Rush toward new weight-loss drugs tramples patients' health Full story:

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When Tami Melum hugs her heart-shaped pillow, she can feel the pain of the past three years seep into the surgical scar on her chest.

"It reminds me of how the kids and my husband suffered," Melum said of the pillow, which was given to her after open-heart surgery and usually sits on a bedroom dresser in her Sedro-Woolley home. "I keep it there as a reminder."

Melum, 39, took weight-loss drugs so she could feel healthier and keep up with her two boys, now 11 and 13. The drugs nearly killed her.

After being prescribed Redux and a drug combination known as "phen-fen," Melum developed heart damage so severe that in 2002 surgeons had to cut open her chest and heart and install an artificial valve.

She is a tragic testament to what can go wrong in a system where the powerful pharmaceutical industry influences what constitutes a disease, who has it, and how it should be treated.

Before taking the drugs, Melum was overweight but healthy: Her cholesterol, blood pressure and blood sugar were all normal.

But that wasn't enough. By the mid-1990s, the medical establishment had changed its mind about people such as Melum. Some of the world's most prominent obesity experts, with backing from the drug industry and medical societies, defined obesity as a stand-alone "disease" that caused premature death and needed to be treated with drugs.

Suddenly, Tami Melum and millions like her were, by definition, sick.

In making obesity a disease, these experts helped create a billion-dollar market for the drugs that maimed Melum, killed hundreds, and damaged the hearts and lungs of tens of thousands.

The story of obesity shows how it became acceptable for doctors to risk killing or injuring people on the premise that it would save them from illnesses they might never get.

How fat hit the fire

Body Mass Index helped fan the flames of diet craze.

How did the fight against fat reach this point?

It started more than a decade ago as drug companies and their scientific consultants increasingly promoted using a Body Mass Index

(BMI) of 30 as the trigger point for when someone should be treated for obesity, including being prescribed weight-loss drugs.

The BMI is a height-to-weight ratio that provides a rough estimate of body fat. Adapted from life-insurancecompany measures three decades ago, the BMI not only measures obesity but also sets ranges for "ideal weight" and "overweight."Tipping the scales

About 30 percent of adult Americans are now classified as obese, according to a chartcalled a body mass index, which is a measure of weight status based on a ratio of height to weight. The chart is the same for men and women. Some very muscular people have a high BMI, which can place them in theoverweight or obese categories.You can check your BMI here: Height 4' 5' 6' 7' 0" 1" 2" 3" 4" 5" 6" 7" 8" 9" 10" 11" Weight

BMI = BMI Categories Underweight Normal 18.5 - 24.9 Overweight 25 - 29.9 Obesity 30+ Source: National Institutes of Health

With the dividing line between being overweight and obese set at a BMI of 30, a 5-foot-10 person would be obese once he weighed 209 pounds or more. About 30 percent of the nation's adults are estimated to be obese.

At the time the BMI standard was being promoted as a disease, only two prescription weight-loss drugs were available in the United States: phentermine, approved by the Food and Drug Administration (FDA) in 1959, and fenfluramine, sold as Pondimin, approved in 1973.

In the early 1990s, doctors began prescribing them together for weight loss, and a diet craze took off. The FDA had not signed off on the safety of the two being used together. This "off-label" use of phen-fen therefore carried unknown risks for patients and their prescribing doctors.

With the patent on Pondimin soon to expire, a drug company formulated a blend of molecules in the two drugs and created Redux, dexfenfluramine. Like phen-fen, it gave its users the feeling of being full.

With a new drug in the pipeline, the industry and its experts demonstrated a new urgency to define obesity as a chronic disease that should be treated with its own drug.

In May 1995, the National Institutes of Health (NIH) asked 24 experts to write guidelines for diagnosing and treating obesity. The expert panel officially defined obesity as a BMI of 30 or higher, and overweight as a BMI above 25 and below 30. The panel, which included the pharmacologist who created the phen-fen combo, was criticized for its ties to the drug and weight-loss industries.

