Based on a content analysis of more than 1,300 episodes of the most-watched shows over a period of 10 years, new research from the University of Southern California released at Expo Milano 2015 has found that food—especially sugary snacks and desserts—plays a leading role on American primetime TV entertainment, while satirical news on The Daily Show with Jon Stewart can change viewers' eating habits for the better. The findings from the USC Annenberg School’s Norman Lear Center were previewed by Lear Center director Martin Kaplan at Hollywood and Dine: The Image and Impact of Food in Entertainment, a USA Pavilion symposium, during the World’s Fair held in Milan with the theme “Feeding the Planet/Energy for Life.” The research, conducted by the Lear Center’s Hollywood, Health & Society program, centered on two studies about food in entertainment. One was about the image of food on TV; the other was about the impact of different kinds of news about nutrition on audiences. The following pages highlight a brief look at the preliminary findings from the research previewed during the Expo Milano presentation. The first study shows that food was depicted in about eight out of 10 primetime episodes. Overall, fruits and vegetables were shown onscreen as frequently as cookies, ice cream and other sugary morsels, but when researchers analyzed the food that characters were shown eating, desserts were consumed more often than healthy food. In comedies, especially, sugary snacks were eaten nearly two-and-a-half times more often than fruits and vegetables. “We know from other research that viewers are influenced when characters similar to themselves model healthy or unhealthy behavior,” said Kaplan, adding, “Is it any wonder that America has a giant sweet tooth?” In the second study, researchers assessed the impact of so-called “fake news” on audiences. In a 1,600 person sample, one group watched a segment of The Daily Show about the food industry’s conflicting messages about nutrition. Others viewed a video or a print news story with the same information, but without the satire. Compared with those who saw the straight video or print stories, initial findings indicate that viewers of The Daily Show story remembered more information; became more cynical about the food industry, but some were more optimistic about changing it; and a month later were eating more fruits and vegetables. In addition to Kaplan, the symposium featured legendary writer, producer and director Norman Lear; Phil Rosenthal, creator of Everybody Loves Raymond and the new PBS food and travel series I’ll Have What Phil’s Having; music scholar, food historian and USC professor Josh Kun; and renowned Los Angeles chef and James Beard Award winner Sherry Yard. U.S. Ambassador to Italy John Phillips, international cinema star Maria Grazia Cucinotta, an ambassador for Expo Milano 2015, and Geoffrey Cowan, president of The Annenberg Foundation Trust at Sunnylands, opened the event.
STUDY ONE

THE FOOD WE SEE, THE FOOD THEY EAT
Beginning in 2004, we've been studying the top 10 shows on each of the five broadcast TV networks in the U.S.—more than 1,300 episodes. We wanted to find out how often healthy food like fruits and vegetables were shown on series, and how often they showed sugary food like candy and desserts.

We see food in about eight out of 10 episodes on TV. It's pervasive. And when we do see food, we're just as likely to see fruits and vegetables as we are to see sweets and desserts. So if you're watching TV, you'd see something from the good-for-you food group in about one out of every three episodes, and something from the I-deserve-a-treat food group in about one out of every three episodes, also.
We also wanted to find out what kind of food people actually eat on TV—how often they’re eating fruits and vegetables, and how often they’re eating sweets and desserts.

It turns out that we see people eating sweets more often than we see people eating fruits and vegetables. Now we know from other research that people are influenced when they see characters similar to them modeling healthy or unhealthy behavior. So when viewers see characters eating unhealthy food more often than healthy food, they may be more likely to pick up unhealthy eating habits.

But there's an interesting difference when you compare the food in dramas and the food in comedies. There is a bigger difference between the food they eat in comedies than there is in dramas. Comedies are about two and a half times more likely to show someone eating sweets than to show someone eating fruits and vegetables.
STUDY TWO

‘FAKE NEWS,’ REAL KNOWLEDGE

Jon Stewart of The Daily Show
Jon Stewart hosted The Daily Show for over 16 years. Throughout, he said that his show was fake news. But we think of it as real news, delivered through entertainment—through satire.

Now, imagine a news story about food. Does it make a difference whether you encounter that story in traditional news, or in satire? Would it affect what you learn from the story, and how you feel about the story? Would it affect your behavior differently? So we recruited 1,600 people for an experiment. We randomly divided them into four groups: One group saw a story about food on The Daily Show. Another group saw the same information but in traditional TV news with no satire (TV symbol). A third group saw the same information but in a straight print story (newspaper symbol). Again, no satire. The fourth group was the control (red circle with diagonal slash symbol). We didn’t show them any stories.
We asked all 1,600 people some questions to find out whether there were differences in what they learned, in what their attitudes were, and in whether they intended to change their behavior. We’re still analyzing the data. In absolute terms, some of these are small differences. But when you consider that up to 2 million people watch *The Daily Show*, even small changes can translate into a major impact. Here are some highlights of what we’ve found so far.

