

# The Food We See, The Food They Eat: The Image of Food in Entertainment



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## EXECUTIVE SUMMARY

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For more than ten 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 ten prime time, 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 fifty 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.

Food was depicted (shown or consumed) in the vast majority (80%) of episodes. Fruits and vegetables were equally likely to be shown as were desserts and sweets—in approximately 30% of episodes. However, desserts and sweets were significantly more likely to be consumed on-screen by characters (15%) than fruits and vegetables (9%). The disparity was particularly pronounced in comedy programming. Comedies were slightly more likely to show desserts and sweets (45%) than fruits and vegetables (39%), but were 2.4 times as likely to show characters eating desserts and sweets (22%) than fruits and vegetables (9%).

Research shows that people are influenced when they see characters similar to them modeling healthy or unhealthy behaviors. Thus, when viewers see characters actually consuming unhealthy food more often than healthy food, they may be more likely to pick up unhealthy eating habits.

# INTRODUCTION

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Entertainment television is a key source of health information for U.S. audiences. But what sort of health information do viewers see on TV?

To answer this question, Hollywood, Health & Society (HH&S) launched the TV Monitoring Project in 2003, in collaboration with faculty from USC's Annenberg School for Communication and Journalism and the Department of Preventive Medicine at Keck School of Medicine. The project is a systematic content analysis of health depictions in the most-watched prime time TV shows. Over the course of more than 10 years, the TV Monitoring Project has tracked the frequency, prominence and nature of depictions of more than 100 different health topics, and beginning in 2012, issues related to climate change and sustainability.

This analysis enables us to answer questions such as:

- What types of health issues are depicted most often?
- What issues figure most prominently as part of a larger character arc or storyline within the episode?
- How are these health messages framed or portrayed to achieve positive effects?
- Are certain audience groups exposed to health messages more than others?

For instance, several years of TV Monitoring Project data indicate that although the majority of health storylines address treatment and symptoms, relatively few provide information on risk factors or prevention.<sup>1 2</sup>

Each year, HH&S recruits a team of graduate students to serve as content coders on the TV Monitoring Project. After completing a rigorous training, coders are assigned shows to view and code throughout the spring TV season from January through May. These data are then cleaned, compiled and analyzed. We undertook the analysis reported here to examine the relative frequency of depictions of healthy and unhealthy foods, and whether these patterns differed over time, or between different genres.

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<sup>1</sup> Murphy, S.T., Hether, H.J., & Rideout, V. (2008). How healthy is prime time: An analysis of health content in popular prime time television programs. A report by the Kaiser Family Foundation and the USC Annenberg Norman Lear Center's Hollywood, Health & Society. Menlo Park, CA: Henry J. Kaiser Family Foundation.

<sup>2</sup> Rosenthal, E.L., Murphy, S.T., & Talati, S. (2014). An analysis of health content in popular prime time television programs: 2009-2011. A report by Hollywood, Health & Society, USC Annenberg Norman Lear Center. Beverly Hills, CA.

# METHODS

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## Research Design

This analysis used data collected by the TV Monitoring Project from 2004 through 2013 (excluding 2007 and 2008, during which data were not collected). Within each year, the sampling frame consisted of the top ten prime time, 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 included in the sample.

For each episode (N = 1334), trained content coders indicated which of over fifty specific types of food were shown on screen, and which were actually consumed by characters. This analysis focused on depictions of two broad categories of food: “healthy food” (fruits/vegetables) and “unhealthy food” (desserts/sweets). Although other types of food might be considered healthy or unhealthy, the distinctions were less objective (e.g., dairy, snack food), so the analysis was limited to the most obvious exemplars.

## Measures

Ten specific food codes were used in this analysis. For each, coders indicated whether the food was not present, shown or consumed (foods consumed were also coded as shown).

The category *fruits and vegetables* consisted of three food codes: fruits; vegetables; and fruits and vegetables (unable to tell). The category *desserts and sweets* consisted of seven food codes: cakes, cookies, etc.; donuts; ice cream; candy; chocolate; other desserts/sweets; and desserts and sweets (unable to tell).

If any of the food items comprising the category was shown (or consumed), the overall category was marked as shown (or consumed), resulting in four variables:

- Fruits and vegetables shown (yes/no)
- Desserts and sweets shown (yes/no)
- Fruits and vegetables consumed (yes/no)
- Desserts and sweets consumed (yes/no)

## KEY FINDINGS

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The vast majority of episodes (79.1%) depicted some type of food, not necessarily fruits and vegetables or desserts and sweets (**Table 1**).

Table 1  
*Episodes with any food depicted, by year*

Year	N	Any Food Depicted
2004	166	133 (80.1%)
2005	176	133 (75.6%)
2006	173	114 (65.9%)
2009	132	102 (77.3%)
2010	149	108 (72.5%)
2011	157	130 (82.8%)
2012	185	165 (89.1%)
2013	196	171 (87.2%)
OVERALL	1334	1056 (79.1%)

As shown in **Table 2**, fruits and vegetables were roughly equally likely to be shown on popular prime time TV shows as desserts and sweets—approximately 30% of episodes. In 2011, depictions of fruits and vegetables slightly exceeded those of desserts and sweets, but the difference did not achieve a  $p < .05$  level of statistical significance.

