anishinabe fish consumers to provide feedback on effective app presentation. Finally, the team will conduct a pretest/posttest experiment to investigate the ability of Anishinabe participants to identify the most beneficial dietary options while reducing PBT exposures when using a pilot version of the app. The proposed analysis is meant to identify feasibility and applicability of novel communication methods. Dietary research focusing on traditional food is in high demand for Anishinabe communities. Future interventions would transform the way risk assessment is viewed in these communities from a nuisance to a helpful guide. These innovations are also applicable to the general public, who are faced with increasingly overwhelming decisions to decrease their exposure to environmental contaminants.

Public Health Relevance Statement:

PUBLIC HEALTH RELEVANCE: The proposed research will reduce health risks associated with Persistent Bioaccumulative Toxics (PBTs) while maximizing the nutritional benefits associated with fish consumption in Upper Great Lakes Native Americans. These communities are particularly vulnerable to the morbidities associated with PBTs and poor nutrition, namely: metabolic diseases, inflammatory diseases, childhood neurological development, and cancer. The interactive risk/benefit educational materials from this study will promote clean, healthy diets.

Project Terms:

Address; Anishinabe; Behavior; Benefits and Risks; cancer risk; Chemical Exposure; Childhood; Chippewa; Collaborations; Communication Methods; Communities; Confusion; Consumption; Data; Databases; design; Development; Diabetes Mellitus; Diet; Disease; disorder prevention; Education; Educational Materials; Environmental Exposure; Environmental Health; Environmental Pollution; Exposure to; Feedback; Fisheries; Fishes; Focus Groups; Food; food marketing; Future; General Population; Generations; Goals; good diet; Grant; Health; Health Food; health literacy; Health Promotion; Heart Diseases; improved; Individual; Industrialization; Inflammatory; innovation; Intake; Intervention; Investigation; Knowledge; Malignant Neoplasms; Metabolic Diseases; Methods; Methylmercury Compounds; Michigan; mobile application; Monitor; Morbidity - disease rate; Native Americans; Neurologic; novel; Nutrient; nutrition; Nutrition Assessment; Nutritional; Ojibwe; Omega-3 Fatty Acids; Outcome; outreach; Participant; Perception; Pollution; Population; prevent; Preventive Intervention; programs; prototype; Recommendation; Research; research study; Rights; Risk; Risk Assessment; Risk Estimate; Science; Series; Software Design; Source; State Government; System; Technology; Testing; Toxicant exposure; Treaty; Tribal Council; tribal member; Tribes; United States; Unsaturated Fatty Acids; Update; Water; Work

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