Report on Permanent Weight Loss

Roberta Russell

Teachers College, Columbia University

NYC, NY

© Roberta Russell, September 29, 2016

rr3067@tc.columbia.edu

Truth
Man with the burning soul
Has but an hour of breath
To build a ship of truth
On which his soul may sail.
Sail on the sea of death,
For death takes toll
Of beauty, courage, youth, Of
all but truth.

John Masefield, Born 1878
Praise for

Report on Permanent Weight Loss

“We are in the midst of a World Wide obesity epidemic that is driving an epidemic of type 2 diabetes, metabolic syndrome, obstructive sleep apnea, infertility and is threatening to reverse the rise in life expectancy. One of the reasons why we have failed to stem the rise in prevalence of obesity is that the majority of individuals who lose weight regain most of the lost weight within a few years.

Roberta Russell has written a wonderful book on psychological strategies to help keep weight off. Unlike many others who have written on this topic, ignoring the recent science on the regulation of body weight, Roberta has gone to great lengths to report on the latest science of weight regain. The “Report on Permanent Weight Loss” will enhance the strategies to help individuals maintain weight loss and should be read by everyone who hopes to maintain weight loss long term.”

Joseph Proietto, AM, MB BS FRACP PhD
Professor Emeritus, University of Melbourne
Professor Joseph Proietto is an Endocrinologist specializing in Diabetes and Obesity.

Dr. Proietto is a world-renowned investigator of the management of obesity who has just been awarded the AM which is a Government award of an “Order of Australia” in recognition of service to the community.

“Roberta Russell's Report on Permanent Weight Loss is a very well written and comprehensive review of the empirical literature on the topic of weight loss maintenance! Given the increasing obesity
epidemic worldwide, this information has the potential to really make a difference in people’s lives."

Stephen Anton, PhD is Tenured Associate Professor, Chief of the Clinical Research Division in the Department of Aging and Geriatric Research, University of Florida.

Dr. Anton has served as the leader of the Clinical Research Core (RC1) since 2011. By training, a Clinical and Health psychologist, with a specific emphasis on the delivery of lifestyle and health promotion interventions.

"The U.S. Department of Defense recently announced that over half of the applicants for its volunteer military forces were rejected. Why? The number one reason was that they were overweight. The obesity epidemic has evoked numerous diets, exercise programs, and behavioral treatments to foster weight control. Nonetheless, most of them are temporary "fixes" and, after a year or so, the lost weight has come back with a vengeance. Roberta Russell's report on long-lasting weight loss could not be more timely. Her report is evidence-based and up-to-date. Ms. Russell takes no prisoners; when she finds a scam she lets her readers know it! But when she finds a program that has met her criteria for effective change, she shares the news as well. This magnificent report will be of value to psychotherapists who work in the area of weight control as well as their clients, their clients' families, or simply to anyone for whom dropping the extra pounds is no longer a fad, it is a matter of life and death."

Stanley Krippner, Ph.D. Professor of Psychology, Saybrook University, Co-author, Personal Mythology, formerly director of the Maimonides Medical Center Dream Research Laboratory
Report on Permanent Weight Loss
by
Roberta Russell

TABLE OF CONTENTS

Foreword by T. Colin Campbell, Ph.D.

Section 1 – Introduction and purpose of this report 1

• To empower the reader to use research-derived evidence of long-term weight loss success to achieve weight loss goals permanently.
• To point out lack of transparency in claims of long-term weight-loss success and debunk false claims
• To underscore the firmly established reality of poor treatment outcomes
• To show how obstacles can be overcome in the process of arriving at and maintaining weight loss goals