Table 2  
*Type of food shown, by year*

Year	N	Fruits/Vegetables Shown	Desserts/Sweets Shown
2004	166	47 (28.3%)	46 (27.7%)
2005	176	51 (29.0%)	38 (21.6%)
2006	173	38 (22.0%)	41 (23.7%)
2009	132	34 (25.8%)	35 (26.5%)
2010	149	52 (34.9%)	39 (26.2%)
2011	157	40 (25.5%)~	27 (17.2%)
2012	185	75 (40.5%)	74 (40.0%)
2013	196	78 (39.8%)	88 (44.9%)
OVERALL	1334	415 (31.1%)	388 (29.1%)

~  $p < .10$

However, as shown in **Table 3**, desserts and sweets were significantly more likely to be *consumed* by characters (14.6%) than fruits and vegetables (9.3%).

Table 3  
*Type of food consumed, by year*

Year	N	Fruits/Vegetables Consumed	Desserts/Sweets Consumed
2004	166	8 (4.8%)	19 (11.4%)*
2005	176	17 (9.7%)	19 (10.8%)
2006	173	11 (6.4%)	25 (14.5%)*
2009	132	11 (8.3%)	22 (16.7%)*
2010	149	18 (12.1%)	17 (11.4%)
2011	157	18 (11.5%)	23 (14.6%)
2012	185	21 (11.4%)	34 (18.4%)~
2013	196	20 (10.2%)	36 (18.4%)*
OVERALL	1334	124 (9.3%)	195 (14.6%)**

~  $p < .10$ , \*  $p < .05$ , \*\*  $p < .001$

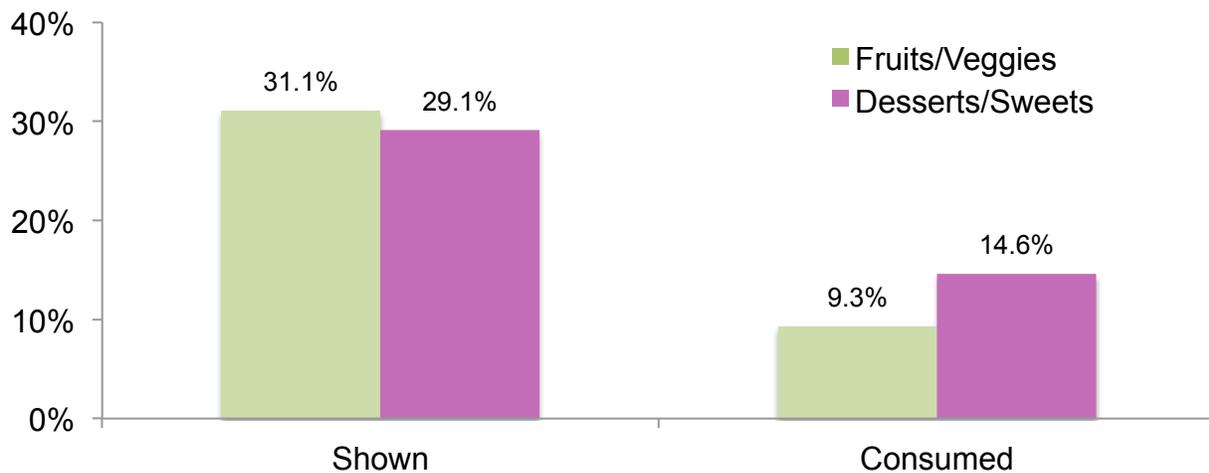
Overall:  $\chi^2(1) = 17.06$ ,  $p < .001$ , Cramer's  $V = .08$  (small effect size)

Whereas desserts and sweets were twice as likely to be shown than to be consumed, fruits and vegetables were 3.3 times as likely to be shown than consumed (**Figure 1**). This pattern was fairly consistent across eight years for which data was collected. In the years where fruits and vegetables were consumed with approximately the same frequency as desserts and sweets (2005, 2010, 2011), fruits and vegetables were somewhat more likely to be *shown* than desserts and sweets. Thus, the disparity was always in the same direction.

Research shows that people are influenced when they see characters similar to them modeling healthy or unhealthy behaviors. Thus, even when healthy food is shown just as frequently as unhealthy food, if viewers see characters actually eating sweets more often than fruits and vegetables, they may be more likely to pick up unhealthy eating habits.

Figure 1

*Fruits and Vegetables vs. Desserts and Sweets (Shown and Consumed)*



The disparity between consumption of fruits and vegetables versus desserts and sweets was particularly pronounced among comedy series (which included animated comedies). Comedies were slightly more likely to show desserts and sweets than fruits and vegetables, but 2.4 times as likely to have characters eating desserts and sweets than fruits and vegetables (**Table 4, Table 5, Figure 2**). Dramas, on the other hand, were significantly more likely to show fruits and vegetables than desserts and sweets, but there were no significant differences in consumption patterns.

