Consumers confused about good nutrition

Whereas roughly 76% of consumers in the United States say they have healthy eating habits, 57% of respondents consider themselves to be overweight. This contradiction raises a host of issues for the food industry as it works to address public concerns about obesity, food safety, portion size, and product ingredients, according to a new survey by the Consumer Business Practice unit of Deloitte & Touche USA LLP, a consultancy based in New York.

Deloitte recently conducted an on-line survey of nearly 4,000 consumers about healthy eating, eating out, in-store food options, consumer responsibility, and food purchasing. Several key findings of the survey include:

- Seventy-four percent of respondents strongly disagree that lawsuits should be allowed against fast-food chains.
- More than half of consumers think that portion sizes at fast-food establishments are too large, whereas 83% believe that healthier food choices should be offered at these eateries.
- Although 54% believe that the individual, not the corporation, is solely responsible for healthy eating, 45% believe it’s a combination of personal and corporate responsibility.

- Three out of five respondents say the issue of country-of-origin labels on perishables is extremely or somewhat important to them. Two-thirds are extremely or somewhat concerned about eating genetically modified foods.

Survey respondents have a heightened sense of the need to eat nutritious foods. When asked to define healthy eating, 52% of respondents said it was eating in moderation, and 51% said it was following the food pyramid hierarchy—more grains and fruits and fewer fats and sweets. Only about one in six said it was through eating low-carbohydrate or low-fat foods.

When it comes to eating out, consumers are slightly less vigilant in their calorie counting, compared with eating at home. Deloitte’s survey indicates roughly half of the consumers who eat at fast-food or casual dining establishments said they were concerned about eating a healthy meal. In contrast, 75% said they were concerned about eating a healthy meal when eating at home.

Consumers also are watchful of the foods they purchase in stores. Nearly 60% of all respondents would like to see more low-calorie, high-fiber, or low-carbohydrate food products available for sale. Sixty-four percent of overweight respondents wanted to see more low-calorie foods, but 52% of nonoverweight consumers also expressed an interest in them.

While desiring an increased availability of wholesome and healthful foods, respondents seem to feel that the greatest commitment to healthy eating needs to come from consumers themselves. Many, however, would also like corporations to support them in their efforts. When asked who was responsible for healthy eating, 54% said it lay squarely with the individual, and 45% said the responsibility should be shared between the individual and the corporation. Less than one percent (0.6%) believe the onus of healthy eating falls solely on corporations.

“The survey results point out the difficulties and inherent contradictions in many of our current attempts to eat nutritional, safe foods,” said Tara Weiner, national managing partner of Deloitte’s Consumer Business Practice. “Despite our stated interests, many of us often eat what is most convenient rather than what is most healthy. Food companies may want to factor into their planning the reality that consumers are pretty evenly split on the issue of eating healthily, which makes it difficult to manage product lines.”

CFSAN publishes priorities

The U.S. Food and Drug Administration’s (FDA) Center for Food Safety and Applied Nutrition (CFSAN) has published its program priorities for the 2004 fiscal year, which ends September 30. Among the “A” list priorities are items concerning food safety and defense, as well as consumer safety and nutrition.

The list includes the intention to publish a proposed rule to regulate qualified health

How fat poisons the livers of the obese

Researchers say they have discovered the mechanism that causes liver damage in many obese children and adults: a protein reaction caused by an excess of fatty acids that kills liver cells, resulting in scarring and liver damage.

Known as nonalcoholic fatty liver disease—NAFLD—the condition was first identified and named by a Mayo Clinic research team in 1980. It affects up to a quarter of the population in Western countries. At press time, the latest Mayo Clinic discovery on NAFLD was scheduled to appear in the July issue of Hepatology (netlink: http://www3.interscience.wiley.com/cgi-bin/jhome/106570044).

The discovery of how excess fatty acids poison livers is important, the researchers say, because currently there is no treatment for obesity-associated liver disease. Knowing the cellular mechanisms behind NAFLD is the necessary first step to developing treatments for it. And although most cases of NAFLD do not progress to cirrhosis or require a liver transplant, physicians are nonetheless worried that this could change because they are seeing more instances of of pediatric NAFLD at earlier ages.

By studying livers of both obese and lean mice, as well as liver samples from obese and lean human patients, the researchers discovered key points about how NAFLD progresses. The process starts when there is so much dietary fat in the blood that it can no longer be contained in the usual storage places, such as fat cells. When this happens, the free fatty acids are found inside the cytosol. These freely circulating fatty acids prompt Bax, a protein known for its role in apoptosis, or cell death, to move to the lysosome.

