

How to implement a cooking program that has been shown to improve nutrition knowledge and decrease food insecurity in a medical school setting

This document details how to implement the 4-week cooking program of plant-based, olive oil recipes that is offered at the Warren Alpert Medical School, Providence, RI starting in March of 2017. The program is based on a diet developed by Mary M. Flynn, PhD, RD, LDN, a research dietitian at The Miriam Hospital and an Associate Professor of Medicine at Brown University. The diet is plant-based and includes extra virgin olive oil in all the recipes. Dr. Flynn developed the cooking program using the recipes for a study she completed in food pantry clients that showed use of the recipes for 2.8 ± 1.3 main meals per week (goal of 3 main meals per week) decreased food insecurity, body weight, and overall food costs, and increased self-reported vegetable consumptions. ¹ The recipes are all economical, costing substantially less than the USDA's more economical meal plan. ²

This is an IRB protocol as data is collected from the USDA Food Security Survey, the baseline nutrition quiz, and the questionnaire assessing the student's current eating behavior. The study consent was signed and the forms completed before the cooking program began. The forms are sent by email to the students completing the cooking program two months/eight weeks after the cooking program ends as the time frame for the Food Security Survey is the previous three months (4 weeks of cooking + 8 weeks of follow-up).

Recruitment:

An email announcing the cooking program and the days and times that it would be offered for a session is sent to all first and second year students. Students interested respond to the email and they are placed in one of the upcoming groups.

Cooking program:

The cooking programs are offered at a time that is convenient to the student's academic schedule, either during the lunch break (12-1p) or when classes ended for a day (4.30 or 5p). The classes are provided at the medical school in the various student lounge areas. The classes have up to 5 participants so there is sufficient food for sampling for each student. The instructor makes a recipe that is plant-based and includes olive oil using an electric skillet. The ingredient amount and reason for including is explained as the recipe is being made. The explanation for the foods is in the weekly lesson handout. The handout is posted on the www.medfooddiet.com website and students are weekly provided with the page that is being reviewed. While the students are sampling the recipe, the weekly nutrition topic is discussed. The topics were extra virgin olive oil, vegetables and fruits, need for dietary protein and plant sources, and the final class is called "Putting it all together". The lesson for the last class provides the students with the basics for the recipes they have been learning: all recipes include 1-2 tablespoons of extra virgin olive oil per serving, 2 or more servings of vegetables and 2-4 servings of starch. The classes, including recipe preparation and nutrition education, are completed in no more than 30 minutes.

Recipes used for the plant-based, olive oil cooking program:

Participants are provided with a packet of 22 recipes the first week of the program. Additional recipes can be found at www.medfooddiet.com. Participants are given a goal of 3 main meals a week that are either the recipes provided or modifications of their own recipes that followed the class recipes of 1-2 tablespoons of extra virgin olive oil, at least 2 servings of vegetables and 2-3 servings of starch (depending on overall energy intake). The ingredients for the recipes are prepared in advance and brought to the class. Prepping includes cooking the starch and measuring out the vegetables to be used.

Recipes that are being used at the WAMS:

The recipes are selected to be easy to prep for and demonstrate. The ones used are:

Spinach, beans, and pasta

Corn, black beans, and tomato fried rice

Vegetable lo Mein

The recipes are priced using “Peapod” which is an online grocery ordering system for Stop & Shop grocery stores. The recipes are repriced every two to three years.

Items needed for a class:

- An electric skillet and an extension cord (in case the closest outlet is not near the area used for the class).
- Rubber spatula for preparing the recipe.
- Cup measures – for demonstrating serving sizes and could also be used to serve the food.
- At least a measuring tablespoon for measuring the olive oil (complete measuring spoon set can be used).
- Paper towels and /or wipes for cleaning up.
- Items for participants to sample the recipe: if these are not available in the area where the class will be taught, you would need plastic forks, paper plates, and napkins.

References:

1. Flynn MM, Schiff AR. A Six-week Cooking Program of Plant-based Recipes Improves Food Security, Body Weight, and Food Purchases for Food Pantry Clients *Journal of Hunger & Environmental Nutrition*. 2013;1.
2. Flynn MM SA. Economical Healthy Diets (2012): Including lean animal protein costs more than using extra virgin olive oil. *Journal of Hunger and Environmental Nutrition*. 2015;10:467-482.