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A blurred background image showing a person's hands in a kitchen, using a knife to chop vegetables on a cutting board. The focus is on the hands and the knife, with the background being out of focus.

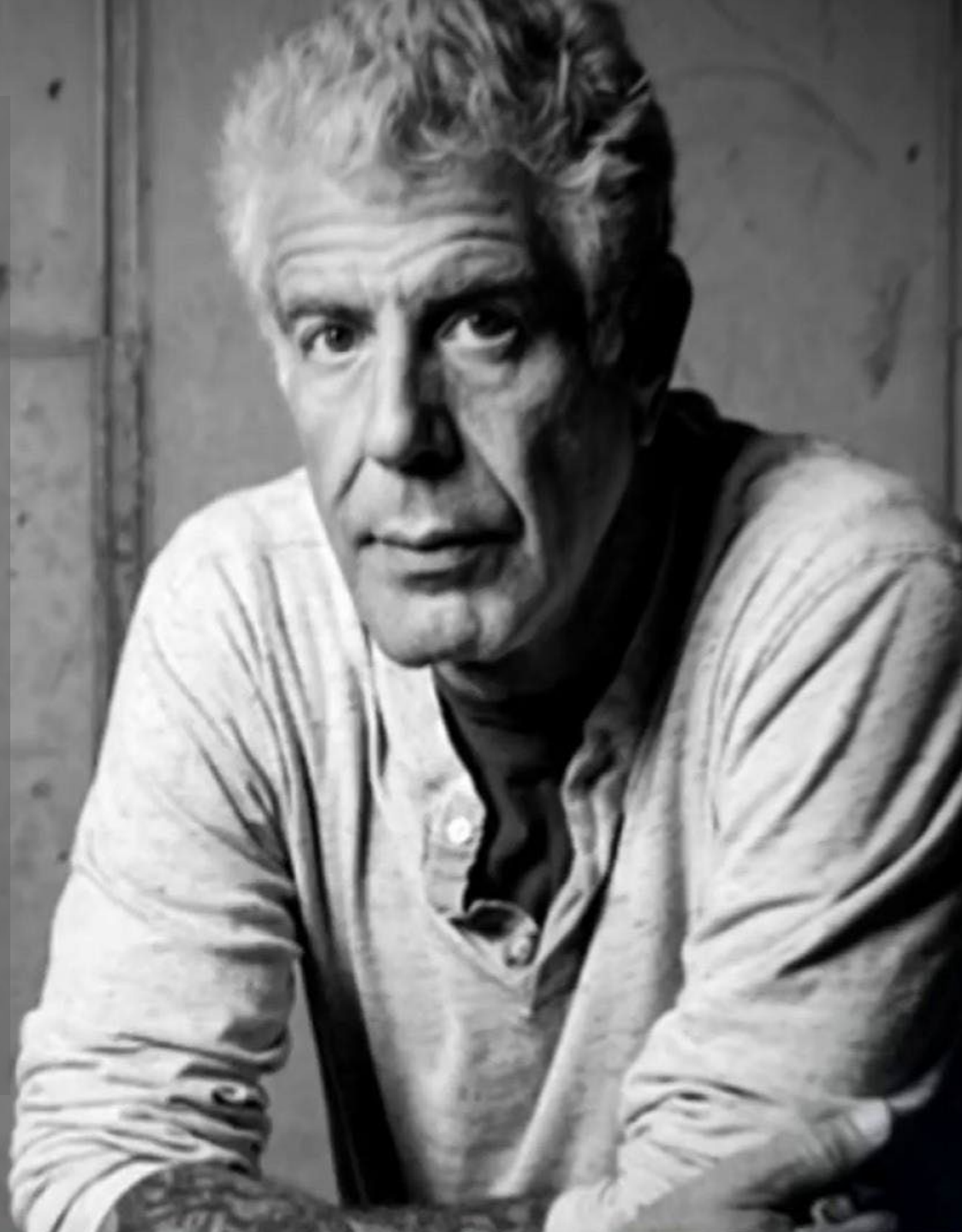
NC STATE UNIVERSITY

College of Agriculture and Life Sciences

Communication Breakdown: why communicating food safety science to impact behavior change is so hard

Ben Chapman, PhD | February 21, 2020

“I've long believed that good food, good eating, is all about risk. Whether we're talking about unpasteurized Stilton, raw oysters or working for organized crime 'associates,' food, for me, has always been an adventure”



Food is risky







Printed for R. Ware, T. Longman, S. Birt, C. Hitch, J. Hodges,
J. & J. Rivington, J. Ward, W. Johnston, & M. Cooper.

