

Abstract

Purpose: The Nutritarian Women's Health Study (NWHs) is a longitudinal hybrid effectiveness-implementation study that seeks to determine the role of a nutrient-dense plant-rich (NDPR) diet on the incidence and progression of chronic diseases.

Background: Prior research supports that individual components of this NDPR diet are effective individually. The intent of this investigation is to assess the benefits of combining an assortment of these protective plant foods in a dietary portfolio called the Nutritarian diet.

Methods: Baseline data is collected from self-reported questionnaires after the participants are provided educational information about the Nutritarian diet.

Conclusions: This NDPR dietary longitudinal investigation seeks to combine the elements of clinical effectiveness and implementation which can provide for more effective strategies and rapid translational gains for clinical and public health practice.



Introduction

Prior research supports that individual components of a nutrient-dense plant-rich (NDPR) diet are effective individually to lower health risks. The intent of this investigation is to assess the benefits of combining an assortment of these protective plant foods in a dietary portfolio called the Nutritarian diet.

Nutrient dense diets, such as the dietary pattern proposed for this study, have been proven to be safe and effective in clinical applications and have been associated with: weight reduction (Sutcliffe et al, 2016; Sarter et al, 2008); lipid management (Fuhrman et al, 2015; Jenkins et al, 2006); glycemic control in diabetes (Yokoyama et al, 2014); inflammation reduction (Sutcliffe et al, 2015); perceptions of hunger (Fuhrman et al, 2010); precautionary approaches for cancer (Gonzales et al, 2014) and overall health and longevity (Tucker et al, 2005).

The Nutritarian diet emphasizes the role that micronutrients have in protecting against chronic disease and cancer. Women are encouraged to consume diets that are high in vitamins, minerals, phytochemicals and antioxidants. This dietary protocol includes the daily consumption of greens, beans, onions, mushrooms, berries, seeds, and tomatoes. Additionally, foods such as processed foods, animal products, sugar, and fats and oils, that do not offer protective factors are to be limited. We intend to assess the differences between and among the study participants with varying degrees of compliance and adoption of the recommended protocol.

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Methods and Materials

Inclusionary Criteria:

- ✓ Female
- ✓ 18 years and older
- ✓ United States resident
- ✓ Online access

Participants: Participants continue to be recruited through social media, direct marketing and nutrition related events. For this baseline assessment, there were 1,271 women enrolled in the study, representing all 50 US states. The targeted total sample size is 5-10,000 women. Mean participant age is 50.69 years ($SD=11.56$). The majority of participants have graduate level educations, married, and report a household income of \$100,000 - \$250,000. 88.9% of participants self-reported race as White.

Procedures: The instructional education tutorial includes four short videos and online access to the book *Super Immunity* by Joel Fuhrman, MD. After the participants complete the educational module on the principles of the Nutritarian diet, enrollees complete intensive online questionnaires regarding health and current dietary practices.

Data Collection: Baseline data is collected from self-reported questionnaires after the participants are provided educational information about the Nutritarian diet.

Results

Mean participant waist-to-hip ratio is 0.86 ($SD=0.13$) while mean participant BMI is 27.03 ($SD=6.83$). Pregnancy during the lifetime was reported by 71.8% of participants. 6.8% of all participants received a diagnosis of breast cancer, with treatment as follows: 93.0% underwent surgery, 51.9% lumpectomy, 56.5% radiation and 45.3% chemotherapy, within this subset.

Participants reported consuming the following: 10 servings/week of vegetables (53.4%) and >15 servings/week (26%), >5 servings/week of fruit (65.4%), >5 servings/week legumes (44.5%) and whole grains (45.8%). Alternatively, over half of the participants consumed less than 5 servings/week of fats/oils, dairy, and processed foods. Zero servings of meat, soft drinks, alcoholic beverages, and restaurant/fast food per week were reported by a majority of participants.

Table 1. Baseline Assessment of current participants

Age Groups	N=1271*	Mean Height (in.)	Mean Weight (lbs.)	Mean BMI	Waist-to-Hip Ratio
18-19	4	65.63	134.00	21.81	0.77
20-29	59	65.52	148.52	24.31	0.81
30-39	164	64.84	161.43	26.87	0.86
40-49	261	64.98	166.94	27.79	0.86
50-59	450	64.92	162.57	27.13	0.86
60-69	249	64.49	160.05	27.09	0.86
70-79	33	64.55	149.42	25.38	0.89
80+	1	65.00	215.80	35.91	0.78



Discussion & Conclusions

The preliminary data reveals a mean BMI that is higher than the desirable range of 18-24.9, with a mean waist-to-hip ratio that exceeds the desirable range of ≤ 0.80 . These increased measurements may lead to a higher prevalence of certain cancers and other chronic disease. To address these risk factors, the intervention will focus on weight reduction and additional participant support to increase knowledge of energy expenditure.

Combining the elements of clinical effectiveness and implementation can provide for more effective implementation strategies and rapid translational gains for clinical and public health practice. In addition, although traditional clinical effectiveness and implementation trials are likely to remain the most common approach to moving a clinical intervention through from efficacy research to public health impact, judicious use of the proposed hybrid designs could speed the translation of research findings into routine practice.

References

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