Ensuring Nutrition Security During Emergency Disasters

Findings from Puerto Rico after Hurricane Maria

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Survivors overlook a section of a collapsed road caused by Hurricane María which swept through Barranquitas, Puerto Rico on October 7, 2017.

PHOTO BY JOE RAEDLE/GETTY IMAGES

- Roads and ports infrastructure destroyed: food and beverage supply chain
- Power & communications grids collapsed
- Potable water systems decimated
- Local food production washed out

Eat Safe Foods: Throw out

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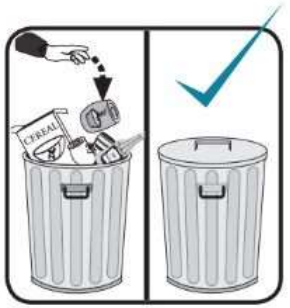
any foods that may have been in contact with the storm or flood water…



Coma alimentos seguros

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Después de una inundación o un corte de electricidad, es posible que algunos alimentos no sean seguros y deban botarse a la basura.

Lea y siga cuidadosamente las instrucciones que aparecen a continuación.

Bote a la basura los alimentos perecederos (como carnes, pescados, huevos, leche y sobras) que estén en el refrigerador si no tuvo electricidad por 4 horas o más.

Los alimentos descongelados que todavía tengan cristales de hielo pueden volverse a congelar o cocinarse. Si no, bótelos a la basura.

Haga lo siguiente con los alimentos o recipientes que pudieron haber estado en contacto con el agua de la inundación o tormenta.

Bote los siguientes alimentos a la basura:

- alimentos que tengan olor, color o textura inusuales;
- alimentos enlatados o envases que estén hinchados, abiertos o abollado
- alimentos que no estén en envases o latas a prueba de agua;
- alimentos enlatados en casa;
- alimentos en envases de cartón (como jugos, leche y fórmula de bebé);
- alimentos en envases con tapas de rosca, tapas a presión, tapas endentadas, tapas de media rosca, tapas abatibles y tapas que abren con botón.

Bote las siguientes cosas a la basura:

- tablas de cortar de madera;
- mamaderas de biberones y chupetes.

Limpie y desinfecte las cosas que toquen alimentos siguiendo un proceso de cuatro pasos:

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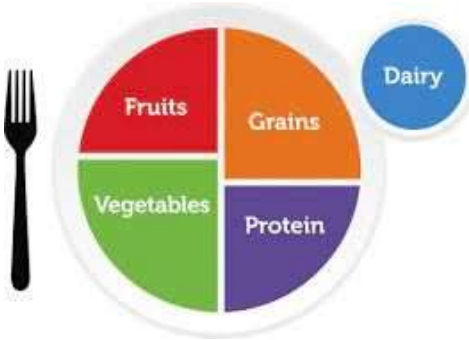
Limited Food Availability

Puerto Rico's supermarket shelves still empty eight weeks after Maria www.newsflare.com

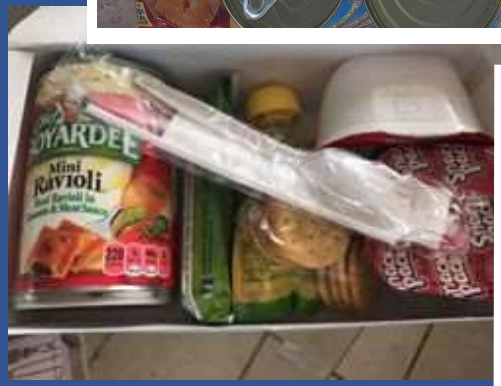
Food relief packages distributed by FEMA :
Shelf stable
Calorie-rich &
Nutrient Poor
HERR'S
SOUR CREAM & ONION
FLAVORED
150
POTATO CHIPS
Satisfaction Guaranteed

Federal initiatives must follow DGA



Aguadilla 10/20 - personal

Yabucoa 10/13 Jorge Figueroa Loza



10/4 Damary Burgos

Guaynabo10/26

(Various sources: Social media Twitter, Facebook, personal pictures)

Urban **Federal Distribution Center**

35 pallets

10 days observation

12 pallets missing information

Rural Distribution Center

23 pallets

12 pallets were shelf-stable modules

Rest of pallets were: disaster relief meals, FEMA menú, MRE, meals ready to heat)

(NSF & U of Colorado Rapid Response. 2017. PI: **Colón-Ramos)**

(Colón-Ramos U et al. 2019, JAND)