THE
Compleat Housewife :
OR,
Accomplish'd Gentlewoman's
COMPANION.

BEING
A COLLECTION of upwards of Six Hundred
of the most approved RECEIPTS in

COOKERY,	CAKES,
PASTRY,	CREAMS,
CONFECTIONARY,	JELLIES,
PRESERVING,	MADE WINES,
PICKLES,	CORDIALS.

With COPPER PLATES curiously engraven for
the regular Disposition or Placing the various
DISHES and COURSES.

AND ALSO
BILLS of FARE for every Month in the Year.

To which is added,
A COLLECTION of above Three Hundred Family RECEIPTS
of MEDICINES: viz. *Drinks, Syrups, Salves, Ointments,*
and various other Things of sovereign and approved Efficacy
in most Distempers, Pains, Aches, Wounds, Sores, &c.
particularly Mrs. Stephens's Medicine for the Cure of the Stone
and Gravel, and Dr. Mead's famous Receipt for the Cure of a
Bite of a mad Dog; with several other excellent Receipts for
the same, which have cured when the Persons were disordered,
and the salt Water fail'd; never before made publick; fit
either for private Families, or such publick-spirited Gentle-
women as would be beneficent to their poor Neighbours.

By E. SMITH.

THE FOURTEENTH EDITION.

To which is now first prefixed,

DIRECTIONS for MARKETING.

AMERICAN COOKE

OR THE ART OF DRESSING

VIANDS, FISH, POULTRY and VEGETABLES,

AND THE BEST MODES OF MAKING

PASTES, PUFFS, PIES, TARTS, PUDDINGS,
CUSTARDS AND PRESERVES,

AND ALL KINDS OF

C A K E S,

FROM THE IMPERIAL PLUMB TO PLAIN CAKE.

ADAPTED TO

AND ALL G

By Am

AN AMER

PUBLISHED ACCORDING TO ACT OF CONGRESS.

HARTFORD:

PRINTED BY HUDSON & GOODWIN.

FOR THE AUTHOR.

1796.

Minced Pie of Beef.

Four pound boild beef, chopped fine, and salted ;
six pound of raw apple chopped also, one pound beef
fuet, one quart of Wine or rich sweet cyder, one
ounce mace, and cinnamon, a nutmeg, two pounds
raisins, bake in paste No. 3, three fourths of an hour.

Tells How to Kill Trichinae

Department of Agriculture Car-
ries on Experiments With
Aid of Packers.

MAKE PORK SAFE TO EAT

Salt and Suitable Temperature Fatal
to Parasite—Time Element Is
Also Figured Out for Each
Variety of Product

Washington --A long series of ex-
periments to ascertain what treat-
ment, other than cooking, will thor-
oughly destroy trichinae and render
pork products safe for consumption
has recently been conducted by the
United States Department of Agricul-
ture. It is hoped that the findings
from these experiments will save
many from the dreaded disease
trichinosis. Hygienically, the custom
of eating uncooked pork and pork
products is regarded by the medical
profession as very much to be discour-
aged; but the toothsome summer
sausage, smoked sausage, pepperoni,

principles by the department's special-
ists that the consumer is himself re-
sponsible for the proper preparation
of fresh pork and pork products that
are usually cooked before eating, but
that the manufacturer is under obli-
gations to make sure that pork prod-
ucts sold as cooked products are prop-
erly cooked, or if of a kind custom-
arily eaten without cooking, to make
sure that the products are free from
live trichinae.

In the federal meat inspection regu-
lations it is therefore provided that
products cooked in establishments un-
der inspection must be cooked in ac-
cordance with methods approved by
the bureau of animal industry.

Most of the department's experi-
mental work was carried out in co-
operation with certain meat packing
establishments in Chicago. The in-
vestigators selected the methods of
preparing pork without cooking that
seemed likely to be efficacious in de-
stroying trichinae and at the same
time suited to practical requirements
of manufacture. Several new meth-
ods were devised.