Section 2 - Origins and background of this report 13

Section 3 - The Current State of Overweight and Obesity and its Consequences 24

Section 4 - The Methodology 32
| Section 5 | Weight Loss: The Best Verified Results | 34 |
| Section 6 | Weight Loss: A Summary of Research-based conclusions | 43 |
| Section 7 | The Way to Permanent Weight Loss and How It Works: Studying the National Weight Control Registry | 47 |
| Section 8 | The Mystification of Permanent Weight-Loss | 50 |
| Section 9 | Why Maintaining Weight After Losing It Is Harder Than Losing It | 62 |
| Section 10 | Intervening Variables | 68 |
| 1. | What controls the hunger that drives us to eat? | 68 |
| 2. | Is it all in your genes? The hereditary contribution to overweight and obesity | 70 |
| 3. | How is knowledge of the biochemistry of weight control useful? | 73 |
| 4. | Does the rate of weight loss affect the success of long-term weight management? | 75 |
| 5. | Are weight-loss results affected by the kind of foods you eat —the percentage of fat, protein and carbohydrates consumed? | 78 |
| 6. | What effect does thermogenesis have on weight loss? | 80 |
7. Do the kinds of food eaten influence the amount of weight lost using appetite as a guide without holding calories constant? 83

8. How does our toxic society promote overweight and obesity? 86

9. How does fat kill us? 85

Section 11 Is long-term success at weight-loss actually possible? 91

The advantages of a membership eusocial permanent weight loss society and how one can create one’s own circle of support without charges, recommendations for the dissemination of this information in order to form community groups of people who use what has been shown to work to achieve permanent weight loss.

References 97

Appendix (1-3) 103

Acknowledgements 111
Foreword

by

T. Colin Campbell, Ph.D.

Professor Emeritus of Nutritional Biochemistry at Cornell University and Author of The China Study and more than 300 peer-reviewed studies.

I encourage readers to read Roberta Russell’s Report on Permanent Weight Loss. It may save your life.

Almost everyone knows that the incidence of obesity has been increasing worldwide for several decades. This is an alarming trend, especially for children who not only are highly likely to become obese when they reach adulthood but also highly likely to suffer the consequences of obesity, as in various kinds of cardiovascular disease (heart attacks, strokes, arteriosclerosis), diabetes, certain cancers and an array of other ailments. The financial burden of obesity, both personally and societally, is huge.

Because so many people are burdened with obesity, there is an enormous market for marketers who promise all manner of cures, very few if any of which works. This is a serious problem that must be resolved for it is a burden for all, regardless of whether they are overweight.

Roberta Russell offers a unique strategy that is not often heard within many scientific disciplines, especially those in nutritional biology. With her experience in psychotherapy and her long time personal experience of having overcome obesity 15 years ago, she has observed that the central issue is behavioral. People simply find it very difficult to do what they want and need to do. They are unable to control the amount of food they consume, for all manner of reasons. Russell refers to this theory, as many others do, as a calorie balance issue, or calories in-calories out. There is no doubt that when more calories are consumed than are expended, body weight increases as energy is stored in the form of body fat, understanding
of course that the calories in-calories out hypothesis does not support the consumption of food that has detrimental health effects.

I especially like her telling her personal experience of having reduced and maintained her body weight reduced by 70 pounds while simultaneously providing scientific references that support this viewpoint. I also can personally attest to her impeccable efforts to tell science as it is, without bias unless it is admitted and explained. She has what is too often missed in scientific discussions.

Roberta Russell acknowledges the difficulty that some people have in shifting dietary practices, even when it is highly desirable to do so. It is a matter of social support, personal commitment and record keeping. She has the experience to document this effect, along with related findings from a cohort of more than 10,000 individuals. I suggest Russell’s behavior program for those who struggle with lifestyle change should offer an excellent method for people who wish to achieve a truly healthful weight.

July, 2016
Section One

Introduction and Purpose of the Report

This report on what is known about permanent weight loss will inform you of research results unencumbered by the mystification and misrepresentations that abound. Its purpose is to dispel wishful thinking and offer instead the hard-won facts that research reveals. Relevant evidence will be examined with the intent of turning these findings to account. However daunting the achievement, permanent weight loss (defined here as a five-year sustained loss) is the most powerful tool available to turn the tide in a more healthful direction.

Anyone who is able to use what has been learned from research findings will have a better chance at achieving life-long weight loss. If one has sufficient motivation and opportunity to do what is necessary to create a lifestyle that ensures a calorie deficit, followed by a calorie and exercise balance, one can
reach and maintain a normal body weight for life. With the power of sufficient motivation, even those who are less determined can use what has been discerned from research outcomes to lose enough weight to improve their health and well-being.