Six hours after exposure to the free fatty acids, Bax inserts into the membrane of the lysosome inside the cell, destabilizing the lysosome and allowing the Cathepsin B molecule to travel out into the cytosol. Once outside the lysosome, CatB sends “death signals” to the liver cell, resulting in cell death, or inflammation and scarring.

“As a pediatrician, I feel we are dealing with a big epidemic—NAFLD is certainly surpassing hepatitis C, in terms of potential damage to the liver,” said Ariel Feldstein, Mayo Clinic pediatric gastroenterologist and principal investigator. “NAFLD is a growing problem related to affluence and the diet and lifestyle associated with it. It’s as true in the United States as it is in Europe, Japan, and my native country, Argentina.”
Fish oil supplement reduces triglyceride level after exercise

Led by Tom Thomas, professor of nutritional science, a team of scientists at the University of Missouri–Columbia examined the effects of exercise and fish oil on triglyceride levels in the bloodstream after subjects ate high-fat meals. The results, which are scheduled to be published in August or September in Metabolism, show that people who engage in prolonged aerobic exercise have muscle cells that break down triglycerides quickly and that taking a fish oil supplement can heighten the reduction in triglyceride levels.

The researchers examined triglyceride levels following meals in recreationally active males. The subjects were divided into groups in order to discern the benefits of exercise only, fish oil intake only, and exercise combined with fish oil intake. The control group subjects ate a high-fat meal only. A second group ate a high-fat meal following an exercise session. Another group ate a high-fat meal after taking a fish oil supplement. The final group ate a high-fat meal after taking a fish oil supplement and engaging in an exercise session. Each subject went through all four treatments on different days.

Results indicated that peak triglyceride levels in the subjects who took a fish oil supplement before eating a high-fat meal were reduced by 38%. Those who both exercised and took a fish oil supplement reduced their triglyceride levels by 50%, the researchers said.

in BMC Medical Research Methodology (4:13, 2004).

- Supplementation with conjugated linoleic acid (CLA) was shown in a 12-month study to help overweight adults decrease body fat mass and increase lean body mass by as much as 9%. Published in the American Journal of Clinical Nutrition (79:1118–1125, 2004), the study is the first to establish the efficacy of CLA supplementation without changes in exercise or diet, according to the Norwegian researchers. The randomized, double-blind, placebo-controlled research looked at 180 men and women, aged 18 to 65, using two forms of CLA (free fatty acid and triglyceride), with olive oil as the placebo.

- The first-ever health claim to be approved in France has been issued for juice and powder from the North American cranberry Vaccinium macrocarpon. The claim—that cranberry can “help reduce the adhesion of certain E. coli bacteria to the urinary tract walls”—was approved by AFSSA, the French food authority. It does not apply to European cranberry-based products.

- Research by British scientists led by Hannah E. Theobald of the Nutrition Food and Health Research Centre indicates daily intake of approximately 0.7 g of docosahexaenoic acid (DHA) increases low-density lipoprotein (LDL) cholesterol by 7% in middle-aged men and women. The double-blind, randomized, placebo-controlled crossover trial lasted for three months and also suggested that DHA down-regulates the expression of the LDL receptor. The study was published in the American Journal of Clinical Nutrition (79:558–563, 2004).

- Food consumption surveys may be much more accurate soon, according to the U.S. Department of Agriculture’s Agricultural Research Service (ARS). The ARS Food Surveys Research Group has developed a new computerized interview process, named the Automated Multiple Pass Method, that enables respondents to recall more accurately foods they consumed over a 24-hour period. The idea was to help survey respondents remember “forgotten” foods and give more exact ideas of serving sizes in their responses. Preliminary research findings from a study of the method’s effectiveness show the first 100 volunteers were able to recall what they had eaten to within 2% of the actual calories used. More information on the new tool is available at netlink: www.ars.usda.gov.

- In what is thought to be the first time, very long-chain polyunsaturated fatty acids have been generated in plants through genetic engineering, Colin Lazarus and his team at Bristol University in the United Kingdom have engineered a new strain of Arabidopsis thaliana that produces arachidonic acid (ARA) and eicosapentaenoic acid (EPA). Any plant with “green tissue” has the potential to produce ARA and EPA, co-researcher Baoxiu Qi told the BBC News.
In the largest study of its kind, scientists have found that dieters on low-carbohydrate programs do not lose more weight over the long haul than those on less restrictive plans, although they do lose more weight more quickly in the short term. The results also suggested the low-carbohydrate diets brought greater improvements in serum triglyceride levels. The work was conducted at the Veterans Affairs Medical Center in Philadelphia and followed 132 obese adults for a year. A second study, conducted at Duke University in Durham, North Carolina, also found low-carbohydrate dieters had better serum triglyceride levels and “good” cholesterol. That study followed 120 overweight people for six months.

