



About West Africa

West Africa stretches from the Cameroon Highlands in the East to the Atlantic Ocean in the West and from the Atlantic Ocean in the South to the Sahara Desert in the North. The variability of the climate influences staple foods, methods of food preparation, and food consumption. Tropical humid rainforests characterize the climate in the South, which progressively turns into savanna, then arid grasslands, and finally the desert further North in the region. Islamization of the North, with a principally Muslim population, and Westernization of the South, with a predominantly Christian population, also influences food preparation methods and modes of food consumption.

Common Nutritional Approaches

A diverse and heterogeneous group of people populates this region. The local cuisines are distinctly different across the area, but the foods portray more similarities than differences. West African regional cuisines are deeply rooted in local traditions and custom. The foods are grown indigenously by local farmers, and the meals are principally starch-based with some meat, fish, and herbs. The staple starch varies depending on the region and ethnic groups, but common starches include cassava, yam, cocoyam, plantains, and cereals like sorghum and millet. Changes in food consumption and shifting dietary patterns from the traditional staples listed above have increased the consumption of rice and wheat. Meats, starches, and vegetables are traditionally fried in palm or coconut oil. The protein consumed varies by region and can range from beef, goat, sheep, beef mutton, and "bush" (game) meat. Seafood, chicken, and Guinea fowl eggs are also famous. Typical non-starchy food staples include Hausa groundnuts, Bambara groundnuts, brown beans, black-eyed peas, and Baobob leaf. Water and soda are often referred to as "minerals" in some areas, and sugar-sweetened beverages, such as juice, are common drinks consumed. Local alcoholic beverages include millet beer and palm wine. The underpinning of a healthy dietary guideline is a focus on a nutrition pattern that incorporates nutrient-dense foods and drinks from all food groups. These include foods with little or no added sugars, saturated fat, or sodium that provide minerals, vitamins, and other health-promoting consumables like soluble/non-soluble fiber within a desired calorie limit.

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Practical Tips and Substitutions for Eating Healthy

- **Coconut milk** is relatively high in saturated fat and evaporated/condensed milk is high in sugar. Consider swapping evaporated/condensed milk, coconut milk, whole fresh milk, and buttermilk with semi-skimmed or skimmed milk, low-fat coconut or almond milk, hemp, oat or cashew milk.
- Roast or grill foods rather than pan-frying foods in oils or deep-frying foods.
 Frying foods in oil results in unhealthier foods that are higher in calories and promote weight gain.
- Olive oil and other unsaturated oils are healthier than the more saturated palm, palm kernel, and coconut oil.
- Consume lean protein such as grass-fed beef, pork tenderloin, or fish.
- **Substitute** brown, black, red, or wild rice for white rice.

Clinical Pearls

- Include fruits as desserts with main meals to add soluble fiber and in some cases non-soluble fiber that will result in a reduction in portion sizes, promote satiety, contribute to the consumption of fewer calories, and promote weight loss.
- Always aim to decrease sodium content. Sodium promotes fluid retention and
 weight gain, therefore, it is necessary to stay under 2 grams of sodium per day, if
 you are being treated for high blood pressure or heart failure. Condiments such
 as Maggi cubes or bouillon cubes have very high sodium content, so these should
 be avoided.
- Most vegetables have high potassium and low sodium content and should be part of a dietary regimen for individuals with high blood pressure with the exception of those with end-stage kidney disease, high serum potassium levels, or those on certain blood pressure medications, such as ACE-inhibitors, ARBs or potassium-sparing diuretics (certain water pills). Work closely with your medical care team to see if you are taking any of these medications.
- It is acceptable to consume minimally processed foods such as bagged vegetables, roasted nuts, or those foods which are processed to lock in their nutritional quality such as canned tuna or sardines in oil versus those canned in water which can have high sodium content and other preservatives, frozen fruits, and vegetables. Avoid processed foods with added flavors, preservatives, sweeteners, or more heavily processed foods such as pre-made/ready-to-eat microwaveable meals. The nutritional composition of processed foods can be altered, and unhealthy substances and chemicals are added during processing to make them more palatable or increase their shelf life while decreasing their production cost.

