

**Providing Nutrition  
Information for Health  
Care Professionals in  
Superfund Communities**

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# Dayhoit, KY





# **National Electric Coil Co. /Cooper Industries**

- **TCE, PCB-laden oils, vinyl chloride drained into Cumberland River**
- **Workers at the plant and residents (40 family mobile home park) had direct exposure through contaminated wells and soil. Town of Dayhoit (350 people) downstream from the plant.**

**University of Kentucky  
Superfund Basic Research Program  
Community Outreach Core**

**Superfund Community Action  
through Nutrition  
(SCAN)**

# UK SBRP Grant Focus

- **Polychlorinated biphenyls (PCBs), trichloroethylene (TCE), and other chlorinated compounds**
- **Nutrition**

# UK SBRP Research:

- **Certain coplanar PCBs contribute to oxidative damage/stress in the body**
- **Exposure to PCBs contribute to an increased risk for chronic diseases:**
  - **Cardiovascular disease (CVD)**
  - **Diabetes**

# UK SBRP Research – Cont'd

- **Health risks are worsened by poor diet**
- **Intake of anti-oxidants protects against oxidative stress**

# SCAN: Communicating Nutrition Information

- Health care professionals (Partnerships)
- Affected community members



# Desired Outcomes

- **Increased knowledge**
- **Improved positive, proactive attitude changes**
- **Changed nutrition and health-related behaviors**

# Content

- **Sound information**
- **Evidence-based scientific information proven with clinical trials**
- **Registered Dietitians credentialed and licensed**

# Challenges to providing sound information

- **Speak the language**
  - Audience's education level – high or low?
    - Comment: we liked you because you did not talk down to us
  - English or other language needs
  - Recognizing audience's preferences – don't like “nutrition” and “diet” but like hearing about “foods”

- **Contending with long term vs short term risk**
  - **Convey risk in a meaningful way**
  - **Exposure to Superfund chemicals (e.g. PCBs), effects of good nutrition, and development of chronic diseases, are all long term**

- **Systemic factors**
  - **Litigation**
    - **Concerns about attending SCAN sessions and responding to nutrition suggestions**
    - **Attorney supported nutrition education, but not food records**
      - **Trusted attorney**
  - **Political**

- **Cultural differences**

- **People affected not inclined to trust strangers from outside community**
- **Knew we were from the University, did not want “research” done on them**
  - **Health care professionals are trusted in the community**
- **Regional dietary influence**
- **Rural areas**

- **Socio-economic**

- **Need jobs provided by Superfund industry to feed their family**
- **Low income, not enough money left at the end of the month for fresh fruits and vegetables – fries, cheese burger are cheaper**

- **Emotional factors**
  - **Watch family and friends suffer and die**
  - **Being a part of the litigation**