In fall 1995, the FDA first took up the approval of Redux, owned at the time by Interneuron Pharmaceuticals. If approved, Redux would be the first new weight-loss drug in more than 20 years.

At the hearings, Interneuron presented data showing an obesity pandemic and said desperate measures were required to stop it from prematurely killing 300,000 Americans a year.

That controversial figure came from weight-loss experts and researchers who used epidemiological data from decades-old health studies to build the case that excess body fat was a crisis more urgent than even AIDS. They estimated the economic cost in health care, including associated heart attacks, diabetes and other diseases, to be more than $60 billion a year.

The high costs and daunting death toll bolstered support for physicians to apply risky treatments to the obese, such as gastric bypass surgery, stomach banding or long-term courses of drugs that would be too dangerous to give to healthy people.

Although phen-fen and Redux were billed as lifesavers, they also were known to have fatal side effects in certain cases.

At the FDA hearing, Interneuron and its experts presented grisly calculations in support of Redux's approval: For every nine people who died from the drug in a given year, 280 people would be saved from premature deaths.

The company's chief scientific officer, Dr. Bobby Sandage, told the FDA panel that, despite expected deaths, the drug had "a highly favorable safety profile given the morbidity and mortality of obesity."

Dr. JoAnn Manson, a Harvard medical professor, making a presentation on behalf of the drug maker, said her research showed that even modest weight loss -- as little as 11 pounds -- would "substantially reduce morbidity and mortality."

One of the leading obesity experts supporting Redux and the effort to classify obesity as a disease was Dr. George Bray, a physician and medical researcher at Louisiana State University. A consultant for numerous drug companies for more than three decades, Bray holds patents for such things as low-fat potato chips, a cream to reduce fat thighs, and treatment for metabolic disorders.

Also at the hearing was a newly formed group, the American Obesity Association, which built a case for treating obesity as a chronic disease. Funded largely by drug companies, including two involved with Redux, the association was headed by Dr. Richard Atkinson, an internist who advocated gastric bypass for severe obesity and who later founded a company to test for what he believed might be an "obesity virus."

At the hearing, the association positioned itself as a patient-advocacy organization, though it offered no patients to testify for the drug.

Dr. Leo Lutwak, the FDA scientist who evaluated Redux, opposed its approval, saying it was too risky for what he thought were only modest weight losses. He said he was concerned about the drug's effect on the brain and its "frightening" association with pulmonary hypertension, an irreparable and often fatal lung disease.

Although few in the field questioned that obesity in its extreme form posed substantial health risks, less was known about the health risks for those who were marginally obese.

When drugs are given to people on the margins of disease, the number of people harmed with little benefit increases exponentially, critics said.

The FDA committee members discussed the troubling data surrounding Redux for nine hours and voted 5-3 against its approval. After impassioned pleas from one member, the committee took a second vote, but the 3-2 vote for approval was voided because some members had left. Another meeting was scheduled for November.

Judith Stern, vice president of the American Obesity Association and a nutritionist at the University of California, Davis, was disappointed the panel members had not voted to approve Redux. Stern told reporters, "If they recommend 'no,' these doctors ought to be shot."

The committee voted 6-5 in November to recommend approval, and in April the FDA gave the drug clearance for long-term use.

The drug went on sale in May 1996. Prescriptions for the drug that year topped 18 million.

Pills' high cost

Woman learns weight-loss drugs have damaged her heart.

Melum, then a 30-year-old mother of two in Skagit County, was swept into the anti-fat fervor by her doctor, who shared the same health club and noticed how hard Melum was working to lose the weight she had gained during her second pregnancy.

Getting into better shape was important to Melum, who wanted to be the kind of mom who played sports with her kids. The extra weight made her feel slow, she said, and her blood pressure, while still in a healthy range, began creeping up.

Melum took the phen-fen combination for six months starting in February 1996. In one month, she lost 22 pounds from her 5-foot-5-inch frame, dropping to 203. She lost another 13 pounds over the next six months. "It worked great, I have to admit," she said.

