

FOOD SAFETY 101

Today's Topics are

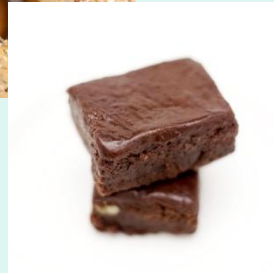
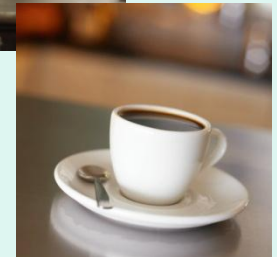
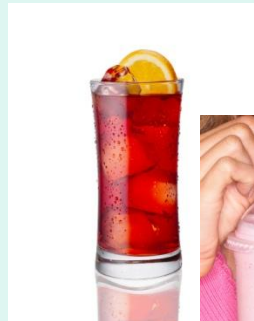
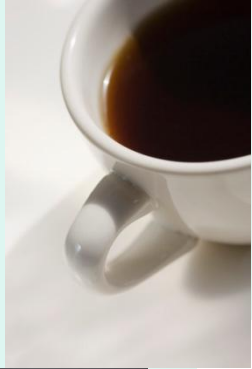


- **Personal Hygiene**
- **Cross-contamination**
- **Foodborne disease prevention**
- **Time/Temp Abuse Control**
- **The Big 5**
- **Sanitation principles**



COFFEEHOUSE

Bridges Coffeehouse Menu



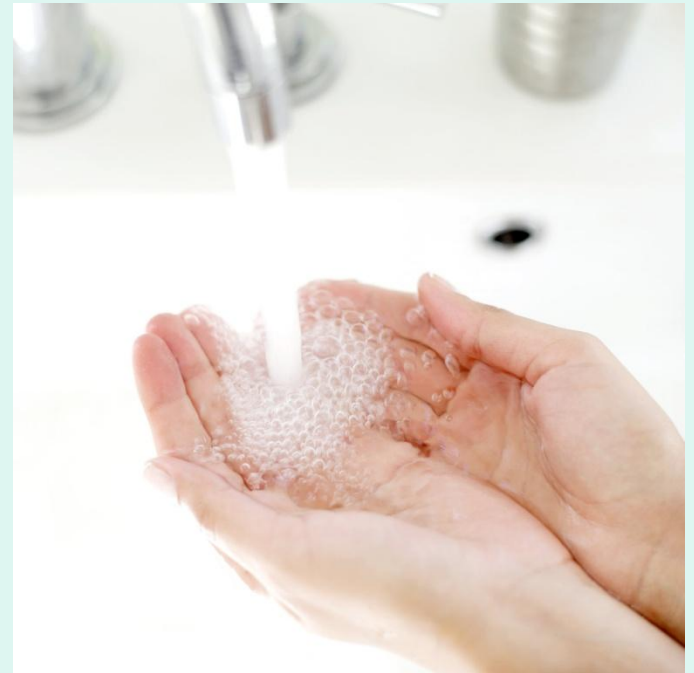
“This is just a coffeehouse with a simple menu.”

Why should we worry about food-borne illness?

~ Church growth means more people

~ Causes serious illness

~ Our church family include the general, healthy population AND ALSO those who are vulnerable - children, the elderly, pregnant women and people with compromised immune systems



TYPES OF CONTAMINATION

- **BIOLOGICAL**
 - viruses, bacteria, parasites, fungi
- **PHYSICAL**
 - Glass, metal shavings, toothpicks
- **CHEMICAL**
 - pesticides, soaps, hand lotions

How Can Contamination Occur?



