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# Health, Obesity, and Behavioral Economics

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# Cornhusker Economics

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## Health, Obesity, and Behavioral Economics

Non-communicable diseases (NCD) such as cancer diabetes, and heart disease impose significant human and economic costs. The occurrence of NCDs is the result of multiple factors; in many cases, individual choices increase or decrease the likelihood that these diseases will occur. Preventive behaviors, though effective at preventing the occurrence of many of these diseases, are adopted less frequently than would be optimal. Behavioral economics, a field of economics that has integrated findings from psychology into the economic model of choice, provides important insights into why people take preventive measures less frequently than they should. Behavioral economic models are particularly important under certain conditions, and a few that are relevant to health are highlighted here. Many people are present-biased—they want to receive benefits immediately and to postpone costs—so when the costs and benefits of individuals' decisions occur at different points in time, individuals tend to overweight immediate benefits and underweight future costs. Second, people have finite self-control which particularly affects decision-making when combined with fluctuating physical or emotional states—hunger or stress, for instance. For instance, people make more

Market Report	Year Ago	4 Wks Ago	1/2/15
<b>Livestock and Products,</b>			
<b>Weekly Average</b>			
Nebraska Slaughter Steers, 35-65% Choice, Live Weight. . . . .	138.86	172.38	168.21
Nebraska Feeder Steers, Med. & Large Frame, 550-600 lb. . . . .	205.20	303.83	278.53
Nebraska Feeder Steers, Med. & Large Frame 750-800 lb. . . . .	172.30	256.64	228.67
Choice Boxed Beef, 600-750 lb. Carcass. . . . .	200.83	256.78	247.40
Western Corn Belt Base Hog Price Carcass, Negotiated. . . . .	78.67	85.91	75.82
Pork Carcass Cutout, 185 lb. Carcass 51-52% Lean. . . . .	83.05	92.58	85.28
Slaughter Lambs, Ch. & Pr., Heavy, Woolled, South Dakota, Direct. . . . .	*	*	*
National Carcass Lamb Cutout FOB. . . . .	364.03	384.05	376.27
<b>Crops,</b>			
<b>Daily Spot Prices</b>			
Wheat, No. 1, H.W. Imperial, bu. . . . .	6.10	6.00	5.67
Corn, No. 2, Yellow Nebraska City, bu. . . . .	4.11	3.52	3.81
Soybeans, No. 1, Yellow Nebraska City, bu. . . . .	12.51	9.62	9.85
Grain Sorghum, No.2, Yellow Dorchester, cwt. . . . .	7.18	6.73	7.43
Oats, No. 2, Heavy Minneapolis, Mn, bu. . . . .	3.79	3.21	3.35
<b>Feed</b>			
Alfalfa, Large Square Bales, Good to Premium, RFV 160-185 Northeast Nebraska, ton. . . . .	220.00	*	*
Alfalfa, Large Rounds, Good Platte Valley, ton. . . . .	130.00	*	*
Grass Hay, Large Rounds, Good Nebraska, ton. . . . .	95.00	*	*
Dried Distillers Grains, 10% Moisture Nebraska Average. . . . .	190.00	125.00	184.00
Wet Distillers Grains, 65-70% Moisture Nebraska Average. . . . .	61.50	45.50	57.50
* No Market			

cognitive errors when they experience stress than under normal conditions (Mani et al., 2013).

To discuss a specific NCD, we will examine obesity. In the United States obesity is one of the most important NCDs, and is a risk factor for other conditions such as type-2 diabetes, heart disease, and certain types of cancer. Obesity imposes personal and society-wide costs in the United States. These costs are borne directly, through increased health care expenditures, and indirectly, by increasing health-related absenteeism, reducing productivity of workers, decreasing quality of life, and shortening lifespan. Over one-third of adults in the U.S. are obese (Ogden et al., 2014), a number that has nearly tripled over the past half century (Ogden and Carroll, 2010). Finkelstein et al. (2009) estimated the annual direct medical cost of obesity, including inpatient and outpatient treatments and drug expenditures, to be \$147 billion. Obesity-related absenteeism and reduced productivity is cumulatively thought to cost the economy more than \$40 billion per year (Cawley et al., 2007; Gates et al., 2008). Additionally, individuals in the U.S. spend approximately \$60 billion per year on weight loss or dietary control products (PCG Advisors, 2009).

Though obesity is certainly a highly complex problem involving access to foods, cultural food traditions, nutritional knowledge, and opportunities to exercise; in a simplified sense, it can be modeled as the relationship between energy consumed and expended. Choosing what to eat frequently involves balancing the immediate trade-off between a tasty, less healthy item and a healthier—but perhaps less satisfying—option against the long-term effect of these choices on health. Personal and policy options derived from behavioral economic models can help individuals (consciously or unconsciously) make healthier choices.

Initiatives are already underway at multiple levels to promote healthier lifestyles. The United States Department of Agriculture has been funding research to inform the design of “smarter lunchrooms”, to encourage the nation’s schoolchildren

to make healthier food choices, and to increase fruit and vegetable consumption. Recommendations include prominently and attractively displaying fruits, making healthier items the first thing that students see, and using marketing techniques to give healthy foods fun or descriptive names. Private groups have partnered with farmer’s markets and grocery stores to increase fresh fruit and vegetable consumption among Supplemental Nutrition Assistance Program (or, SNAP—formerly the Food Stamp program) recipients by giving them one dollar they can use to buy locally grown foods for every dollar spent on fresh produce.

Behavioral economics has also informed—or can explain the rationale behind—various strategies to promote healthier choices. Among the strategies available to people are setting up times to exercise with friends, incentives programs where insurance deductibles decrease or increase based on the amount of exercise they complete, or writing contracts to compel themselves to reach their goals. Central to all of these approaches—with the aim of overcoming present bias—is the self-imposition of a cost for failing to exercise self-control. StickK, a company founded by a professor of Economics at Yale University, allows individuals to create a contract with themselves to meet goals and provides, for those who feel they need extra motivation, the choice of having their money sent to a charity whose aims they oppose if they fail to meet the terms of the contract. A relatively young field, behavioral economics will continue to provide novel insights into the design of personal, private, and public policies to promote healthier choices.

## Citations

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