

Weight-Loss Camps in the U.S. and the Immersion-to-Lifestyle Change Model

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“If our only tool is a hammer, we will treat everything as if it were a nail.”

— *Maslow’s Maxim*
Abraham Maslow
1966 (p.15)¹

Abstract

This article provides a description of the seven largest weight-loss camps that operated in the U.S. in 2010. Approximately 2,800 campers (primarily obese teenagers) attended weight-loss camps in the U.S. in 2010. All seven of the larger camps used a low camper to staff ratio (approximately 3:1), provided primarily low-fat and reduced-calorie diets (with some allowing *ad lib* access to low caloric density foods at mealtimes), a wide variety of physical activities, and culinary and nutritional education. Several camps included cognitive-behavior therapy (CBT) and parent workshops. The camps cost about the same as most private camps (about \$1000 per week), with some health insurance reimbursement available primarily at the camps that provided CBT. Although definitive RCTs remain to be done, recent reviews indicate that immersion treatment produces relatively rapid weight loss during camp and, for programs that include CBT, ostensibly more substantial changes at follow-up compared to outpatient treatment. Studies generally show parallel improvements on measures other than weight, such as blood pressure, fitness, moods, self-efficacy, and quality of life. Correlates of success indicate that campers experience especially favorable results if they have very supportive families and if they remain at camp for relatively longer durations (e.g., 9 weeks vs. 3 weeks). An Immersion-to-Lifestyle change model is presented to depict the manner in which immersion treatment when augmented by CBT may lead to the development of healthy obsessions and lifestyle change.

Introduction

As the obesity epidemic has escalated in the past three decades, many well-meaning people have created educational programs designed to promote weight loss or at least deceleration of weight gain. The U.S. First Lady, Michelle Obama, recently joined this beneficent effort by creating the *Let’s Move!* campaign (www.letsmove.gov). Unfortunately, these educational programs usually produce disappointing results. For example, Saelens et al.² randomly assigned overweight and obese adolescents to either an intervention group or a comparison group. The comparison group received one educational session; they became significantly more overweight 4 months later. The intervention group completed an elaborate computerized assessment. They also received: an educational session to review an explicit plan for change; a detailed treatment manual; a family consultation; and, eleven telephone counseling sessions. The intervention group did not lose weight initially or at a

3 month follow-up. If this elaborate educational intervention proved so ineffective with overweight teens, could we really expect preventive oriented education presented in classroom settings to work? The results of Stice et al.’s³ comprehensive meta-analysis suggest not. They found that the average effect size ($r = .04$) of primarily classroom-based educational programs was so small that it “would be considered trivial by most researchers and clinicians.” Only three programs out of 64 (<5%) produced significant weight reductions that persisted over time.

Providing education about nutrition and the value of movement does not generally lead to meaningful improvements in weight status among overweight or obese children, adolescents or adults, nor do such programs seem to prevent weight gain among non-overweight young people. Yet, we continue investing hope and millions of dollars in these programs. After all, education remains a very logical and cheap intervention, readily provided to captive audiences in schools and via the Internet. To invoke *Maslow’s Maximum*,¹ education

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has become our hammer and we're treating the childhood obesity epidemic as if it were a nail. We have better tools than that hammer.

Immersion treatments (i.e., camps, spas, inpatient clinics and boarding schools designed to promote weight loss) are among the most promising alternatives to educational approaches. We can define *immersion treatment* as an intervention or program designed to produce therapeutic change in weight that includes 24-hour attendance for at least 10 consecutive days.⁴ Ten days is useful as the minimal duration because an important study showed clinically significant long-term benefits for a 10-day immersion program.⁵ The purpose of this article is to describe a particular version of immersion treatment, with a closer look at seven weight-loss camps in the U.S.

Weight-Loss Camps in the U.S.

Only camps that had 50 or more campers in attendance in 2010 in the U.S. were included for this review. The author and a research assistant sent brief surveys (and follow-up emails and calls) to operators of the seven groups of camps listed alphabetically in Table 1, in addition to reviewing material on their websites.

