Are Age-old Risk Communication Principles Standing the Test of Time (and the Internet)?

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In Short -

- Yes, basic risk communication principles are standing the test of time.
  - Human nature has not changed
  - What people want to know when faced with risks and uncertainty has not changed

- However, the **implementation** of basic risk communication principles has evolved in the era of the Internet and Social Media.
Principles:

• Predict
• Preparedness and Planning
• Prevent
• Perception
• Purpose
• Psychology
• Process that is Transparent, Open, and Responsive
• Participation of Stakeholders
• Provide Useful, Accurate, Timely, Targeted Information
• Preempt Bad Information
• Put Risks in Perspective
• Promote Appropriate Actions
• Personal
• Pre-test Messages
• Plurality of Languages and Cultures
• Public Monitoring
• Pivot
• Post-mortem
Overall Goal of Risk Communication:

- Help people respond appropriately to risks.
  - What people?
    - With whom should we be communicating?
  - What risk?
    - Which risks are worth considering?
    - Who determines this?
  - What is the appropriate response?
    - Who decides?
    - On what basis?

The Internet and Social Media have a large influence on the answers to these questions
Who is our Audience?

- According to 2015 Pew Research Center data:
  - 84% of American adults use the Internet
    - Equal percentages of men and women
  - But, use differs by:
    - Age
    - Class
    - Race and Ethnicity
    - Community Location
Young Adults Are Most Likely to Use The Internet, but Seniors Show Faster Adoption Rates

Among all American adults, the % who use the internet, by age

PEW RESEARCH CENTER
Income and Education

Those In Higher-Income Households Are Most Likely To Use Internet

Among all American adults, the % who use the internet, by income

- $75K+: 97, 95
- $50K–$74,999: 85
- $30K–$49,999: 74
- Less than $30K: 58, 72
- Less than $30K: 34


While Less-Educated Adults Are Catching Up, Their Internet Adoption Rates Are Still Below Those of College Graduates

Among all American adults, the % who use the internet, by education level

- College+: 95, 90
- Some college: 76
- HS grad: 66
- Less than HS: 67
- Less than HS: 40
- Less than HS: 19


Race/Ethnicity

English-speaking Asian-Americans Are the Most Likely To Report Internet Usage
Among all American adults, the % who use the internet, by racial/ethnic group

- Asian (English Speaking):
  - 72% in 2000
  - 97% in 2015

- White:
  - 53% in 2000
  - 85% in 2015

- Hispanic:
  - 38% in 2000
  - 68% in 2015

- Black:
  - 46% in 2000
  - 78% in 2015

Starting in Dec 2008, surveys were conducted in both English and Spanish. Data for 2008 incorporates one survey reflecting this change.
Community Location

Rural Citizens Are Less Likely To Use Internet

Among all adults, the % who use the internet, by community type


PEW RESEARCH CENTER
Smartphone Use

- 64% of Americans now have a Smartphone
  - Ownership highest among
    - Young adults
    - Those with Higher Incomes and Education
    - Those living in Urban/Suburban areas

Pew Research Center, April, 2015, “The Smartphone Difference”
Available at: http://www.pewinternet.org/2015/04/01/us-smartphone-use-in-2015/
68% of smartphone owners use their phone at least occasionally to follow along with breaking news events,
- 33% say that they do this “frequently.”
62% have used their phone in the past year to look up information about a health condition.
40% to look up government services or information.
30% to take a class or get educational content.