- Person-to-food
- Equipment-to-food
- Food-to-food



Which one is of greatest concern to Bridges? *You're right! Person-to-food*

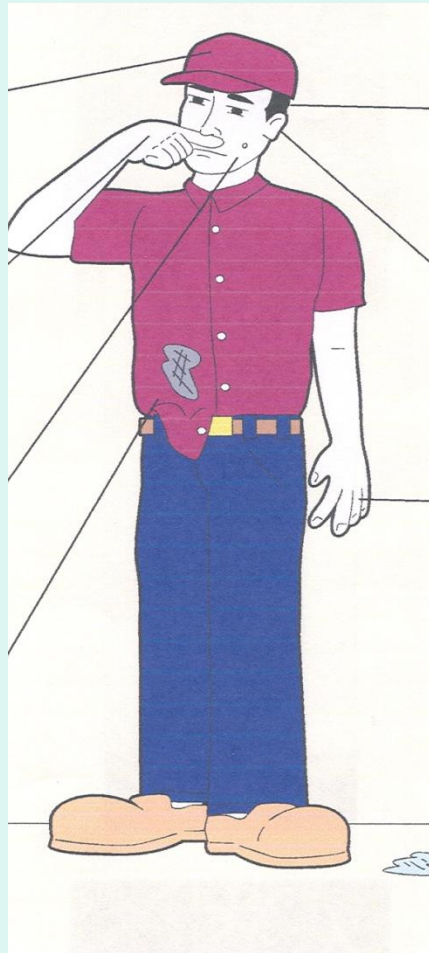
HOW FOOD CAN BECOME CONTAMINATED

Touching clothes

Wiping or touching nose

Touching open sore

Wear dirty clothes



Touching hair

Rubbing ear

Coughing, sneezing into your hand

Spitting on the floor

Let's talk more personal hygiene!

Hair in
food?

Hands
touching
clothes



Why the
apron? TO
PROTECT
food from
pet hair and
dirt! NOT
to protect
your
clothes!

HANDWASHING



What? How?
Where? When?

Exercise:

When should you wash your hands?

Before & after what activities?

(list as many as you can in 2 minutes)

- | | |
|-----------|-----------|
| #1. _____ | #5. _____ |
| #2. _____ | #6. _____ |
| #3. _____ | #7. _____ |
| #4. _____ | #8. _____ |

Glove Etiquette



- Wash hands BEFORE putting on gloves.
- ALWAYS use gloves with RTE (ready-to-eat) foods
- Same hygiene rules apply to hands AND gloves – don't touch clothing, your face, or used cups, etc.
- Wear gloves to put on coffee cup lids.

3. Don't Cross – Contaminate!



Don't touch face, clothes, jewelry, or dirty surfaces.



What not to wear!