She took Redux for two or three months, and when it seemed to stop working, resumed taking phen-fen for about five more months. Melum said she doesn't recall discussing the known risks with her doctor when she began taking phen-fen and Redux.

At the time, the drug maker noted what it said were rare instances of lung damage but nothing else of significance. But across the country, Redux users were suffering heart damage, a side effect the drug maker never mentioned.

The first outsider to publicly warn about Redux and heart damage was a medical technician at a Fargo, N.D., clinic. She noticed that echocardiograms of younger women, with no history of heart disease,

showed severely damaged heart valves after taking the diet drugs. The doctor she worked for sent two dozen case files to the Mayo Clinic.

There at the clinic, cardiologists researched the matter and concluded that Redux and phen-fen were linked to heart-valve damage. The clinic announced this startling finding in summer 1997, and the FDA followed up with its own warning about the drugs to doctors, hospitals and the public.

Unaware, Melum took the drugs until September 1997, when a local pharmacist told her they had been pulled from the market. He told her she might be able to get her prescription filled elsewhere.

She tried without success but went on with her workouts.

In fact, Wyeth, which by then held the license to Redux, had pulled the drug from the market that month. It also stopped selling Pondimin, its brand-name fenfluramine, half of the phen-fen combo.

Melum said her doctor, Nadine Burrington in Mount Vernon, never contacted her after news broke of the potentially deadly side effects. Melum said the doctor eventually apologized and told her she had no idea the drugs would harm her.

Melum gave Burrington permission to discuss all aspects of her treatment with The Seattle Times. The doctor declined to be interviewed.

The first information Melum received about potential problems with her heart came in early 2001 in the form of an information packet Wyeth sent her. The mailing was part of its proposed legal settlement with hundreds of thousands of patients in a class-action lawsuit. Melum said she kept the information but ignored it until fall 2001. At a friend's urging, she applied for Wyeth's free testing, which discovered her valve damage.

"The doctor told me if I had waited much longer, I would be a candidate for [a heart] transplant," Melum said.

In May 2002, a surgeon sawed through Melum's sternum, cut into her heart and replaced a valve that controls blood flow on the left side of her heart.

Within three weeks, she suffered an allergic reaction to the anesthesia and was hospitalized. Two days later, she was near death.

In emergency surgery at the University of Washington Medical Center, doctors inserted a tube in her chest and siphoned more than three quarts of fluid from her heart. Her husband, Glenn, watched and wondered how he was going to raise the boys by himself.

"I was standing there watching her just slip away from me," he said in an interview, looking to the ceiling to keep tears at bay.

The medical bills related to her surgeries topped $140,000.

Wyeth established a $3.7 billion trust fund for injured patients in 2000 as part of a proposed settlement and created a $1.2 billion supplemental fund for patients earlier this year. Wyeth said it expects to pay $21.1 billion to settle legal claims involving phen-fen and Redux.

Melum joined the lawsuit and settled her claim in December. After fees, she received $500,000. She now weighs more than when she started the drugs, has an eight-inch scar down her chest, and will have to take a daily blood thinner for life.

Pushing ahead

Weight-loss industry works to forge treatment guidelines.

The industry lost a blockbuster obesity drug, but more were in development. In the years after the Redux fiasco, the weight-loss industry -- doctors, nutritionists, weight-loss clinics, drug makers -- supported efforts to keep obesity classified as a disease and successfully lobbied for insurance to cover its treatment.

Industry-sponsored obesity experts continued to support treatment guidelines for obesity that included prescribing drugs. Guidelines are essentially detailed steps for doctors in diagnosing and treating an ailment, including recommended drugs to prescribe.

The doctors who write guidelines are a powerful force in health care because their opinions become the blueprints that drug companies and medical societies use to teach doctors in the trenches how to prescribe newly approved drugs.

Many of the doctors who supported Redux, including Bray of Louisiana State University and others, worked on the obesity guidelines for the NIH and the World Health Organization.