Pew Research Center, April, 2015, “The Smartphone Difference”
Available at: http://www.pewinternet.org/2015/04/01/us-smartphone-use-in-2015/
Smartphone Dependent

19% of Americans rely on their Smartphones to some degree to access online information/services

- 7% are “Smartphone Dependent”
  - Own a Smartphone
  - No broadband access at home
  - Relatively few options for getting online other than their cell phone

- Most likely to be in this category:
  - 18-29 years of age
  - <$30,000 income
  - Non-Whites

Pew Research Center, April, 2015, “The Smartphone Difference”
Available at: http://www.pewinternet.org/2015/04/01/us-smartphone-use-in-2015/
Internet Access is Growing
But
Traditional Media Remains Extremely Important
Create a Presence on / Monitoring Social Media

• Not possible to have a meaningful presence everywhere
  – Once you create an online presence, its difficult to back away

• Meaningful social media monitoring may need to be focused

• Bottom line – Choosing the right platforms is important
  – These are constantly evolving

• Focus on appropriate audience segmentation
  – Understand which audiences use which platforms, when, for what purposes
SOCIAL MEDIA EXPLAINED...

BY Donuts

TWITTER: I'M EATING DONUTS
FACEBOOK: I LIKE DONUTS
FOURSQUARE: THIS IS WHERE I EAT DONUTS
YOUTUBE: WATCH ME EAT DONUTS
LINKEDIN: I AM VERY SKILLED AT EATING DONUTS
GOOGLE+: I AM A GOOGLE EMPLOYEE WHO EATS DONUTS
MYSPACE: WHERE'D ALL THE OTHER DONUTS GO?
INSTAGRAM: HERE IS A VINTAGE PHOTO OF MY DONUT
QUORA: WHY AM I EATING DONUTS?
TOUT: WATCH ME EAT DONUTS REALLY FAST

PHOTOVINE: SEE GOOGLE'S FAILED DONUT PHOTO
PINTEREST: HERE IS MY DONUT RECIPE
TUMBLR: HERE IS MY BRIEF STORY ABOUT DONUTS
REDDIT: READ ABOUT HOW I EAT DONUTS
YELP: READ A REVIEW OF MY DONUT
FLIKR: ADD MY PHOTO OF DONUTS
PRWEB: PRESS RELEASE: I ATE A DONUT
STUMBLEUPON: EVER TRIED A FISH DONUT?
CRAIGSLIST: ANYONE WANT TO BUY A DONUT?
Number of Users of Social Media

Users in Millions

<table>
<thead>
<tr>
<th>Social Media</th>
<th>Users in Millions</th>
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<tbody>
<tr>
<td>FACEBOOK</td>
<td>1550</td>
</tr>
<tr>
<td>WHATSAPP</td>
<td>900</td>
</tr>
<tr>
<td>QQ</td>
<td>860</td>
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<td>QZONE</td>
<td>800</td>
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<td>WECHAT</td>
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<td>INSTAGRAM</td>
<td>555</td>
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<td>Baidu Tieba</td>
<td>320</td>
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<td>Sina Weibo</td>
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<td>Viber</td>
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<td>LINE</td>
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<td>Snapchat</td>
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<td>LinkedIn</td>
<td>100</td>
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<tr>
<td>Other</td>
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Pop Quiz

Weibo
225 million users

Qzone
663 million users
KFC Sues Chinese Companies Over Alleged Eight-Legged Chicken Rumors

Restaurant says three companies ‘misleading the consumer’ on Internet

A pedestrian walks past a KFC restaurant in Qilhar city, northeast China in this November 2014 photo. KFC said it is suing three companies in China for allegedly spreading rumors about the quality of its food—including that its chickens have eight legs. Photo: ZUMA PRESS
Internet hoax: KFC said one of the best-known fake rumors was that chickens used by the company are genetically modified and have six wings and eight legs (computer generated image)
Our Audiences are International

- When the FDA announces a product recall
  - People in other countries often contact their own food authorities to determine if the product is sold there.
Food safety

From Wikipedia, the free encyclopedia

Food safety is a scientific discipline describing handling, preparation, and storage of food in ways that prevent foodborne illness. This includes a number of routines that should be followed to avoid potentially severe health hazards. In this way, Food Safety often overlaps with Food Defense to prevent harm to consumers. The traces within this line of thought are safety between industry and the market and then between the market and the consumer. In considering industry to market practices, food safety considerations include the origins of food including the practices relating to food labeling, food hygiene, food additives and pesticide residues, as well as policies on biotechnology and food guidelines for the management of governmental import and export inspection and certification systems for foods. In considering market to consumer practices, the usual thought is that food ought to be safe in the market and the concern is safe delivery and preparation of the food for the consumer.