Drinking on the job - doesn't look professional or clean



Don't eat
behind
counter

Not acceptable
– lips touch lid
& fingers touch
mouth

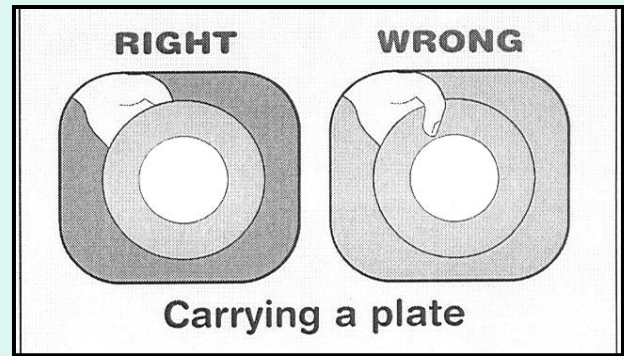
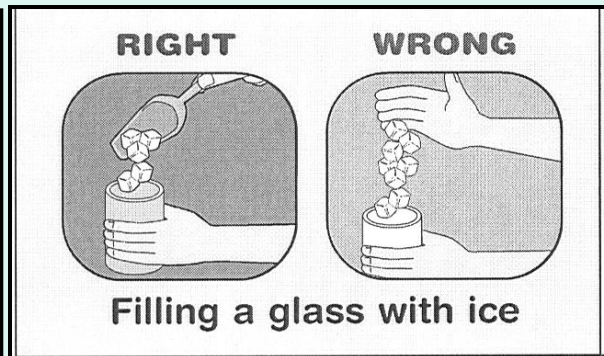
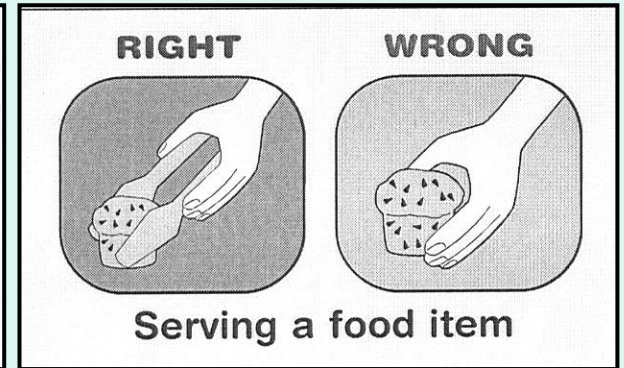
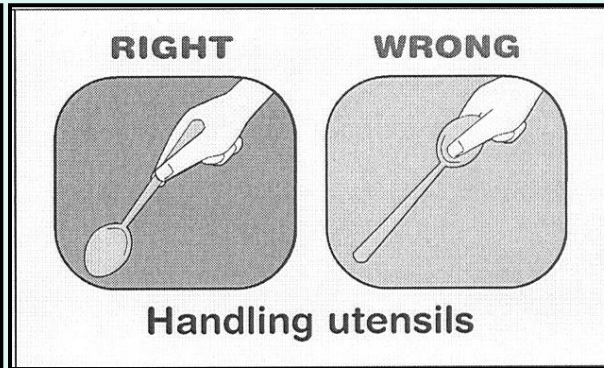
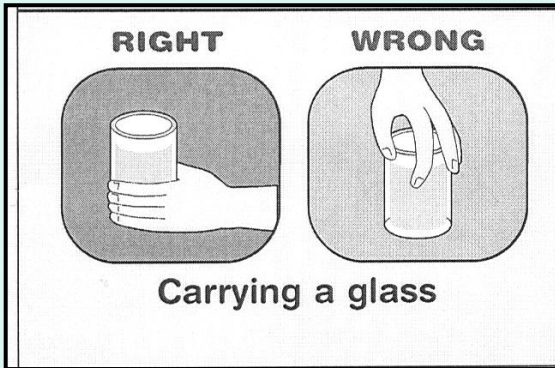
Straw keeps
lips and hands
apart – to
prevent cross-
contamination.