Table 1 shows that two of the seven groups began more than 40 years ago (Camp Kingsmont and Camp Shane) and that three groups offered camps in multiple locations [(New Image Camp (2); Camp Shane (2); Wellspring (9)]. As the table indicates, more than 2,500 campers attended these relatively large weight-loss camps in 2010. Based on Internet searches and information accumulated in recent years, it seems likely that another 300 campers attended smaller camps throughout the U.S. in 2010. Table 1 also reveals that the camps held sessions

of varying lengths; modal length of stay seems to be 3–4 weeks. The average cost per week was about \$1000, with sometimes significant health insurance reimbursement (e.g., \$1000 or more) available at the camps that offered cognitive-behavior therapy sessions (see Table 2). Typical private camps also cost the same amount, about \$1,000 per week.

As indicated in Table 2, the camps varied substantially in the elements of treatment included. All camps focused on weight loss and had diets that were undoubtedly lower in total calories than typical diets at home. Most of the camps included 3 meals and 2 snacks per day and used diets that seemed relatively low in fat. Several camps included unlimited access to certain foods that were low in caloric density.⁶ Specifically, Jumpstart, Kingsmont, and New Image allowed unlimited access to salad bars at lunches and dinners. Jumpstart's salad bar included romaine lettuce, fresh vegetables, and fruit (from a neighboring farmer), seeds, low-fat cheese, raisins, and fat-free salad dressings. Kingsmont's salad bar included the usual salad items, fat-free dressing, fat-free cheese, and occasionally, yogurt. Wellspring included unlimited access to salad, fat-free dressing, fruit, very-low-fat soups, and very-low-fat sources of lean protein (e.g., yogurt; fat-free cheese; fat-free egg whites, and tuna salads).

All camps also stressed high levels of varied activities. All camps provided nutritional and culinary education of some type. Camper-to-staff ratios were quite low in all cases.

Three of the camps (Jumpstart, Kingsmont and Wellspring) employed full-time counselors or therapists who provided various amounts of cognitive-behavior therapy focused on weight control. The camps also varied notably on the degree and manner in which they involved parents and provided follow-up interventions. Finally, two of the

Table 1. Descriptive Information About Weight-Loss Camps in the U.S. in 2010

Camp (Founded)	Locations (States)	Ages	# Campers per Summer	Duration (options, in weeks)	Cost per Week (\$) ^{1,2}
Camp Jumpstart (2003) campjumpstart.com	MO	9-17	80	4-8	836
Camp Kingsmont (1967) campkingsmont.com	MA	9-18	200	4-8	999
New Image Camps (1991) newimagecamp.com	FL, PA	7-19	400	1.5 – 7.5	1187
Camp Pennbrook (1976) campennbrook.com	NJ	8-21 females only	150	4-7	1112
Camp Shane (1968) campshane.com	AZ, NY	7-25	550	3-9	933
Camp Shining Stars (2003) campshiningstars.org	NC	12-18	70	3-6	991
Wellspring Camps (2004) wellspringcamps.com	CA, FL, HI, NY, NC(2), PA, TX, WI	5-65 (88% were 11-18)	1100	2-12 (1 week option only for Family Camp)	958

1. Costs were calculated by taking the longest session length available (e.g., 8 or 12 weeks) and dividing the cost for attending camp for that duration by the number of weeks.

2. Health insurance reimbursement is available at some camps (e.g., sometimes \$1000+), primarily camps that provide CBT.

camp published evaluation research in peer-reviewed journals (Jumpstart and Wellspring).

Effects of Weight-Loss Camps

In the first comprehensive review of the effects of immersion treatments for childhood and adolescent obesity, including weight loss camps, it was reported that,

“compared to results highlighted in a recent meta-analysis of outpatient treatments, these 22 immersion programs produced an average of 191% greater reductions in percent-overweight at post-treatment and 130% greater reduction at follow-up. Furthermore, mean attrition rates were much lower when compared to standard outpatient treatment. Inclusion of a cognitive-behavior therapy (CBT) component seem especially promising; follow-up evaluations showed decreased percent-overweight at follow-up by an average of 30% for CBT immersion programs versus 9% for programs without CBT.”⁴

Figure 1 illustrates these effects. As the graph suggests, these results show that weight-loss camps that include CBT seem to produce especially good outcomes. The most favorable results at follow-up derive from Wellspring’s outcome studies and related work by Carolyn Braet and her colleagues, most recently conducted at an inpatient clinic, the Zeepreventorium in Belgium.⁷ Both Wellspring and Braet’s approaches to immersion share several key elements: intensive CBT, substantial parental involvement, and use of a very-low-fat and low-caloric density diet, including provision of extra portions of low caloric density foods at every meal.