Food can transmit disease from person to person as well as serve as a growth medium for bacteria that can cause food poisoning. In developed countries there are intricate standards for food preparation, whereas in lesser developed countries the main issue is simply the availability of adequate safe water, which is usually a critical item. In theory, food poisoning is 100% preventable. The five key principles of food hygiene, according to WHO, are:

1. Prevent contaminating food with pathogens spreading from people, pets, and pests.
2. Separate raw and cooked foods to prevent contaminating the cooked foods.
3. Cook foods for the appropriate length of time and at the appropriate temperature to kill pathogens.
4. Store food at the proper temperature.
5. Do use safe water and raw materials.

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Terms

Foodborne illness
Hazard analysis and critical control points (HACCP) • Hazard analysis and risk-based preventive controls (HARPC)

Critical factors

pH
Water activity (a_w)

Bacterial pathogens

Clostridium botulinum
Escherichia coli
Listeria
Salmonella
Vibrio cholerae

Viral pathogens

Enterovirus
Heptaviridae A
Norovirus
Rotaviruses

Parasitic pathogens

Cryptosporidium
Entamoeba histolytica
Giardia
Trichinella
The Internet is an Abundant Resource

Toxin Free Food Suggestions

Summary: Avoid processed foods when possible. Limit grain consumption, especially of whole wheat products, peanut butter, and other potentially moldy foods unless steps are taken to detoxify them. Use vitamin C to help the liver detoxify mold toxins. Avoid bruises on fruits.
The Messages are Often Consistent
The Source of the Advice is often Hidden
WARNING: The Right Diet Can Transform Your Body Forever

"Discover How To Detoxify Years Of Waste, Lose Over 20 Lbs Naturally, Boost Your Immune System & Enjoy Great Health..."

Dear Friend,

Every month, thousands and thousands of visitors have come to our website and trying to find the detox diet that is going to rejuvenate their health, cleanse their body and hopefully even lose weight.

If you are thinking about trying a detox diet, take a moment to read this website and see if any detox diet is right for you.

It is true that a detox diet could help your body in many ways and detoxifying your body is definitely a good way to cleanse your body. The key is finding the detox diet that works for most people and that is suitable for you.
Why do you need to detox and cleanse your body?

Health

good health

Junk food = fast food, sugar, meat

fall ill

Medicine

Looking at the graph above, when you are healthy, you are at the peak of your health on the left. You exercise everyday, you watch your diet and you have a healthy lifestyle.

For most people, that don’t last long as there are so much delicious food out in the world and so much emotional stress. Hence, you start to consume all the unhealthy food like fast food, sugar food (like pastries, soft drinks, chocolates), and meat (red meats, steak, pork, chicken).
Too Much Information Available

• The Public Depends on Curators and Interpreters of Food Safety Information
  – Health Professionals
  – Science Communicators
  – Government Agencies
  – Consumer Organizations
  – Authors / Journalists
  – Museums
  – Advertising
  – Interactions with Other People
  – Websites and Blogs
  – Social Media
Importance of Trust in an Era of Social Media

• Trust is essential for risk communication
  – Many food safety risks are invisible
    • Bacteria
    • Viruses
    • Chemical contaminants
  – Information is often incomplete or uncertain
  – Much of the public cannot understand available information themselves
The Importance of Trust

- People who distrust food safety risk messages are unlikely to believe or act upon the information.
  - This can have severe health, environmental, trade, and economic implications.
Trust Components

- **Credibility** - The extent to which a source or institution is perceived to have the knowledge and expertise to assess, manage and communicate about a risk.

- **Honesty** - The extent to which a source or institution conveys information about a risk in an open, truthful and transparent way.