Acceptable
on lower
shelf

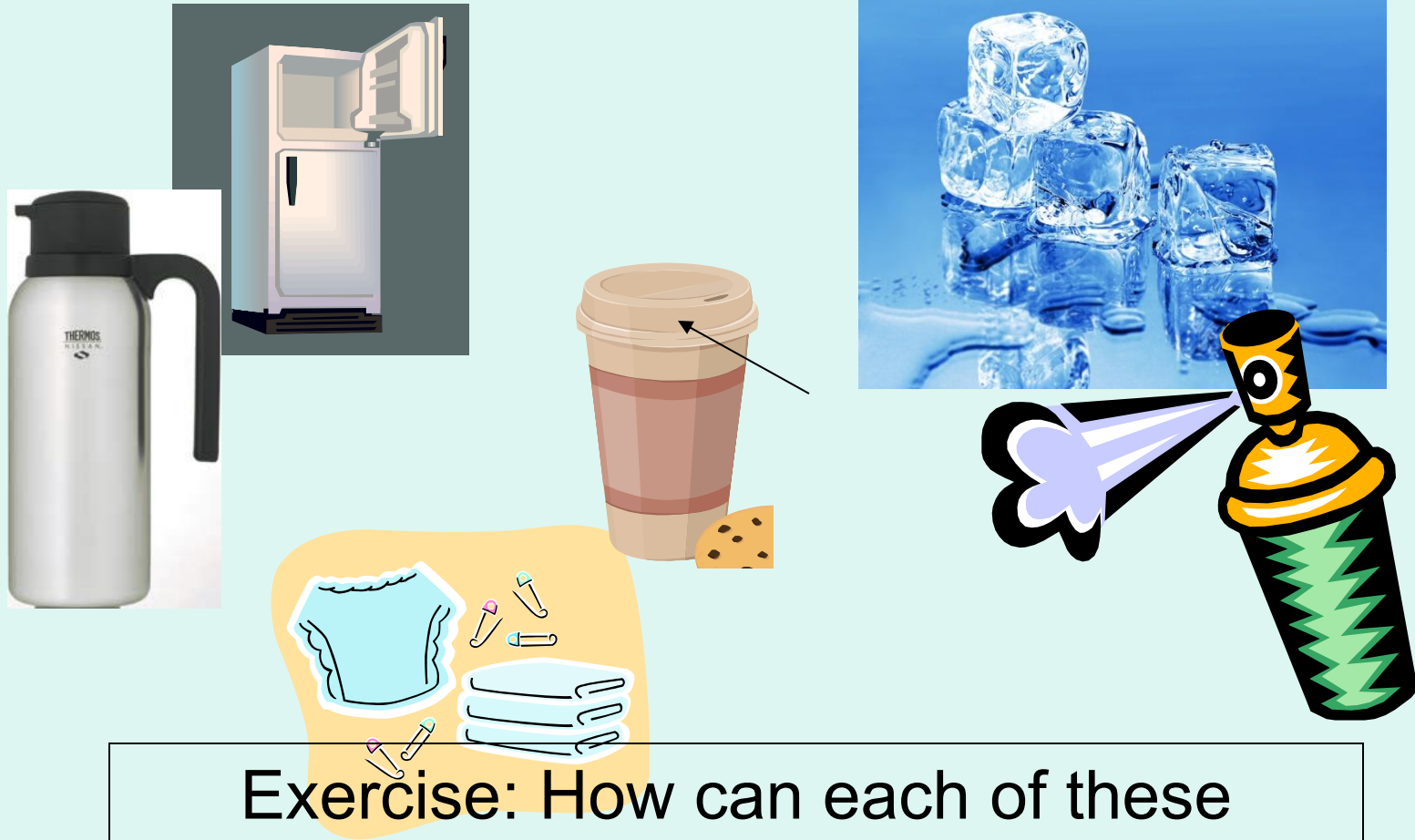
Exercise – Proper way to Serve Food

Proper (and improper) way to serve food



To NOT contaminate!

CROSS-CONTAMINATION



Exercise: How can each of these items cross-contaminate food?

CROSS-CONTAMINATION

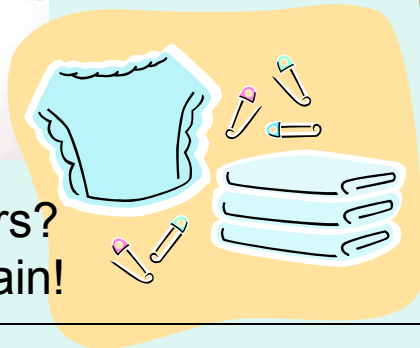
By mixing old dairy with old. Never refill creamer carafe. Get a new one.



Properly separate hazardous and RTE food



Use gloves



Changing diapers?
Wash hands again!



Don't store scoops in ice machine. Never reach in with bare hands.



Keep cleaners away from food

Exercise: Discuss how each of these items might cross-contaminate food.

Money – the Reality is disgusting



- New money has anti-bacterial properties so it is relatively clean...
- However after handling it can be filthy, even containing staphylococcus bacteria, active flu virus and drugs such as cocaine. Therefore...
- We dedicate a person who doesn't wear gloves to handle money. Cashiers who also provide coffee must wear 1 glove to handle the cup/lid and that glove doesn't touch money.

Hazard Analysis

Hazardous Food

(raw meat, seafood, etc.)

We do not serve ANY “Hazardous Food.”