The investigation shows that pork
products of the kinds customarily
eaten without cooking may be ren-



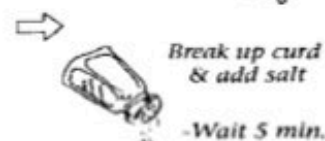
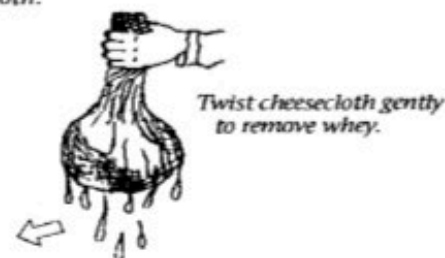
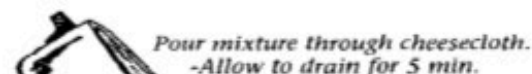
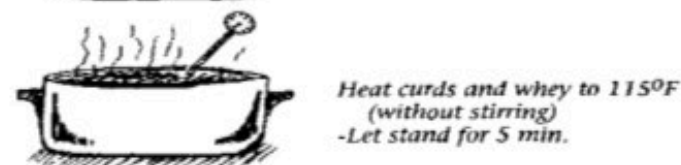
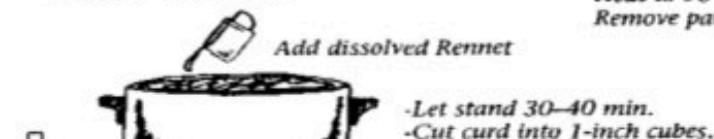
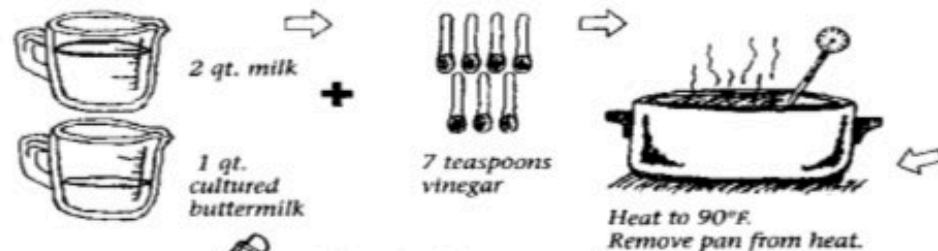
A Pacific Northwest Extension Publication

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Oregon State
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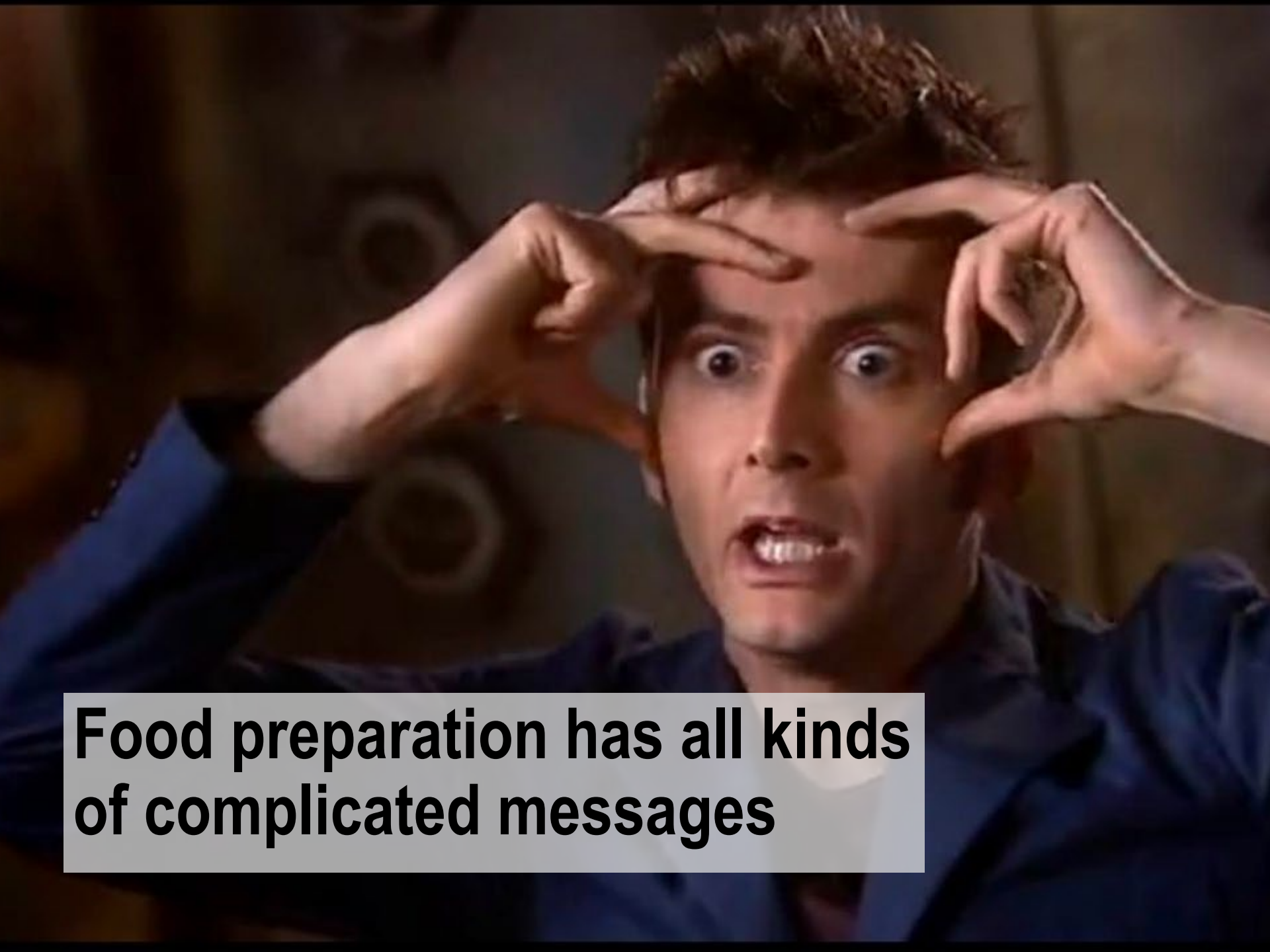
University of
Idaho