- **Care** - Care for the interests of the other party and that the source or institution shares the same values and concerns.
How To Choose The Healthiest Chicken For You & Your Family

By Food Babe

March 28, 2016

There is no doubt that chicken is the most popular meat to consume in the United States. It's viewed as a cleaner, leaner protein than beef, and lots of people eat it while they are dieting or trying to get "healthy". Did you know that over 8 billion chickens are farmed for meat every year in this country? Eight billion!

To meet this extreme demand for chicken, much of the industry breeds and feeds chickens in a way that
Viewers Reveal Why They Love Zero-Calorie Foods

Journalist and fitness expert Jenna Wolfe talks to viewers about why they eat zero-calorie foods. Plus, they take a look at the...

OZ'S PICKS

- Nigella Lawson on Why She Calls Herself a Home Cook
- The Lazy Girl's Guide to Working Out
- Simple Smoothie Recipes
- 10 Fan-Favorite Moments
- 9 Most Revealing Celebrity Moments
“Helpful Tips From Healthy Helen”  
(Retired Health Professional)
I choose these companies!

Dr. Josh Axe
March 30 at 10:05am

Here is an exhaustive, master list of the companies who refuse to use GMOs...

Over 400 Companies that Aren’t Using GMOs in their Products

Courtesy of the Non-GMO Project, here is a list of companies who make many or...
Secret Detox Drink - Transform Your Kitchen - Episode #36

584,120 views 5 years ago

http://draxe.com

Dr. Axe’s secret detox drink recipe not only tastes great, it will help you burn fat, lose weight, balance blood sugar levels, and get your body healthy!

-Apple Cider Vinegar is full of enzymes and good bacteria. It contains acetic acid, which has been shown to lower blood pressure up to 6 percent. It can also help eat up the starches if you do eat grains in your diet. (Bragg – Apple Cider Vinegar)

-Lemon juice helps balance blood sugar and has an alkaline effect on your body

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Detox Your Body

The Amazing Gallbladder
Secret
Maximize Your Health
Naturally Get Rid of Cavities
How to Heal Cavities
Seriously? The GMO mosquitoes caused the problem in the first place IMHO. Don't mess with Mother Nature!

Food and Drug Administration: US Agency Gives Preliminary Approval to Use Genetically Modified Mosquitos to Fight Virus

That's what I said! It's nature leave it alone
Make sure you don't have these in your cupboard!

Bumble Bee tuna recalled because of possible life-threatening bacteria in cans

SAN DIEGO, Calif. — Tens of thousands of cases of Bumble Bee tuna are being recalled because of possible spoilage that could introduce “life-threatening”...
Bumble Bee issues recall of canned tuna that could lead to death if eaten
Please read and share!

February 14 - 0

THIS IS SCARY PLEASE READ AND PASS ON!!!

IMPORTANT WARNING*****PLEASE READ AND SHARE!!
WHO KNEW? WOW!!
Cake Mix Warning (not a joke)
Warning re: cake mixes - who knew?
I always thought that "old" mixes that were past their expiration date would just not rise/bake correctly. This is scary!
Somebody wrote: 'Before my surgery I bought quite a few Duncan Hines cakes mixes that were on sale. A couple of months ago I decided to use one, I checked the expiration date and found it past, all the boxes were past the expiration date. I phoned Duncan Hinds to ask if the one that was only two months passed if it was OK. She told me in no uncertain words to throw them all out, she even said to open the boxes and throw the mix in the garbage, just in case someone picked it up and used it.