Limitations in the extant research include quite a few missing cases in some studies (not analyzed with intent to treat statistics in most cases) and sometimes reliance primarily on parent—or self-report assessments.⁴ Also, most critically, to determine the specific benefits of immersion versus outpatient treatment would require a randomized control trial comparing comparable interventions, with adequate sample sizes and comprehensive assessments. That has not happened yet.

Table 2. Differential elements of the programs

Camp	Diet (average calories per day, nutrient approach)	Camper to Staff Ratio	Nutrition and Culinary Education	Cognitive-behavior Therapy	Parent Involvement During Camp	Post-camp Intervention	Published Manuals or Evaluations
Jumpstart	1400-1600, varies based on “age, gender, needs” 3 meals, 2 snacks unlimited salad bar – lunch, dinner	3:1	Yes, 2x per week	Yes, group sessions, workbook, ? weekly	Weekly calls from staff during camp	Interactive website focused on self-monitoring	Yes, evaluation studies
Kingsmont	1500-1800 “depending on need”, 3 meals, 2 snacks, balanced, unlimited salad bar – lunch, dinner	2.4:1	Yes, 1x per week + “cooking classes”	Yes, 1 group per week, individual sessions were “available”	Parent weekend includes brief presentation, nutritional questions answered	Reunions, newsletters, nutritional consultation available	No
New Image	1750 3 meals, balanced, 2 snacks, unlimited salad bar (lunch, dinner)	4:1	Yes, 1x per week	No	?	Nutrition and personal training offered post-camp; consultation available	No
Pennbrook	? calories, 3 meals 2 snacks balanced	?	Yes, 1x per week + one individual session	No (weekly “rap” sessions)	?	Monthly calls, reunions, consultations w/ staff	No
Shane	? calories 3 meals, 2 snacks “no diet food”	3.5:1	3 offered per week (? optional)	Some CBT offered to some campers	?	“At Home” booklet provided, newsletter	No
Shining Stars	1750 3 meals, 2 snacks	4:1	Yes, 2x per week	Informal, minimal	Parent workshop	Newsletters, email interactions with director encouraged	No
Wellspring	1300 3 meals, 2 snacks, very low fat, low caloric density, unlimited very low fat/low cal. density food at every meal (salad, soups, fruit, lean protein)	3:1	Yes, 2x per week	Yes, 4x per week, 2 group and 2 individual	Weekly camper calls, emails from camp directors, 2-day parent workshops, published parent guidebook provided	Interactive internet self-monitoring & discussion boards X 10 months, consultations w/ staff, reunions, newsletters	Yes, self-help book, parent guidebook, evaluation studies with follow-ups (9-18 months), reviews

Clearly additional research would help determine if CBT immersion proves as promising as these findings imply, not just pertaining to effects on the primary outcome of weight change. Evaluation research has also examined other important measures and shown quite encouraging parallel results. For example, immersion studies have demonstrated positive outcomes on measures of fitness, blood chemistry, and blood pressure, and psychosocial functioning (e.g., self-confidence, quality of life, moods, body image, and disordered eating). In addition, some work has begun investigating correlates of success associated with immersion treatments. In these analyses, participants tended to do better when they had substantial positive family support⁸ and remained in immersion treatment for relatively long periods of time.⁴