 One tablet Rennet into one cup of cold water



Form the cheese.
Remove from form.

Refrigerate**



Food preparation has all kinds of complicated messages



NC STATE

EXTENSION

Safe Handling Instructions

This product was prepared from inspected and passed meat and/or poultry. Some food products may contain bacteria that could cause illness if the product is mishandled or cooked improperly. For your protection, follow these safe handling instructions.



Keep refrigerated or frozen.
Thaw in refrigerator or microwave.



Keep raw meat and poultry separate from other foods.
Wash working surfaces (including cutting boards),
utensils, and hands after touching raw meat or poultry.



Cook thoroughly.



Keep hot foods hot. Refrigerate leftovers
immediately or discard.

What temperature should I cook frozen vegetables to?



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Frozen vegetables need just as much **heat** as fresh ones in order to caramelize and become roasted. Be sure your oven is set between 400 and 450°F to roast **frozen vegetables**, and that you don't place the **veggies** into the oven until that **temperature** is achieved. Nov 17, 2016

[How to Roast Frozen Vegetables - Tommy's Superfoods](https://tommyssuperfoods.com/roast-frozen-vegetables/)

<https://tommyssuperfoods.com/roast-frozen-vegetables/>



About this result



Feedback

People also ask

Do I need to cook frozen vegetables?



Assuming all **frozen veggies** need to be cooked. Some **frozen veggies** are best eaten as-is — no **cooking necessary**. We're talking thawed **frozen** corn tossed into fresh summer salads, or **frozen** cauliflower puréed into smoothies. ... In fact, **frozen vegetables** can help quickly chill dishes such as pasta salad. Jul 8, 2018

[Mistakes to Avoid When Cooking Frozen Vegetables | Kitchn](https://www.thekitchn.com/frozen-vegetable-mistakes-259663)

<https://www.thekitchn.com/frozen-vegetable-mistakes-259663>

Search for: [Do I need to cook frozen vegetables?](#)

PREPARATION

STOVETOP

Place contents of bag in $\frac{1}{4}$ to $\frac{1}{2}$ cup boiling, salted (optional) water. Bring to boil, stirring gently. Cover, reduce heat and simmer 4 - 5 minutes or until tender*. Drain, season to taste and serve.

MICROWAVE

Half of bag: Place frozen green beans in a microwave-safe 1-quart casserole dish. Add 2 tablespoons water, cover and cook on high setting 4 minutes. Stir and cook on high setting for an additional 5 - 6 minutes*. Drain, season to taste and serve.

Whole bag: Place frozen green beans in a microwave-safe 2-quart casserole dish. Add 4 tablespoons water, cover and cook 10 - 12 minutes*, stirring twice during cooking. Drain, season to taste and serve.

Note: *For food safety and best product quality, cook to 160°F . Microwave cooking times may vary depending on the brand of appliance used. Please consult the manufacturer's instructions.