Cake Mixes & Toxins. **PLEASE READ** Pass this on to ALL in your address book. You never know whose life you may save by doing so. For those of you at work, PLEASE remember to check your cupboards when you get home tonight!!!
A student at HBHS (high school) had pancakes this week and it almost became fatal. His Mom (registered nurse) made him pancakes, dropped him off at school and headed to play tennis. She never takes her cell phone on the court but did this time; and her son called to say he was having trouble breathing. She told him to go to the nurse immediately and proceeded to call school and alert the nurse.
The nurse called the paramedics and they were there in 3 minutes and worked on the boy all the way to the hospital. He came so close to dying. Evidently this is more common then I ever knew. Check the expiration dates on packages like pancakes and cake mixes that have yeast which over time develop spores.
Apparently, the mold that forms in old mixes can be toxic! Throw away ALL OUTDATED pancake mix, brownie mixes, Bisquick, cake & cookie mixes, etc., you have in your home.
P.S. Tell this to your children, grandchildren, nephews, nieces and anyone else who keeps these types of mixes in the cupboard
P. P.S. This warning especially applies to any person(s) with mold allergies. You can NEVER Be to cautious!
Due to consumer inquiries regarding mold developing in expired mixes, we would like to assure you that there is no concern with products manufactured by Pinnacle Foods Group LLC. We place a “BEST BY” date on the packaging to ensure product quality in terms of appearance, texture and taste of the finished item. There is no food safety concern in using Duncan Hines cake mixes or Mrs. Butterworth's pancake mixes that beyond their “BEST BY” dates. We do recommend that Duncan Hines and Mrs. Butterworth's products be kept in a cool, dry place. In general, protecting mixes from moisture will prevent mold growth.
“A lie can travel halfway around the world while the truth is putting on its shoes.”

- Mark Twain
Mix Master

Claim: Expired boxes of cake and pancake mix are dangerously toxic.

MIXTURE:

TRUE: Pancake and cake mixes that contain mold can cause life-threatening allergic reactions.

FALSE: Pancake and cake mixes that have passed their expiration dates are toxic.

FALSE: The yeast in packaged baking products 'over time develops spores.'
Intuitive Plausibility Matters
Beliefs about Eating GM Foods

Some people have had allergic reactions to genetically modified foods.

Eating genetically modified wheat has caused more people to become sensitive to gluten.

Eating genetically modified foods has caused an increase in cancer.

Eating genetically modified foods is more likely to cause obesity than eating non-genetically modified foods.

By eating a genetically modified fruit, a person's genes could also become modified.

Hallman, Cuite, Morin, 2013  Survey of 1148 American Adults
Influencing Mental Models
5 Reasons Why Younger Women are Developing Breast Cancer

Last week I blogged about the statistics of younger women developing Breast Cancer. Survival rates are worse when compared to older women that are pre or postmenopausal. According to the University of Columbia, 95% of cancers are due to diet and the accumulation of toxins. Eating clean and staying away from the S.A.D. (Standard American Diet) was discussed.

This week, I will focus on Essential #2, Reduce your Toxic Exposure.

Is it really possible to reduce our toxic exposure in this polluted world? Absolutely! There are many things that you have control over and there are specific detoxification protocols that will help you reduce your toxicity.

Let’s look at the toxic overload from a macro level to a micro level.

About 10 years ago, the CDC conducted a study of saliva and urine on over 2000 subjects from all over the US. They found that the average person had 212 toxic chemicals in their body! Think about the strain those 212 chemicals must put on the body’s detoxification systems!
1.) Environmental Toxins – many of these are hormone disruptors and estrogen mimickers

   - Dioxins from municipal waste plants and paper mills
   - Volatile Organo compounds (VOC’s) in tap water and dry cleaning fluids
   - Phthalates from plastics and perfumes
   - Pesticides and herbicides
   - PCB’s from plastics and farm raised salmon

2.) Household Toxins – your home should be a sanctuary for your body to heal.

The average household has over 1000 toxic chemicals looming in the air. Take a look at the following and replace them with non-toxic versions, or simply use vinegar and water.