# Quiz

**Which is a better choice ?**



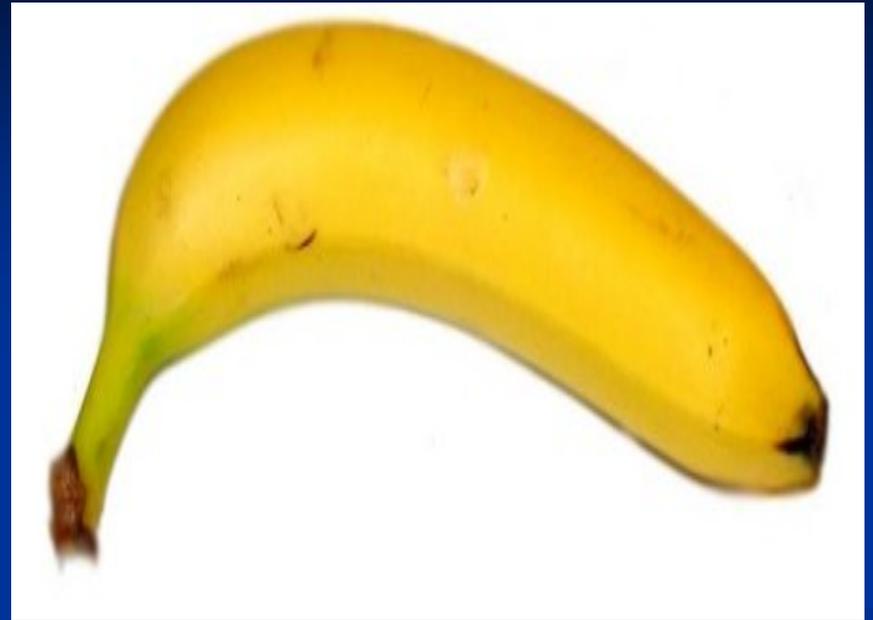
**1 (4 oz.) bagel**



**1 (4 oz.) muffin**



**1 Apple**



**1 Banana**



**1 oz. Potato chips and  
1/4 cup onion dip**



**1 oz. Tortilla chips, 1/4 cup  
salsa, and 12 oz beer**



**1 pkg ramen noodle soup**



**1 can ready-to-serve chicken  
noodle soup, 2 crackers,  
2 cups greens, and 1/3 cup  
raspberries**



**5 piece chicken strips and hot mustard sauce**



**1 hamburger, small fries, side salad with low fat vinaigrette, and 1 ice cream cone**

- Oklahoma State University Food Gallery at [www.okstate.edu/hes/nsci/nutrition/NSCI2114/foodgallery.htm](http://www.okstate.edu/hes/nsci/nutrition/NSCI2114/foodgallery.htm)
- Glamour Health Calorie Math at [www.glamour.com/health/articles/2006/12/caloriemath](http://www.glamour.com/health/articles/2006/12/caloriemath)
- <http://www.msnbc.msn.com/id/21570923/from/ET/>

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**1 (4 oz.) bagel**

**285 calories**

**2 gms fat**

**50% more protein**



**1 (4 oz.) muffin**

**320 calories**

**12 gms fat**



## **1 Apple**

**70 calories**

**3 gms of fiber**

**10% of daily amount of vit C**

**Some potassium**

**Often contain high levels of pesticides**



## **1 Banana**

**105 calories**

**3 gms of fiber**

**15% daily amount of vit C**

**3 X potassium, vitamin B<sub>6</sub> and manganese**



**1 oz. Potato chips and  $\frac{1}{4}$  cup  
onion dip**

**260 calories**

**19 gms fat**



**1 oz. Tortilla chips,  $\frac{1}{4}$  cup  
salsa, and 12 oz beer**

**260 calories**

**7 gms fat**



**1 pkg ramen noodle soup**

**370 calories**

**13 grams fat**



**1 can ready-to-serve chicken  
noodle soup, 2 crackers,  
2 cups greens, and 1/3 cup  
raspberries**

**370 calories**

**11 grams fat**



**5 piece chicken strips and  
hot mustard sauce**

**680 calories**

**35 gms fat**



**1 hamburger, small fries,  
side salad with low fat  
vinaigrette, and 1 ice cream  
cone**

**675 calories**

**25 gms fat**



**1 handful Goldfish crackers**



**6 cups light popcorn**



**1 fried chicken breast**



**1 fried drumstick, mashed potatoes, green beans, and corn**



**1 cup Red Cherry Tomatoes**



**1 cup Carrots**



**1 handful Goldfish crackers**  
**130 calories**  
**6 gms fat**



**6 cups light popcorn**  
**120 calories**  
**3 gms fat**  
**4X fiber**



**1 fried chicken breast**

**380 calories**

**19 gms fat**



**1 fried drumstick, mashed  
potatoes, green beans, and corn**

**370 calories**

**15 gms fat**



## **1 cup Red Cherry Tomatoes**

**25 calories**

**30% DV Vit C**

**25% DV Vit A**



## **1 cup Carrots**

**55 calories**

**15% DV Vit C**

**330% Vit A**