These experts ended up endorsing the notion that doctors should encourage obese patients to lose weight at almost any cost.

The guidelines also discussed the approval of future weight-loss drugs. New anti-obesity drugs should be approved if significant numbers of people taking them lost at least 5 percent of their body weight and kept it off, compared to those taking placebos.

The FDA agreed with that target.

The world's leading weight-loss experts also argued that weight-loss drugs should be given to marginally obese people who could not lose weight by other means and even to overweight people who had at least two other "at risk" conditions such as high cholesterol and elevated blood pressure.

Some of them argued that the FDA should approve new weight-loss drugs even if obese people lost only 7 pounds on them.

Critics of the guidelines, notably those not associated with the drug industry, argued that physical activity and fitness play a greater role in health than body fat. People can be fat and fit.Figuring out who's

fatThe Body Mass Index, medicine's most common method to determine who is obese, is an imprecise tool. By BMI standards, more than half of the National Basketball Association players are overweight and four are obese, according to an Associated Press study.NormalSeattle Sonics' Luke Ridnour6 feet, 1 inch; 167 pounds; 22 BMIOverweightSeattle Sonics' Reggie Evans6 feet, 8 inches; 245 pounds; 26.9 BMIObeseMiami Heat's Shaquille O'Neal7 feet, 1 inch; 325 pounds; 31.6 BMI

Those experts also said the drive to classify excessive body fat as a disease and develop rules for its treatment would make more sense if there were effective treatments and proof that losing weight would enable someone to live a longer, healthier life. But there are no effective long-term methods for significant weight loss, studies show.

Some doctors say obesity can be modified, but "there's no evidence it can be easily changed," said Paul Ernsberger, a nutrition professor and drug researcher at Case Western Reserve University. Everything tried so far, he said, has "an abysmal success rate."

Like most others with dissenting views on obesity, Ernsberger was not invited to sit on the expert medical panels that wrote guidelines for the treatment of obesity. At the Redux approval hearings, he came on his own and testified about its dangers during a public-comment period.

"There's this fantasy of taking 160 million overweight Americans and instantly converting them to the mythical ideal weight," Ernsberger said in an interview.

Recently, a study by the federal Centers for Disease Control and Prevention challenged the conventional wisdom that the nation faces a medical crisis caused by fat.

In fact, carrying a few extra pounds may prolong life, especially in the elderly, the study shows. People who are overweight, but not obese, have a lower death risk than people of normal weight, according to the study. Obese people, except for those who are extremely obese, face only a slightly increased risk of death from their weight, the study shows.

The study's federal scientists discounted previous estimates of 300,000 annual deaths due to obesity, the controversial figure used by pharmaceutical companies to justify selling the risky weight-loss drugs. Authors of the new study said the 300,000 figure had been exaggerated by selective data and faulty analysis.

Instead, obesity was associated with 112,000 deaths each year -- most of them in extremely obese people, the study said. Being underweight had risks, too, and was said to be responsible for 34,000 premature deaths a year.

More drugs on way

More than 70 new medicines in development; industry wages terminology battle.

Whether anyone is becoming healthier because of all the activity remains to be seen. What is clear is that people continue to gain

weight, that governments are worried about what that could mean for the future of health-care spending, and that more weight-loss drugs will continue to hit the FDA pipeline.

Currently, two prescription weight-loss drugs are sold in the U.S., and more than 70 are in development.

Meanwhile, the lobbying arm of the drug industry, Pharmaceutical Research and Manufacturers of America (PhRMA), continues to press the FDA to allow overweight people to enroll in drug trials for new weight-loss drugs.

PhRMA also asked the FDA to stop referring to obese people as "relatively healthy" or "otherwise healthy." The industry group said such language "sends the wrong message" and does not reflect its view that obesity is a chronic disease requiring life-long intervention.

One person who will be paying close attention to the debate is Tami Melum.

Had she known then what she knows now, she never would have taken the risk that the drug-company experts minimized in their battle against fat.

"You may be a little overweight," she said, "but at least you have your health."

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