

a. *Abdominal cramping.* In 1996, when FDA required the label of foods containing olestra to list the GI symptom "abdominal cramping," it did so on the basis of data generated under conditions that were not customary or usual for savory snack use (see section 201(n) of the act). Since then, FDA has received and reviewed new data and information designed to evaluate olestra's effects under the customary or usual conditions of use for savory snacks. These new data provide no evidence of an increased frequency of abdominal cramps due to the ingestion of olestra in savory snacks. This lack of association is consistently found in several well designed, double-blind, placebo-controlled studies.

Specifically, the Home Consumption Study was conducted under circumstances that more closely reflect the usual and customary conditions of use for savory snacks. As noted, in this study, there was no evidence of an increase in reported abdominal cramping among subjects who ate olestra-containing foods compared to those who ate triglyceride-containing foods. Importantly, the Home Consumption Study had sufficient power to detect differences in the frequency of reported GI effects between the olestra and the triglyceride consuming groups, but such an effect was not found for abdominal cramping. Likewise, results from the Acute Consumption Study showed no difference in the rate or severity of abdominal cramps for the group consuming olestra compared to the group consuming triglyceride. Although CSPI has raised questions about the power of the Acute Consumption Study, the agency believes that the results of that study provide meaningful information that corroborates the findings of the more powerful Home Consumption Study. In addition, these results are confirmed by the Rechallenge Study. That investigation used a population of consumers who had previously reported a GI effect that they associated with eating an olestra-containing snack; in their initial symptom episode, the majority claimed to have experienced abdominal cramps. As noted previously, in the Rechallenge Study, there was no difference in the frequency of reports of abdominal cramps after eating olestra-containing chips when compared to triglyceride-containing chips. Finally, the results of the Stool Composition Study are consistent with outcomes of the foregoing three studies. In this study,

olestra does not cause diarrhea but simply adds bulk and softens the stool.

although there was an increase in the percentage of symptom days for abdominal cramping, with increasing olestra dose, the difference was not significant. Accordingly, FDA concludes that consumers of olestra are no more likely to report abdominal cramping than are consumers of triglyceride chips under normal use conditions.⁴⁸

FDA has also evaluated information about whether the current olestra label statement communicates effectively to consumers (see section III.F of this document). In general, evidence from consumer perception studies shows that after reading the required label statement, a majority of consumer participants did not correctly understand the nature, severity, or frequency of possible GI effects as a result of consumption of an olestra-containing snack. Although FDA's purpose in requiring the label was to provide information to consumers, most of those surveyed viewed the label statement as a warning and thus drew inaccurate conclusions about olestra's safety. Accordingly, FDA concludes that the required label statement is not an effective means of communicating accurate information to olestra consumers.

The new data and information that the agency has received since the 1996 final rule provide no evidence of an increased frequency of abdominal cramps when olestra-containing foods are consumed under the customary or usual conditions of use for savory snacks (see section 201(n) of the act). As discussed previously, this lack of association is consistently found in several well designed, double-blind, placebo-controlled studies. Accordingly, FDA finds that there is no scientific basis to support a statement on the label of foods containing olestra that olestra consumption may cause "abdominal cramping."

b. *Loose stools.* As noted, prior to the approval of the use of olestra for savory snacks and their subsequent marketing, consumers had little knowledge of, and no experience with, olestra. Since the 1996 decision, the agency has received additional data about olestra and the nature and frequency of loose stools; these new data better reflect the conditions of use that are customary or usual for savory snacks. FDA has found that olestra may increase the frequency

of loose stools and bowel movements but that the magnitude of the increase is minor and the severity and impact of these effects on daily activity are not different from other foods that may cause an effect such as loose stools. In addition, the record before the agency shows that consumers are now familiar with olestra's potential to cause loose stools.

In particular, the Home Consumption Study found that consumers of olestra-containing chips experienced a small but measurable increase in more frequent bowel movements and loose stools compared to those who ate triglyceride-containing chips. Because of the number of subjects enrolled (3,181), and the length of time for the study (42 days), the study was able to detect small differences in the frequency of symptoms. Importantly, the absolute incidence of these reports was low, especially relative to the background rate of reported symptoms. Analysis of the reported incidence of severity did not show any difference between the olestra and triglyceride groups. The study showed no increase in the use of medications or physician visits associated with olestra consumption. FDA's analysis of the study showed that consumers who reported a GI event moderated their consumption of chips. Assessments by participants of a symptom's effect on the ability to carry out normal activities showed little if any impact on the daily life of subjects. There was no increase in the percentages of reported severe impairment in performing daily activities in the olestra group compared to the control group. There was no evidence that these effects (loose stools, more frequent bowel movements) were more severe or had any different impact on consumers' daily activities than those associated with similar foods made with fat.

Results from the Acute Consumption Study and the Rechallenge Study are consistent with the results from the Home Consumption Study. Specifically, the Rechallenge Study showed that under the conditions of the study, the incidence of reports of diarrhea or loose stools after exposure to olestra or to triglyceride chips did not differ. The incidence of diarrhea was 6 percent for the olestra group, 8 percent for the triglyceride group; the incidence of reports of loose stools was 5 percent for the olestra group, 7 percent for the triglyceride group. Subjects who had previously reported a GI effect (including loose stools and abdominal cramps) after consuming olestra were no more likely to report GI symptoms after eating olestra chips than those eating

⁴⁸ FDA reviewed a number of reports from passive surveillance of olestra consumers. As noted in the previous discussion, passive surveillance cannot establish cause and effect, although such information may be useful in supporting hypothesis generation. FDA has not relied upon information from the passive surveillance in reaching its conclusions about the current label statement.