Potentially Hazardous Food

(anything with fresh dairy)



Non-Hazardous Food

(most baked goods, coffee beans, coffee, potable water, bottled water or juices, tea bags, sugar, sweeteners)

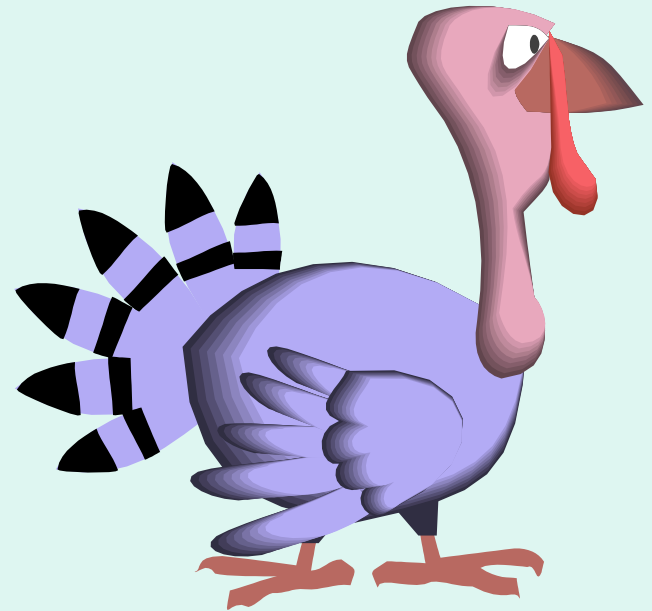
Exercise: Use paper menu photo cards to categorize our menu items.

RTE = Which ones are Ready To Eat Foods?



- F** • Food, especially high-protein (dairy)
- A** • Acidity, neutral (7) to a little acidic (dairy: Ph of 6.6)
- T** • Temp – 41⁰– 135⁰ (holding dairy)
- T** • Time – 2+ hours (at kiosk)
- O** • Oxygen (air in creamer carafes)
- M** • Moisture > .86 (dairy!)

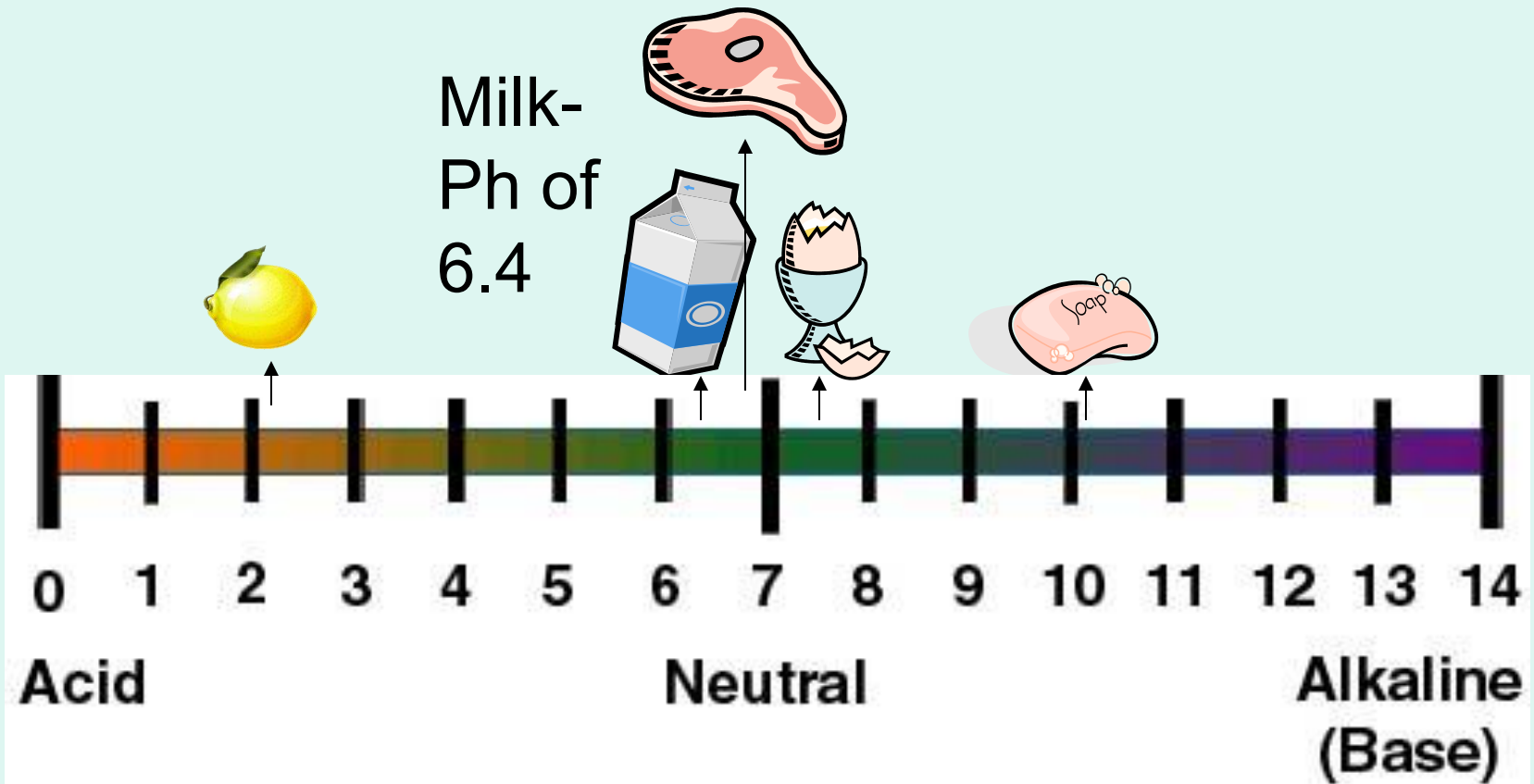
Ideal conditions for bacterial growth - FAT TOM