Table 4

*Type of food shown, by genre*

Year	N	Fruits/Vegetables Shown	Desserts/Sweets Shown
Comedy	418	163 (39.0%)	189 (45.2%)~
Drama	916	252 (27.5%)**	199 (21.7%)
OVERALL	1334	415 (31.1%)	388 (29.1%)

~  $p < .10$ , \*\*  $p < .01$

Table 5

*Type of food consumed, by genre*

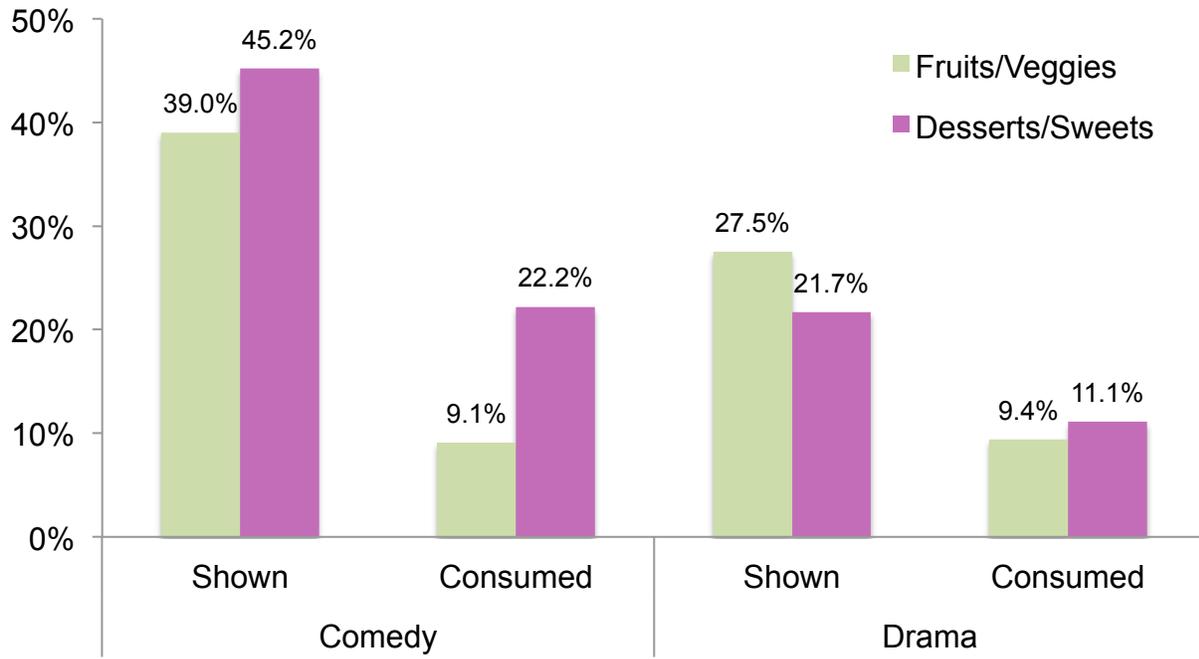
Year	N	Fruits/Vegetables Consumed	Desserts/Sweets Consumed
Comedy	418	38 (9.1%)	93 (22.2%)***
Drama	916	86 (9.4%)	102 (11.1%)
OVERALL	1334	124 (9.3%)	195 (14.6%)***

\*\*\*  $p < .001$

Comedy:  $\chi^2(1) = 26.40$ ,  $p < .001$ , Cramer's  $V = .18$  (small to medium effect size)

Figure 2

*Fruits and Vegetables vs. Desserts and Sweets (Shown and Consumed), by Genre*



## **HOLLYWOOD, HEALTH & SOCIETY**

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Hollywood, Health & Society (HH&S) is a program of the Norman Lear Center at the University of Southern California's Annenberg School for Communication and Journalism. Established in 2001, HH&S provides entertainment industry professionals with accurate and up-to-date information for storylines dealing with health and climate change through consultations and briefings with experts. Funded by the Centers for Disease Control and Prevention, The California Endowment, the Bill and Melinda Gates Foundation and The SCAN Foundation, among others, the program recognizes and studies the profound impact of entertainment on behavior. For more information, go to [www.hollywoodhealthandsociety.org](http://www.hollywoodhealthandsociety.org).

## **THE NORMAN LEAR CENTER**

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The Norman Lear Center is a multidisciplinary research and public policy center studying and shaping the impact of entertainment and media on society. From its base in the Annenberg School for Communication and Journalism, the Lear Center builds bridges between faculty who study aspects of entertainment, media and culture. Beyond campus, it bridges the gap between the entertainment industry and academia, and between them and the public. For more information, visit [www.learcenter.org](http://www.learcenter.org).