   - Floor and carpet cleaners
   - Dishwasher detergent
   - Clothing detergent
   - Bathroom cleaners
   - Artificial candles and sprays
3.) **Cosmetic toxins – the average person is exposed to 126 chemicals per day through their body care products**

- Antiperspirants contain Aluminum which is a metallo-estrogen and mimics estrogen
- Sunscreens contain cancer causing chemicals. Proper exposure to the sun does not cause cancer.
- Parabens are preservatives used in most skin care products that mimic estrogen. They are found in cancerous tumors.
- Hair dyes are loaded with cancer causing chemicals

4.) **Internal Toxins**

Your body metabolizes and filters out toxins through the liver, kidneys, colon and lungs. When there is an overload of toxins in the body, the detoxification pathways can become overloaded and sluggish. The following pathogens can also add a toxic burden to your body and compromise your Immune System:

- Yeasts and Candida
- Bacteria
- Viruses
- Parasites
5.) **Electro-Pollution**

*Electromagnetic pollution (EMF) may be the most significant form of pollution human activity has produced in this century!* ~ Dr. Andrew Weil

We are surrounded by a sea of because of cell towers, cell phones, computers, WI-FI, satellite and radio waves.

- EMF’s cause DNA damage.
- Neurological damage
- Compromised Immune System
- Reduced sperm count
- Reduced melatonin production
- Weakens the thyroid
So what’s a girl supposed to do about all those toxins? Slowly eliminate them one at a time.

- Stop using plastic containers and plastic water bottles
- Use water and shower filters in your home
- Don’t eat farm raised fish
- Avoid meats that have any type of hormones and antibiotics
- Start reading labels and don’t purchase products that have chemicals in them
- Use organic and clean body care products
- Talk to an integrative doctor that can help you detox and eliminate the parasites and yeasts.
- Protect yourself from Electro-pollution with scientifically based products

Live consciously. Choose wisely. Make informed decisions about your health. Be proactive with prevention in order to insure that Breast Cancer, or any cancer for that matter, will not have the potential to develop in your body.

“Dr. Veronique Desaulniers, better known as Dr. V, is the founder of The 7 Essentials System™, a step-by-step guide that teaches you exactly how to prevent and heal Breast Cancer Naturally. To get your F.R.E.E. 7 day mini e-course, and to receive her weekly action steps and inspiring articles on the power of Natural Medicine, visit [http://breastcancerconqueror.com/](http://breastcancerconqueror.com/).”
Product Overview

GIATrim's CLEANSE Gentle Detox Formula contains a proprietary blend of Aloe Vera, Ginger and variety of other renowned ingredients to aid in your digestion, detoxification and elimination. CLEANSE is formulated with GIA's patented Single File Alignment (SFA) Technology, designed to deliver the results YOU want.*
The TerraGIA line of "Inspired Energy" products allows you to thrive in an increasingly stressful and wireless world. They are designed to address the effects of daily stressors, including electromagnetic radiation. You'll discover a renewed sense of well-being, and a calming peace of mind.*

**GIAlife Pendant**
The GIAlife Pendant provides you with a body-worn, bioenergetic solution to help you deal with everyday debilitating stress, including electromagnetic radiation. Experience for yourself the pendant's unique energy enhancement qualities, which have already improved thousands of lives across the world.* [Learn More »]

**Harmonizer**
The GIA Harmonizer is the result of intensive research and development in the fields of bioenergetics and electro-sensitivty. This innovative device is a simple and effective way to create an energetically harmonious environment in your home and office.* [Learn More »]

**Car Harmonizer**
The GIA Car Harmonizer is the most convenient way to enjoy an energetically harmonious environment in your car. In addition to its incredible energetic qualities, the Car Harmonizer also features a convenient, environmentally-friendly solar charger for a number of your electronic devices, as well as a bright LED flashlight.* [Learn More »]

**Smart Strips**
Even while living a healthy, active lifestyle, the effects of undue stress can compromise your sense of well-being. The GIA Smart Strips have been designed to reinforce your body's natural energy field, providing relief and energetic support - simply and effectively.* [Learn More »]

**Cell Guard**
The GIA Cell Guard has been designed to neutralize the effects of your exposure to electromagnetic radiation (EMR), and to strengthen the resilience of your body's biofield to stress at the same time.* [Learn More »]
Have the Principles Stood the Test of Time and the Internet?

- Yes,
  - Human nature has not changed
  - What people want to know when faced with risks and uncertainty has not changed

- However, the **implementation** of basic risk communication principles has evolved in the era of the Internet and Social Media.
For More Information:

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