Explanations for Favorable Effects of CBT Immersion Treatments

CBT may prove quite useful in immersion treatments because it helps to develop and reinforce key self-regulatory skills, such as self-monitoring. CBT can also reduce negative emotional states and improve psychosocial functioning. CBT could accentuate the benefits of the rapid weight losses generally produced in all immersion treatments. After all, immersion removes the negative influence of the obesogenic culture, increases the intensity of modeling and support by staff members and peers, provides opportunities to stay very active, and uses effective weight-losing diets. Immersion CBT participants can capitalize on these effects by learning to attribute this rapid success to their self-regulatory efforts. This kind of self-attributed rapid success may, in turn, improve self-efficacy and other positive internal reactions (e.g., improvements in moods).⁹ Improvements in self-efficacy,

attitudes, and moods could translate to greater commitment to maximize and sustain weight loss. That commitment could work, in part, by promoting the development of a healthy obsession: “the sustained preoccupation with the planning and execution of target behaviors to reach a healthy goal.”¹⁰ (p.3) This highly focused attitude toward key target behaviors (e.g., very-low-fat eating; high levels of activities, and consistent self-monitoring) seems necessary for success at weight control.

The Immersion-to-Lifestyle Change Model

Figure 2 shows a model that summarizes the proposed relationships between immersion treatment, CBT, and lifestyle change. Three of the elements in the model are external interventions: Immersion Treatment, CBT, and Social Support. The other three elements (Rapid Consistent Weight Loss; Healthy Obsession; and Lifestyle Change) represent internal changes: biological, cognitive, behavioral and emotional changes.

The model implies that immersion produces rapid and consistent weight loss. With the help of CBT, participants learn to attribute that success to their own improvements in self-regulatory skills, behaviors, and knowledge. In turn, they can increase their self-efficacy about weight control and begin creating the kind of healthy obsessions that are considered necessary for permanent lifestyle change in this model. It is also worth noting that this model’s emphasis on the vital role of CBT in the treatment of childhood and adolescent obesity concurs with the recommendations of three expert panels published over the past 3 years.^{11–13}

Maximizing the quality of the first element in the model, Immersion Treatment, can undoubtedly facilitate movement toward the final element in the model, the ultimate goal of Lifestyle Change. Weight loss camps, for example, that include a very-low-fat and low-caloric density diet, as well as other elements may prove especially effective (e.g., establishing measurable goals for both diet and activity). Staff and peer support, appropriate education (nutrition, culinary, weight control), maintenance of a safe and healthy environment at camp, provision of a diverse array of activities, and other factors during immersion treatment may also contribute to success.

A dotted line connects the Social Support element of the model to Healthy Obsession. Certainly positive support can facilitate lifestyle change, but such support may not be critical for some participants in immersion treatment. For example, parents can model

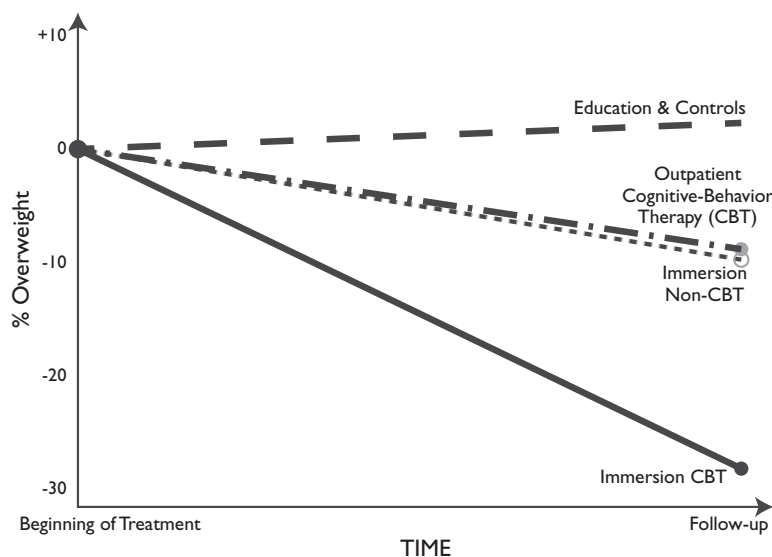


Figure 1. Average changes in % overweight observed in four approaches to treating childhood and adolescent obesity. From Kelly & Kirschenbaum.⁴ Reprinted with permission.