TIME / TEMP ABUSE CONTROL

- **KEEP HOT FOOD HOT AND COLD FOOD COLD!**
- $41^{\circ}\text{F} - 135^{\circ}\text{F} = \text{danger zone (esp. } >70^{\circ} \text{)}$
- Hold food in danger zone no longer than 2 hours
- Bacteria grows exponentially
- Also relevant at home, parties, potlucks, holiday dinners, etc.

A stands for “acidity.” Ph chart.
Bacteria like a Ph of 6.6 - 7.5



PROPER STORAGE prevents Cross-Contamination

- **REFRIGERATION:** 32⁰F to 38⁰F
- **FREEZER:** 0⁰F to -10⁰F
- **DRY GOODS:** 50⁰F to 70⁰F
- Cleaners **ALWAYS** on bottom shelf
- Cleaners **NEVER** share shelf with food



Lab: Thermometer Calibration

MATERIALS NEEDED: ice, cold water, thermometer, small bucket or large cup.

- Make an ice slurry in container (fill about $\frac{1}{2}$ full of ice. Add small amounts of water, until it is the consistency of a slushy. This is an **ice slurry**.)
- Add thermometer, but do not submerge. (It should be able to register 0°F - 200°F) for up to 3 minutes.
- Thermometer should register 32°F during that time.
- You can properly calibrate thermometer by using pliers to make small adjustments to the nut directly underneath the dial until it reads 32°F .



Listeria

- Reason why opened milk has 7 day shelf life.
- Is in dirt - can be transferred into refrigerator
- Serious for pregnant women



Staphylococcus, in 20-50% of healthy people, on skin / nose.

Can be on skin even after washing hands - reason to wear gloves with RTE foods.



BIG 8 ALLERGENS

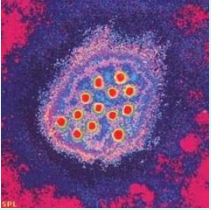
- PEANUTS
- TREE NUTS
- EGG
- MILK
- SOY
- WHEAT
- FISH
- SHELLFISH

All volunteers need to know these. Watch for swelling, choking, rash, etc.

FOOD BORN ILLNESSES

- There are **MANY** food born illnesses, either bacteria, viruses, parasites or fungi.
- We've talked about two, (Listeria and Staphylococcus) now we'll cover the BIG ones.
- You need to recognize the symptoms of these BIG 5 illnesses. The health department requires that you report to the Person In Charge (PIC) if you are diagnosed with one of them and you may be excluded or restricted from serving for a period of time. See Robin for more information.