We asked everyone: How did Kraft Singles get the “Kids Eat Right” label? The answer, of course, is that Kraft gave money to support the “Kids Eat Right” program. About one third of the people in the control group (red circle and slash) got it right. Remember, they saw nothing, so either they guessed correctly or they already knew the answer. About two-thirds of the people who read the print story and about two-thirds who saw the regular TV news report got it right. But almost 80% of *Daily Show* viewers knew the correct answer.

What about attitudes? In particular, what about cynicism? We wanted to know how cynical people were about the food industry. Here’s what we found: Those who saw *The Daily Show* video were more cynical about the food industry than people who saw the other news stories, or saw nothing.
But here's something very interesting about that cynicism. We asked people if they agreed with statements like this: "There's very little we as a society can do to fight back against food industry practices that we oppose." Or: "It's hopeless to try to change the food industry; it is just too powerful." What we found was that cynicism didn’t necessarily lead to feeling helpless or hopeless. People who saw The Daily Show may have been more cynical, but for some of them, the Daily Show video made them feel more optimistic about changing the food industry.

One month later, we wanted to see if the kind of food news that people saw correlated with any changes in what they ate. Here’s what we found. A month later, people who saw The Daily Show or the TV news were eating fruits and vegetables more often than people who saw the newspaper story.

So: People who saw satirical news remembered more information about the food industry, became more cynical about the food industry and, in some cases, felt less hopeless about the potential for change in the food industry. And a month later, they were eating more fruits and vegetables. You can find out more about all this by visiting our website at hollywoodhealthandsociety.org.
For more than 10 years, Hollywood, Health & Society has conducted the TV Monitoring Project, a systematic content analysis of health and climate change depictions on the most-watched TV shows. This analysis included data from 2004 through 2013 (excluding 2007 and 2008, during which data were not collected). Within each year, the sample consisted of the top 10 primetime, scripted TV series in the composite, 18-49 audience demographic (based on Nielsen ratings data from February sweeps). All episodes of the relevant shows that aired between January and May of each year were content analyzed and included in the sample. For each episode (N = 1334), trained content coders indicated which of over 50 specific types of food were shown on screen, and which were actually consumed by characters. This analysis focused on depictions of fruits and vegetables versus desserts and sweets. Desserts and sweets included depictions of any of the following: cakes, cookies, etc.; donuts; ice cream; candy; chocolate; other desserts/sweets; and desserts and sweets (unable to tell). We tallied the number of episodes in which each category of food (fruits/vegetables or desserts/sweets) was shown or consumed overall, within each year, and within each genre (comedy or drama). More information about the methodology and findings of this study is available here.

A sample of American adults aged 18 or older (N = 1619) was recruited by Qualtrics Panels, stratified by gender, age and race/ethnicity to approximately match the U.S. population and invited to take part in a study on news formats. Participants were randomly assigned to one of four experimental conditions:

- A segment from *The Daily Show with Jon Stewart* that focused on the food industry’s conflicting messages around health and nutrition
- A compilation of video news clips with the same information
- A print news story with the same information
- A control condition with no news story

Participants were then asked about their knowledge of the topics covered in the news stories, attitudes regarding nutrition and the food industry and their intentions to improve their eating habits or learn more about the food industry in the next month. One month later, a sub-sample of the original participants (N = 799) completed a follow-up survey assessing knowledge, attitudes and intentions, as well as support for stronger regulations on the food industry, eating behavior and seeking and sharing information about nutrition and the food industry. More information about the methodology and findings of this study is available here.

Hollywood, Health & Society is a program at the USC Annenberg Norman Lear Center that provides entertainment industry professionals with accurate and timely information for health storylines, through expert consultations and briefings, panel discussions and online tip sheets. We also collaborate with researchers and entertainment industry executives to study the content and impact of TV health storylines. We present our findings at national conferences and publish them in professional journals. Funded by the Centers for Disease Control and Prevention and several other agencies and foundations, the program recognizes the profound impact that entertainment has on knowledge, attitudes and behavior. Please visit our website at www.usc.edu/hhs.

We conducted a scan of the existing research literature on food and nutrition depictions on TV. We sought to include literature addressing both the food and nutrition-related content of entertainment media (what viewers see) and the impact of exposure to such content (how viewers are affected). In terms of impact, this scan was focused on research addressing specific food, nutrition or obesity-related depictions or storylines; studies examining the overall effect of TV viewing (e.g., screen time) on food-related outcomes were excluded. The bulk of the literature on this topic pertains to the effects of food marketing to children. There have been several content analyses examining the frequency and type of foods viewers are exposed to on TV, but again, these largely address marketing (e.g., commercials, product placement) rather than entertainment programming. Very few studies address the impact of food, nutrition or obesity-related depictions in entertainment, and of these the vast majority are correlational, which makes it difficult to establish causality. A list of further reading on this topic is available here.

**EXISTING RESEARCH LITERATURE**

**HOLLYWOOD, HEALTH & SOCIETY**