Avoid overcooking. Keep frozen until ready to use. Do not thaw and refreeze.

Cooking Instructions

Stove Top:

Place frozen corn into 1 cup of boiling water. Bring to second boil. Reduce heat, cover and cook gently, 8 to 10 minutes or until tender. Do not overcook. Drain and season to taste.

Microwave:

Place frozen corn into a 1-1/2 quart glass casserole. Add $\frac{1}{4}$ cup of water. Cover and microwave on high for 6 minutes, stirring halfway through cooking time. Drain and season to taste.
Note: Microwave oven times may vary (depending on the power of your microwave)

For proper food safety and quality follow these directions and cook to a minimum temperature of 165°F .

**KEEP FROZEN
DO NOT THAW AND REFREEZE**

PREPARATION

Stovetop: In a medium saucepan, bring $\frac{1}{4}$ to $\frac{1}{2}$ cup water to a boil. Add frozen kale to saucepan and again bring to a boil. Cover, reduce heat to medium and simmer 4 - 6 minutes or until tender. Drain, season to taste and serve.

Microwave: Place frozen kale in a microwave-safe dish. Add 4 tablespoons of water, cover and cook on high setting 7 - 9 minutes or until tender, stirring twice during cooking. To cook half the bag, add 2 tablespoons water and cook 4 - 6 minutes. Drain, season to taste and serve.

Note: For food safety and best product quality, cook to 160°F . Microwave cooking times may vary depending on the brand of appliance used. Please consult the manufacturer's instructions.

Avoid overcooking. Keep frozen until ready to use. Do not thaw and refreeze.



Ben Chapman

@benjaminchapman



@FDAfood, thanks for the follow. Do you have recommended safe end point temperatures for NRTE frozen vegetables when preparing them at home? I think it's somewhere between 135F, 165F, piping hot and check the manufacturers directions. Asking for a friend.

10:01 AM - 15 Feb 2019

5 Likes



2



5







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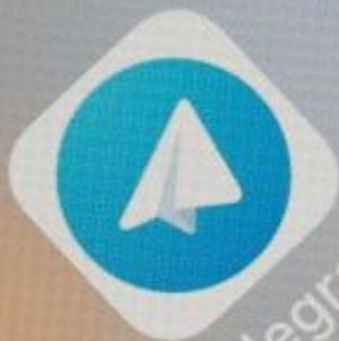
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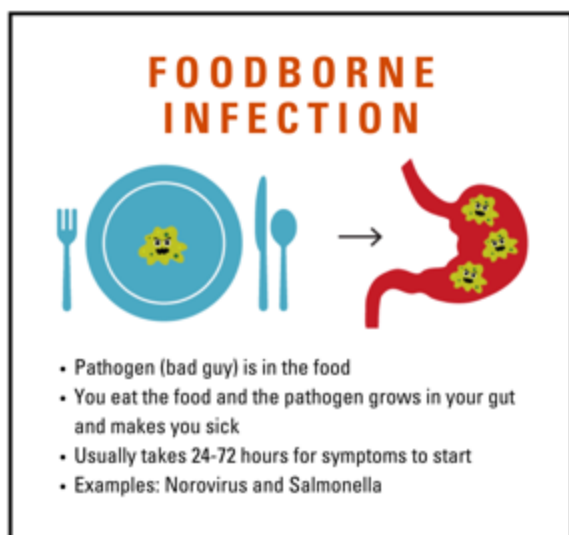
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Messages need to be relevant, concise and visually appealing.

- Identify the content and audience
- Craft message and visuals for the appropriate platform
- Peer review



Safe Plates Food Safety Information Center

Posted by Hootsuite

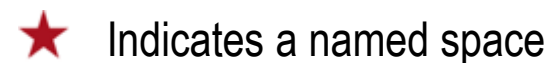
February 10 at 5:00 PM · 🌐

Why can you get sick from eating a turkey sandwich that has been left out on the counter all day, but not from a peanut butter sandwich? Glad you asked. Turkey is a Time/Temperature Control for Safety (TCS) food. 🍔

Turkey sandwiches, salads, custard filled doughnuts, shrimp and grits, etc are foods that have just the right amount of moisture and a neutral/slightly acidic pH. Why does that matter? Well, with all of these foods, you need to think of two factors to control: time and temperature to minimize the growth of toxins and tiny microbes that will make you sick. Next month we will explore more how time and temperature are factors with the food you eat.

2020









How do you make kimchi?







The End