The Big 5 Food Born Illnesses



Hepatitis A Virus

Fecal contamination,
tired and jaundiced



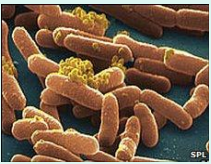
E-coli 57 bacteria –

changing diapers, not
washing hands after
using restroom



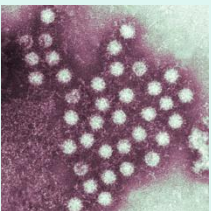
Shigella bacteria

**Poor restroom habits
unsanitary food handling.
Invades cells, destroys
tissue**



Salmonella –
pretty name, nasty
personality!

**SYMPTOMS: Does the term
“sick as a dog” mean
anything to you?**

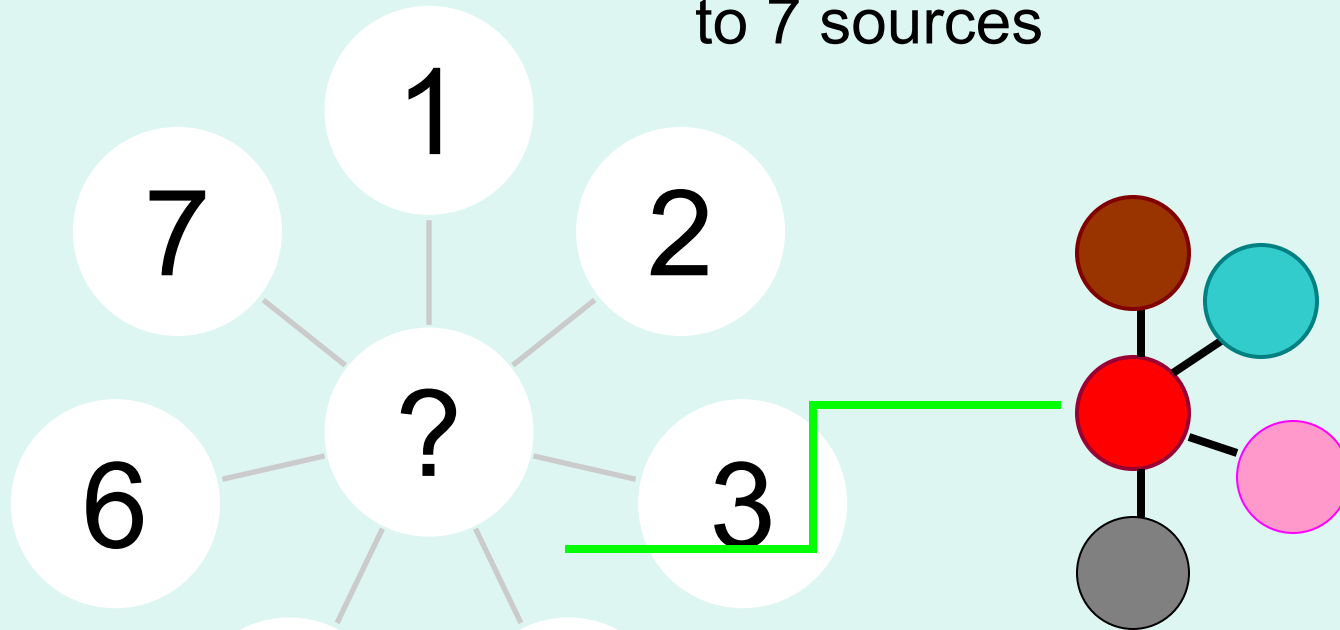


Norovirus

**Most serious for WBC - it
is VERY contagious and
mistaken for stomach flu.
Extremely nasty
symptoms. You won't
forget that you had it.**

Norovirus: How contagious is it?

1 contaminated hand can spread active germ particles to 7 sources



And each of those 7 can spread it to 4 others!

How many surfaces do YOU touch at church each Sunday?

Symptoms That We Can't Ignore

- Diarrhea
- Vomiting
- Sore throat with fever (infection)
- Jaundice – yellow skin or eyes
- Exposed lesions with pus (infection)
- Discharge from mouth, nose or eyes (sneezing or coughing)

Go over Healthy Volunteer Form – needs to be completed and turned in for files.

