Can Food Processing Enhance Cancer Protection?

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Hyatt Regency Bethesda
Name of Speaker: John W. Erdman Jr

Relevant Financial Relationship:
Name of conflicting business, organization or individuals:

Wm. Wrigley Company (a division of Mars, Inc.)

Nature of Conflict: Chair, Wrigley Scientific Advisory Committee
Outline of Session

• John Erdman - Introduction

• Marc Hendrickx – Influence of food processing on retention and bioaccessibility of bioactive food components

• Elizabeth Jeffery – Processing crucifers to retain optimal bioactivity
Outline of Session

• Amanda Cross – Processing and preparation of meats to minimize formation of carcinogens

• Johanna Lampe – Fermented foods: intake and implications for cancer risk

• Panel Discussion – Q & A
What is Food Processing?

It is the transformation of raw ingredients into food, or of food into other forms

Prehistoric food processing

- Fermentation
- Sun Drying
- Preservation with salt
- Various types of heating and smoking
Historical Look

“The growth of towns and cities involved larger needs (for food) and new difficulties in storage and transportation ….. gradually transformed food production from an occupation to a business”

Prescott and Proctor. Food Technology. 1935
Modern Industrial Food Processing

- Fermentation (with and without salt)
- Dehydration - sun, spray, freeze, hot air, etc.
- Freezing – (Birdseye) and refrigeration
- Thermal procession – canning (Appert), pasteurization (Pasteur), UHT, etc.
- Separations – dry milling, membrane, centrifugation, etc.
Benefits

• Protection from microbiological and chemical hazards
• Provision of a diversity of foods year-round
• Reduction of food shortages
• Reduction of spoilage while maintaining consistent taste and acceptability
• Increase convenience and reduce time needed to prepare foods
Drawbacks

- Some loss of heat labile nutrients such as vitamin C
- Exposure to food additives and preservatives
- Highly processed foods tend to be high in simple sugars, fat and salt
- Energy use and cost may or may not be higher than for local or home prepared foods
Today

- In the USA, 7 – 8% of our income goes for food purchase
- The USA has arguably the safest food supply in the world
- Can it be safer – Yes
- Are there food choices that impact cancer risk - Yes

Sit back and listen