Hawai‘i is an island chain with a blended cultural background with people of Native Hawai‘ian descent or multi-ethnic descent living in Hawai‘i (kama‘aina). Hawai‘i is home to the largest multiracial population in the U.S.; White and Asian is the largest biracial group followed by Asian and Native Hawai‘ian/Pacific Islander and then by White and Native Hawai‘ian/Pacific Islander. Hawai‘i is also the only state to have a tri-racial group of White, Asian and Native Hawai‘ian/Pacific Islander as its largest multi-racial group. Native Hawai‘ian and Other Pacific Islanders (NHOPI) is also the third-fastest growing ethnic group in the U.S.

**Common Nutritional Approaches**

Hawai‘ian cuisine traces its origins from Polynesian settlers who introduced new livestock and produce, such as taro from which poi is made. Poi became a staple of ancient diets and continues to influence traditional Hawai‘ian cuisine today. Immigration to Hawai‘i over the late eighteenth and early nineteenth century from Europe and Asia introduced new foods and styles of cooking, which have influenced Hawai‘i’s multi-ethnic cuisine. Popular carbohydrates include poi, a starchy food paste made from taro root, uala, saimin and paiai. Dishes like poi are high in iron and carbohydrates and unfortunately have little additional nutritional benefit. The traditional Hawai‘ian active lifestyle accommodated larger carbohydrate intake, but modern sedentary lifestyles now raise the risk these foods may contribute to obesity. Common sources of protein include poke, Spam, lauau stew, mahi mahi, Mea ono pua‘a, kalua pig, pork ribs and ground beef which are high in calories per gram, fat, sodium, and caloric density. Plate lunches composed of white rice, macaroni salad, and an entree are commonly found throughout the area.

**Practical Tips and Substitutions for Eating Healthy**

- Poi can be reduced in frequency without eliminating it altogether, by substituting it with whole grain starches that grow well in the Hawai‘ian climates, such as amaranth or oats.
- Moderate consumption of whole fruit, specifically fruits high in sugar like mango, pineapple or oranges. Specific considerations should be made for individuals with diabetes.
- Moderate portions and substitute brown rice and whole grain macaroni in place of white rice and macaroni in plate lunches.
- Choosing plant-based oils such as olive, avocado, or flaxseed instead of butter, lard, or tallow for cooking.
- Use low-sodium, low-calorie seasoning such as lemon juice, vinegar or spices instead of traditional high-sodium and sugary sauces.
- Avoid processed foods for snacks; instead, choose fresh fruit or nuts (in limited quantities) for mid-meal snacks.
- Revert to traditional methods of cooking instead of frying.
- Consume raw or partially cooked vegetables and fruit.
- Revive and re-engage in *ohana*, defined as “a person’s family which can include friends and other important social groups”, especially around meal times to promote health and well-being among all members.
Healthful Eating Plan & Meal Ideas

**Breakfast Ideas**
- **Hawai’ian Style Oatmeal**: Soak oats in boiling water. Add milk, salt, ginger, dates and cinnamon. Then, bake.
- **Pineapple Oat Breakfast Squares**: Bake fresh-cooked pineapple mixed with oats and whole wheat flour. Add macadamia nuts and other spices such as cinnamon and nutmeg.
- **Healthy Hawai’ian Loco Moco**: Mix rehydrated shitake mushrooms with garlic, fish sauce, salt and pepper, then add mixture to ground sirloin. Cook mixture in skillet. Place over a bed of cauliflower rice and top with gravy mixture made from low-sodium fat-free chicken broth, onions, mushrooms, parsley, and a little bit of cornstarch.

**Lunch/Dinner Ideas**
- **Poke**: Ahi tuna mixed with yellow onions, scallions, sesame seeds, chili pepper, soy sauce, and toasted sesame oil over a bed of brown rice.
- **Kalua Pig**: Slow cook pork shoulder to make shredded brisket. Top over a few pork rinds. Top with fresh salsa and lightly dust with parmesan cheese.
- **Spam Musubi**: Place a small piece of spam over brown rice wrapped in a strand of seaweed. Consider with a side of limu (seaweed) salad.
- **Saimin**: Combine egg noodles, dashi, char siu, scallions and kamaboko in a bowl. Tofu can be used as a meat substitute.
- **Modified PuPu Platter**: Lightly toss 3 chicken wings in black pepper, salt and smoked paprika to taste. Separately place lean cuts of beef on one skewer. Separately thaw 3-5 precooked shrimp with shell. Lastly, set aside a small amount of beef teriyaki. Combine all in an air fryer at 390 degrees for 18 minutes, turning half-way. Serve with a side of broccoli.

**Clinical Pearls**

- Traditional foods available in Hawai‘i such as taro, poi, sweet potato, yams, breadfruit, greens (fern shoots and leaves of taro), fruit, seaweed, fish and chicken as part of a low-fat, low-energy-dense diet could be included in meal plans with relative ease.
- The Waianae Diet Program addressed important health issues from westernization of diet and lifestyle of ethnic populations and demonstrated improvement in several health parameters with reversal to culturally-based food and lifestyle habits. Furthermore, these changes can potentially revive the culture and restore holistic well-being beyond simple weight loss.
- The patient population has historically been a very active society and the decrease in physical activity over the decades may contribute to increased overall metabolic risk. Exercise has shown to improve insulin response to carbohydrates and improve insulin sensitivity, which is helpful as this population has a high rate of insulin resistance.


www.obesitymedicine.org

Written by Lalitha K. Kambhamettu MD and Ryan Morgan DO
© Obesity Medicine Association. All rights reserved. Materials may not be reproduced, redistributed, or translated without written permission.