

# Weighing, Active Intervention Keep Pounds Off

BY MITCHEL L. ZOLER

NEW YORK — Daily self-weighing helps people who have recently lost weight prevent a subsequent gain.

People who are trying to maintain their weight need to “learn to use scale information [the same way] a patient with diabetes uses blood-sugar monitoring,” Rena R. Wing, Ph.D., said at a meeting sponsored by the American Diabetes Association. They then need to use that daily information to guide their eating and exercise, added Dr. Wing, professor of psychiatry and human behavior at Brown University, Providence, R.I.

But just getting on a scale every day is not enough. A recently completed study enrolled 314 people who had already lost a substantial amount of weight and randomized them to three different strategies for reduced-weight maintenance. The results showed that daily weighing was effective for maintaining reduced weight only when it was combined with an active counseling program, either through the Internet or in regular face-to-face group sessions. The control group in this study received a regular newsletter about weight maintenance but no active intervention.

Participants in the Internet and face-to-face groups were taught to detect small changes in their weight and, if it increased, to immediately implement problem-solving steps. They reported their weights once weekly, and were sent feedback about their weight maintenance.

When weight remained within 2 pounds of entry weight, participants were told they had stayed in the green zone, and they received a positive message along with a small gift once a month. People whose weight rose 3 or 4 pounds above their baseline level were told they had entered the yellow (caution) zone, and they were advised to implement a problem-solving strategy. Participants whose weight rose by 5 or more pounds were told they had entered the red zone and should immediately start a

new weight-loss program; they were sent a “tool box” of supplies (such as meal-replacement drinks) to help them.

After 18 months, the percentage of people who regained at least 5 pounds over their entry weight was about 70% among the controls (those receiving a newsletter), a significantly higher rate than the 55% rate among those in the Internet program and the 46% among those in the face-to-face program, said Dr. Wing, director of the weight control and diabetes research center at Miriam Hospital in Providence. The difference between the rates of high weight regain was not significant between the Internet and face-to-face intervention groups (*N. Engl. J. Med.* 2006;355:1563-71). However, Dr. Wing and her colleagues found that although the incidence of weight regain was statistically similar in the Internet and face-to-face groups, people who regained weight gained more if they were in the Internet group, which suggests that the most effective intervention strategy was face-to-face, group follow-up sessions.

These findings highlighted the high risk for weight gain faced by people even after they have successfully lost a lot of weight. The average weight loss in study participants immediately before entry into the study was 44 pounds (about 20% of their body weight before their weight loss) during the 2 preceding years. Despite that success, about 70% of those in the control group regained a significant amount of weight during the subsequent 18 months. “There was something about seeing people face to face that allowed us to be more effective

about getting them back on target,” Dr. Wing said. The face-to-face group reported using strategies to help their weight maintenance more than the other two groups did. Strategies included setting weight-loss goals, counting calories, and keeping records of food intake and exercise.

Another noteworthy strategy linked to success was daily weighing. In the newsletter group, daily weighing was used by about 40% of the participants when the study began, and the rate slipped to about 30% after 18 months. In contrast, in the Internet and face-to-face groups, the rate of people who weighed themselves daily was also about 40% at baseline, but rose to more than 60% by the end of the study in both groups, reaching a rate of nearly 70% in the face-to-face group.

The findings showed that daily weighing alone was not enough, as observed in the participants who regained at least 5 pounds over the study period. In such high weight gainers in the control group, there was no significant difference between those who weighed themselves daily and those who did not. A different pattern was seen in the Internet and face-to-face groups: The subgroups who weighed themselves daily had a substantially lower percentage of high weight regainers, compared with those who did not weigh themselves daily. (See box.)

The combination of daily weighing and counseling on weight-gain intervention strategies, provided in the two active intervention groups, produced the best results, Dr. Wing concluded. ■



Daily weighing, combined with an active intervention, helped maintain weight loss.

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## Liver Enzyme Spike After Weight Loss Deemed Transient

BY JANE SALODOF MACNEIL

PHOENIX — Increases in liver enzymes after substantial weight loss are common, transient, and not cause for alarm, suggest study results presented at the annual scientific meeting of the Obesity Society.

Dr. James W. Anderson assessed liver function tests in 91 obese and 94 severely obese patients who were participating in a rapid weight loss program at the University of Kentucky, Lexington, where he is medical director of the Health Management Resources weight loss program.

About a quarter of both groups had elevated alanine aminotransferase (ALT) levels at baseline. Mean ALT levels increased within 3-6 weeks of starting the program in nearly all patients. By 16 weeks, however, ALT levels had returned to normal in 98% of the population.

“What we found systematically is that the levels increase, but they come back

down below where they started. So we think this is therapeutic, of great value,” he said in a poster-side interview, rejecting the hypothesis that weight loss could trigger or worsen liver disease.

Generally speaking, about a third of obese individuals have elevated ALT before weight loss, Dr. Anderson said. Moreover, approximately two-thirds of obese individuals and about 90% of severely obese individuals have steatosis, according to one report (*N. Engl. J. Med.* 2002;346:1221).

The 91 obese individuals studied by Dr. Anderson had a baseline body mass index of 42 kg/m<sup>2</sup> and lost 40 pounds on average during 18 weeks in the program. Two-thirds were women, and the average age was 49 years.

Less than half, 47%, of the 94 severe-

ly obese individuals were women, and the group was slightly younger with an average age of 43 years. The severely obese cohort started with a baseline BMI of 53 kg/m<sup>2</sup> and lost 135 pounds on average during 44 weeks in the program.

**‘Most of our patients had benign steatosis that benefited from rapid and significant weight loss.’**

DR. ANDERSON

weeks and were below baseline at 40 weeks. The mean peak and final ALT values in this group were 81 U/L and 24 U/L, respectively.

Another 24 severely obese patients had abnormal initial ALT values that increased from 61 U/L to 81 U/L at 2 weeks before falling to 34 U/L by 16 weeks. The mean peak and final ALT val-

ues in this group were 97 U/L and 28 U/L, respectively.

In the obese group, the changes were not as dramatic, but a similar pattern was observed. In these patients, the initial ALT value was 33 U/L, and the final value fell to 29 U/L.

“These observations suggest most of our patients had benign steatosis that benefited from rapid and significant weight loss,” the authors concluded in the poster.

Dr. Anderson speculated that liver enzyme levels might go up when people start losing weight because fat moves out of the liver so fast that “it drags some enzymes with it.”

To prove benefit conclusively would require biopsy data, and that would require an unnecessary invasive procedure, he added.

“We think we are doing a good thing here, but this is clinical judgment,” he said. “We don’t have solid biopsy data.”

Dr. Anderson disclosed no conflicts of interest. ■

