SCIENCE

Regulation of Body Weight

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Body weight is a lot like the weather: Everybody talks about it, but no one seems able to do much about it. But in the past few years, researchers have learned a great deal about the physiological mechanisms that help people keep their energy intake and expenditures in balance—as well as how that balance may be upset. In this special issue, *Science* examines the recent progress in our understanding of what causes obesity and the outlook for new strategies aimed at prevention and treatment.

In the opening Article, J. O. Hill and J. C. Peters focus on prevention, arguing that we will not "cure" obesity until we cure the environmental factors that promote overeating and discourage physical activity. But genetic factors also play a role, and A. G. Comuzzie and D. B. Allison discuss progress in the difficult task of tracking down the genes that predispose to obesity. S. C. Woods and colleagues review the molecular signals that together ensure that food intake is in synch with the body's immediate and long-term energy needs. Identification of those molecular signals, as well as new obesity genes, is now pointing the way to new therapeutic strategies for losing weight, which are discussed by L. A. Campfield and colleagues. Still, as B. T. Walsh and M. J. Devlin remind us in their overview of the eating disorders anorexia nervosa and bulimia nervosa, defects in body weight regulation can manifest themselves in a variety of ways, some far more devastating than the addition of a few extra pounds.

In the News component of the special issue, two stories focus on who's getting fat and what the consequences might be—a topic that is still being debated, as some researchers contend that not all overweight people need to lose weight. And finally, the third News story deals with the identification of new proteins that might help regulate a person's metabolism and thus his or her tendency to gain weight.

–Paula A. Kiberstis and Jean Marx