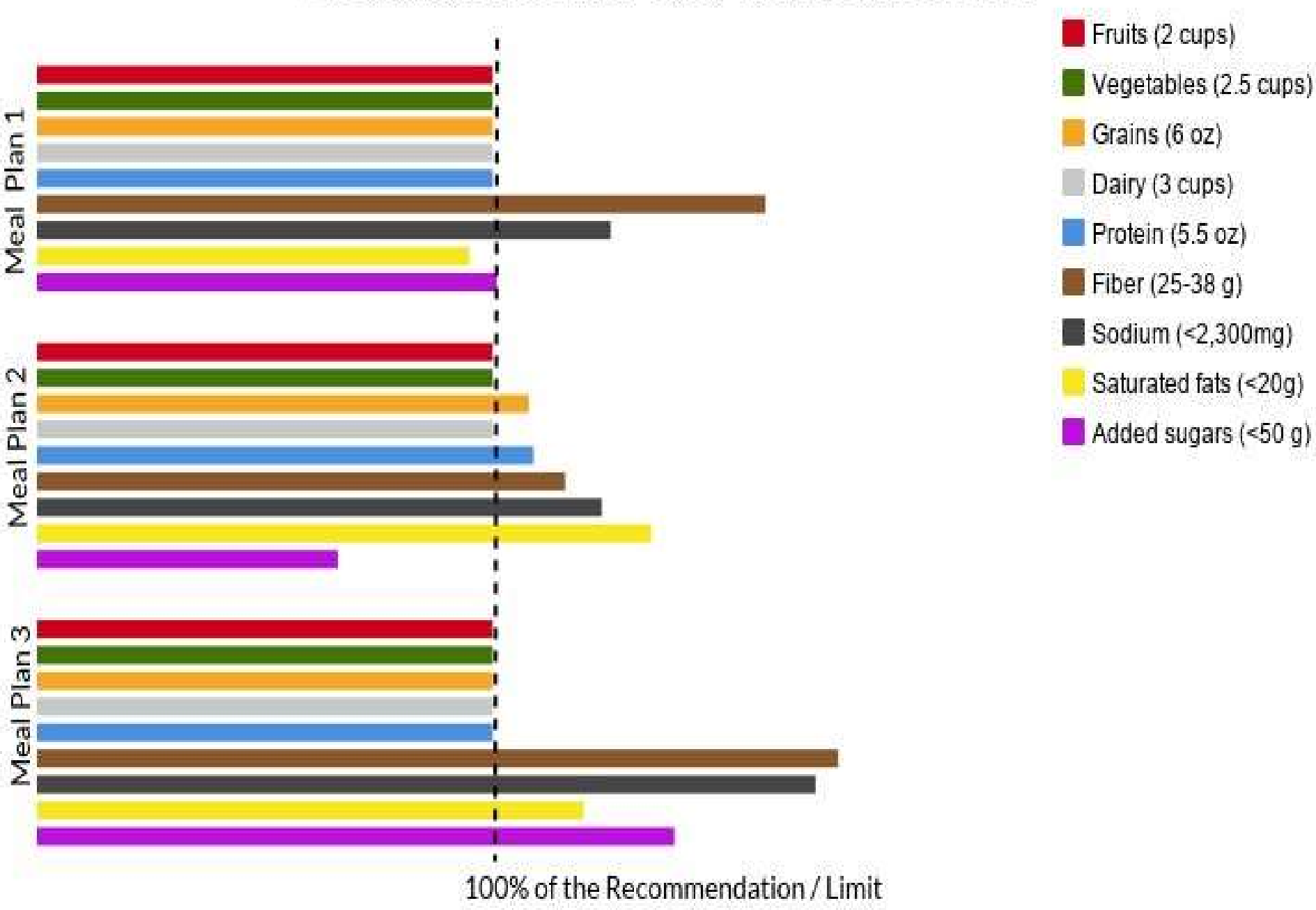
(Clay LA, Slotter R, Heath B, Lange Leach V, **Colón-Ramos U.** 2021, Disaster Med Public Health Prep. J)

Federal Relief after Hurricane Maria - November 2017

- Shelf-stable meal modules; ready-to-eat; ready to-heat;
- 50% of unique food items exceeded upper limits for sodium, saturated fat, or added sugars per serving

Colón-Ramos et al. JAND 2019

All meal plans met fiber recommendation, exceeded upper limits for saturated fats, added sugars or sodium



Is it realistic to provide shelf stable foods that are not harming nutrition?