Children whose mothers ate oily fish as little as once a week during pregnancy were 75% less likely to develop asthma by their fifth birthday compared with children born to women who did not eat fish, according to research presented at the American Thoracic Society International Conference in May. In addition, the study found that children whose mothers ate processed fish sticks during pregnancy were twice as likely to develop asthma as those born to women who did not eat fish sticks. The research was led by Frank Gilliland, professor of preventive medicine at the Keck School of Medicine at the University of Southern California in Los Angeles.

British researchers say all people diagnosed with type 2 diabetes and having at least one risk factor for heart disease should routinely be given a cholesterol-lowering statin drug. In a study of more than 2,000 patients presented at the American Diabetes Association 64th Scientific Sessions in Orlando, Florida, patients were given either 10 mg of the statin atorvastatin each day or a placebo. In people taking the statin, cardiovascular illnesses were cut by a third and strokes by 48%, compared with the control group. Research leader John Betteridge of University College London told the BBC News: “In this study, patients on atorvastatin experienced major cardiovascular benefits—so much so that the trial was stopped early. . . .”

The Alberto-Culver Company announced that it has recently completed the purchase of the last remaining Cederroth International minority shares that had been outstanding in public hands, making Cederroth a 100% wholly owned subsidiary of Alberto Culver. Cederroth’s minority shareholders owned less than 1% of the company’s outstanding shares in recent years. Alberto-Culver initially took voting control of Stockholm, Sweden-based Cederroth International in 1991 and gained a majority equity interest in the company in 1992. In 1995, Cederroth acquired Molnlycke Toiletries, another Swedish-based operation, to double the size of its business and become the leading toiletries, household, health, and wound care company in the Nordic market.

Elementis, through a wholly owned subsidiary, has entered into an agreement with a wholly owned subsidiary of Sasol Limited to acquire, on a debt-free and cash-free basis, the entire issued share capital of Servo for a purchase price of approximately 48.5 million in cash. Elementis will also benefit from net proceeds of approximately 4.25 million due to Servo from the unwinding of a historical joint venture that will occur at the same time as completion of the acquisition. The complementary nature of Servo’s businesses with Elementis Specialties’ existing rheology and surface chemical additives business will broaden the range and performance characteristics of Elementis Specialties’ product offering and extend its innovation capabilities according to an Elementis press release.

Dow Chemical Company officials announced in April that the Midland, Michigan-based company will reduce its 46,000-person workforce by 3000 jobs, or 6.5%. The reductions will come through business reorganizations, attrition, shutdowns, and divestitures. Last year the company cut 3,500 jobs.

### Surfants & Detergents

**Washing hands reinforced as disease preventive**

The Procter & Gamble Company (P&G) and the Journal of the American Medical Association (JAMA) recently announced the results of a study conducted by P&G and the National Centers for Disease Control and Prevention (CDC) that demonstrated the effectiveness of household handwashing with soap in preventing diarrhea among children at highest risk of death from this illness. The study, titled “Effect of Intensive Handwashing Promotion on Childhood Diarrhea in High-Risk Communities in Pakistan: A Randomized Controlled Trial,” appeared as the lead article in JAMA’s June 2004 special theme issue dedicated to global health (JAMA 291: 2547–2554, 2004).

The study demonstrated that household handwashing with soap reduces diarrheal illnesses by about 50%. Additionally, the study showed that household handwashing can prevent diarrhea among those who are most vulnerable and at greatest risk of death—children under the age of 12 months and those who are malnourished. Two million children die every year from diarrhea caused by unsafe drinking water and poor hygiene and sanitation. “This study suggests that, even among the most vulnerable, young, malnourished children, handwashing with soap can save lives,” said Steve Luby, medical epidemiologist with the CDC. “Our collaboration with P&G since 1995 has been a model for public–private partnerships.”

The study was conducted over a one-year period ending in March 2003 in Karachi, Pakistan. Karachi was selected for the study as a city representative of living conditions in low-income, developing countries, where diarrhea can cause substantial morbidity and mortality. Additional public–private partnerships between P&G and local health agencies in the Philippines, Pakistan, and China are also under way to help consumers develop healthy handwashing habits that improve the health of children.