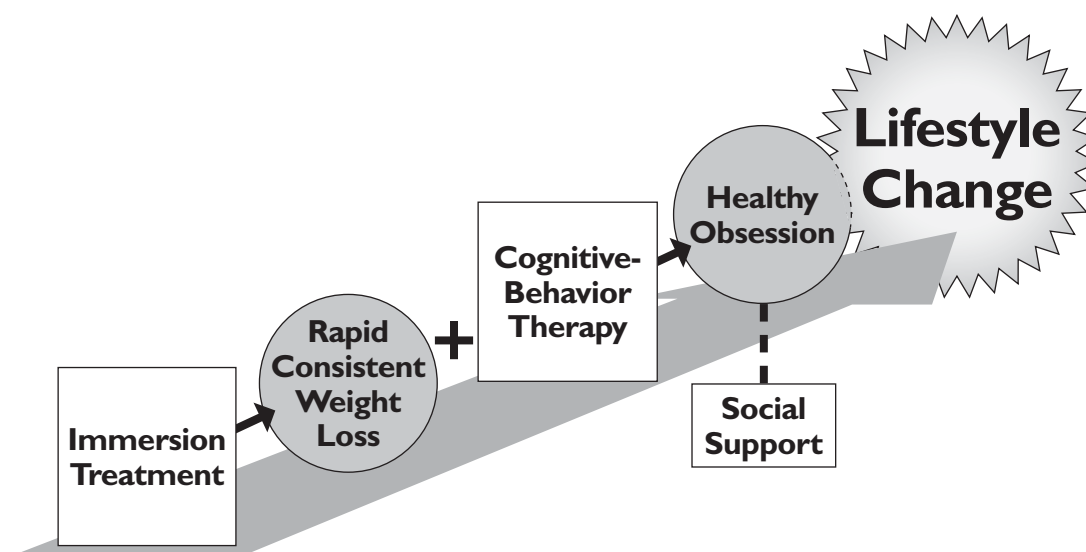


Figure 2. The Immersion-to-Lifestyle Change Model.

daily commitment to very-low-fat eating and consistent activities. Parents and other family members can eliminate all fats from the home, order according to the program's principles at restaurants, and wear pedometers to monitor their steps every day. Campers could join teams or gyms or work with coaches or trainers post immersion and get additional support for their nascent healthy obsessions in those ways. On the other hand, such support, while clearly helpful in most cases, may not prove critical to some participants (e.g., older, very independent teens or young adults who live away from home; those from dysfunctional families).

Conclusions

The nearly ideal weight controlling environment created by immersion treatment may prove especially powerful as an intervention for childhood, adolescent, and even adult obesity. Immersion in the form of weight-loss camps offers advantages over education (far better outcomes) and outpatient treatment. Many families drop out of outpatient treatment, in part because of the variability in modest weekly outcomes but also because of logistical challenges. By contrast, campers can get to weight-loss camps from any location. Once campers arrive at camp, they can have fun, learn and begin mastering something that had been frustrating them for much of their young lives. Both campers and their parents can experience genuine momentum and even inspiration from the transformations that occur in weight-loss camps. These effects generally increase when campers stay for relatively long periods of time (i.e., 9 weeks instead of 3 weeks), when families function well and provide genuine support and modeling at home, and when campers learn CBT to improve their

self-regulatory and stress management skills. Additional research will be necessary to examine these proposed mechanisms and test the efficacy of CBT immersion treatment in longer and better controlled studies, including research with low income and diverse populations. However, the promise of this approach is very relevant for all populations, as current popular solutions have faltered and as the obesity epidemic continues to extract its substantial toll on individuals, families, and societies world-wide.

Acknowledgments

The author gratefully acknowledges the help provided by the following Wellspring staff members regarding various aspects of this paper: Kim Atwater, Michael Bishop and Ryan Craig. Kristen Gierut's substantial and excellent assistance in gathering information about the larger weight loss camps is especially appreciated. The responses by the following camp directors to emails and calls also proved very helpful: David Ettenberg (Camp Shane), Ira Green (Camp Shining Stars), Sam Houghteling and Michael Roman (Camp Kingsmont), and Jean Huesling (Camp Jump Start).

Author Disclosure Statement

The author is employed, in part, by Wellspring, a provider of immersion treatment programs for overweight children, adolescents, and adults.

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