Ensuring Nutrition Security During Disasters: An Update

- American Red Cross Feeding New Nutrition Committee 2018.
    - FEMA, USDA, Southern Baptist, WCK
- Nutritional Goals for Disaster Meals - Draft Summary and Technical Documents.

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THANK YOU

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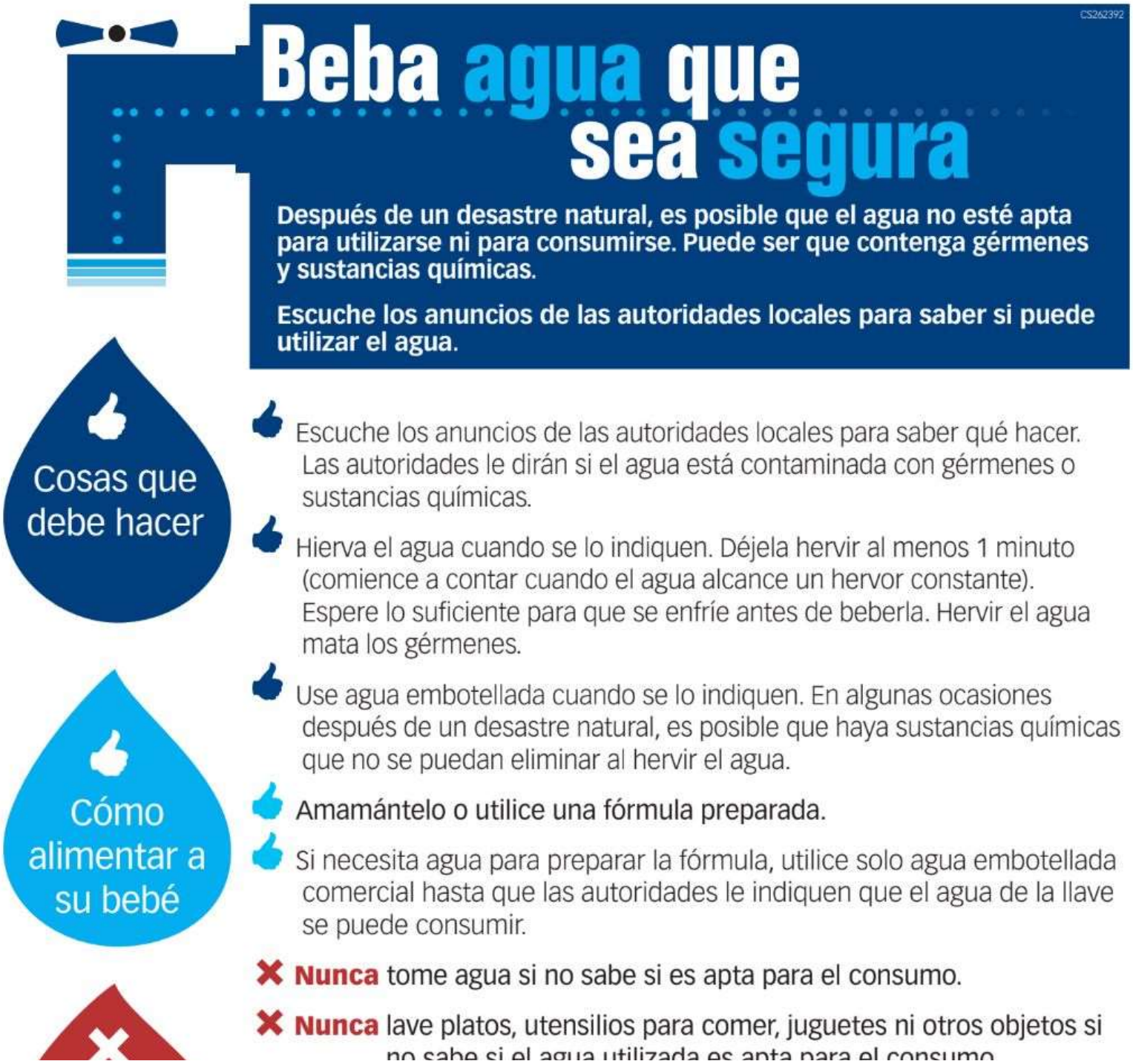
Drink Safe Water

Boil water

Use bottled water

Never use water if you don't know where it comes from



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The reality on the ground was different…

20k pallets bottled water were shipped & never used

"Storm of Controversy: What Really Happened in Puerto Rico," CNN 2018

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