Proper Sanitization prevents Cross-Contamination

- Sanitize BEFORE and **AFTER** food prep
- Keep purses and cell phones off counters
- QUAT tester strips determine if QUAT is effective - 200ppm – up to 4 hours.
- Use 3-compartament sink properly - rinsing keeps soap out of QUAT
- Keep cleaning cloths in QUAT
- Keep Chlorine bleach as alternative (100ppm)

Lab: Sanitization – Using Test Strips to Confirm QUAT Ratios

- **MATERIALS NEEDED:** QUAT test strips, QUAT (ammonia)/water mixture either in Sink 3 of 3-compartment sink or in **red QUAT** bucket.
- Tear a ~1-1/2” strip from the test strip roll and dip/stir it into the mixture for about 15 seconds. (Safe for hands.)
- Remove strip and compare its color to the QUAT test chart. **green is too strong**, **orange is too weak**.
- A **light olive color** (middle) indicates the proper ratio of **200ppm**.



So, remember
These 4
Important food
safety rules. . .

1. Washed Hands are Safer Hands



10 seconds
scrubbing

10 seconds rinsing

(**AND** . . . After
using the
restroom, use
paper towel to
open the restroom
door!

2. Say “yuck” to bare hands on RTE foods!



3. Keep Cold Food Cold and Hot Food Hot!



4. Avoid Cross-Contamination

- Clean and Sanitize Food Contact Surfaces
- Separate old and new
- Store Properly - cleaners or unclean items away from potentially hazardous RTE food
- Use good personal hygiene



**What can happen when a break
occurs . . .
between what we know –
and
what we do?**

Group Exercise: Go over each of 4 real outbreak examples. What went wrong in each one?

SINGLE WORKER CAUSES OUTBREAK



- 37 cases of viral GI illness from cold salad bar items at cafeteria of Minnesota college, 2000
- A food worker with symptoms called in sick; felt better later so returned to work the next day

WHAT WENT WRONG?

Worked remainder of the week with extensive bare-hand contact of salad items

Foods Fecally Contaminated by Infected Worker Are Temperature Abused Leading to Outbreak

- New York in 1981:
- *Y. enterocolitica*O:8 37
persons including head cook
and kitchen staff; Five
hospitalized for appendicitis
- Powdered milk and dispenser
contaminated when food
workers cleaned and repaired
broken spigot
- Reconstituted milk held 24
hours under cool conditions but
allowed growth of *Yersinia*



**WHAT WENT
WRONG?**

**Worker didn't wash
hands after using the
bathroom.**

Foods Nasally Contaminated by Infected Worker Temp Abused – Leads to Outbreak

- 1979 convention in Florida: outbreak of pharyngitis, 72-231 ill, including waiters and cooks
- Cook prepared chicken salad **a day prior to symptoms**
- Cooked chicken refrigerated overnight in a deep container
- Opportunity for growth of the Streptococcus



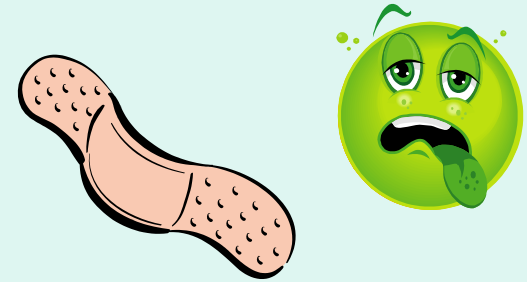
WHAT WENT WRONG?

No indication cook wore gloves - temp abuse.



Hand Infection

- Flight attendant and 196 passengers - rapid onset of vomiting/diarrhea after eating ham and cheese omelets served during a flight from Tokyo to Paris
- Cook who had infected finger prepared ham
- Ham left at room temperature for six hours
- *S. aureus* isolated from food samples



WHAT WENT WRONG?

Should cook have worked with infected finger – even with band-aid? Was there time/temp abuse?



Thank you for serving in
Woodside's Bridges Coffee
Ministry.