This introduces the inevitable question: How does one get sufficiently motivated to make use of the carefully derived knowledge that has been distilled through an analysis of the research? For some people the power of a therapeutic alliance, either in or out of formal therapy, can aid in this very challenging endeavor. This book titled, Report on Permanent Weight Loss, will explore ways and means shown to have the best predictive validity in the uncommon achievement of long-term weight loss.

Additionally, much can be learned from studying the patterns of behavior of the many persistently overweight or obese people who do finally succeed in paring down to normal weight and ultimately develop a lifestyle that supports their long-term maintenance of that weight without backsliding (Butryn, Phelan, Hill, & Wing, 2007; Jeffery et al., 2000; McGuire, Wing, Klem, & Hill, 1999; Shick et al., 1998; Sumithran et al., 2011; R. R. Wing & Hill, 2001; R. R. Wing & Phelan, 2005; R. R. Wing, Tate, Gorin, Raynor, & Fava, 2006; Wyatt et al., 2002). In Report on Permanent Weight Loss we will scrutinize the behaviors and coping skills that are demonstrably
employed by people who successfully lose weight to arrive at and maintain a normal (defined as a BMI of 18.5 to 24.9) or even an ideal weight (often on the mid to lower end of a normal BMI) for the long-term, while feeling satisfied on a reduced calorie diet coupled with sufficient exercise. Studying successful long-term weight loss, wherever and however it occurs is a natural and rich source of knowledge.

Some people who have managed to achieve long-term weight loss have done so by engaging a therapist and or reading diet books and then proceeding independently. Others have accomplished this challenging goal by joining commercial groups such as Weight Watchers or Jennie Craig or not-for-profit groups such as TOPs® (Take Off Pounds Sensibly) or Overeaters Anonymous (OA). Nevertheless, regardless of the variability of initial weight loss methods used, research reveals that the behaviors that successful long-term weight losers employ to maintain their weight losses are very similar (ibid).

Permanent weight loss is possible. Even though 10,000 people who have successfully lost weight for the long term have been studied by the National Weight Control Registry, the stubborn fact is that more than two-thirds of the population in the U.S. is currently overweight or obese. For almost all of these statistically normal, too-heavy people, long-term results for weight
loss are rare. Regain is the norm (Cooper et al., 2010; J. Latner et al., 2000; R. Russell, 1995a; R. Russell, 2001b; R. Russell, 2003; R. R. Wing, & Phelan, S., 2005).

The National Weight Control Registry, a program developed 31 years ago and currently run by Rena Wing, PhD and James Hill, PhD, is an organization that has tracked 10,000 successful weight losers who have lost at least 30 pounds and kept that weight off for one year or more. Those in the registry have an average weight-loss of 65 pounds, maintained for 5.5 years (Thomas, Bond, Phelan, Hill, & Wing, 2014). Regardless of the differing means that these successful long-term weight losers have employed to reach their goal weights, this select group, including myself, uses similar methods to maintain their substantive losses. I am more than 70 pounds lighter than I was 15 years ago and have been normal weight for all of that time. My caloric needs, habits and exercise are similar to those in the registry. The registry participants monitor their weight frequently, keep track of the food they eat, average about 1,400 calories per day and burn about 400 calories daily in exercise, mostly by walking (R. Russell, 2003). This growing group of 10,000 people is indeed fertile ground for a close unbiased examination of the components of long-term success (Butryn et al., 2007, pp. 3091-3096).
Misinformation abounds. Most people, desperate for a definitive solution to weight loss are seduced by the alleged quick fixes, gimmicky diets, and particularly by the unsubstantiated, but convincing claims of best-selling author/doctors. In one instance, well-known author and doctor, Joel Fuhrman, M.D., publicized unprecedented, 53-pound average weight-loss results, without backsliding for at least two years, for all of his patients in a study published in a 2008. Furthermore, Dr. Fuhrman claimed that this study, on which he based his incredible report, had the best weight-loss result ever achieved in research (Fuhrman, 2008; Joe Cross, 2010; Sarter, 2010; World Preservation Foundation, 2010a, 2010b).

Dr. Fuhrman’s patients’ results were reported in his published retrospective study, co-authored with Barbara Sarter, PhD. Initially, T. Colin Campbell, PhD, a highly regarded, seasoned researcher and author, was also listed as a co-author of the published retrospective study of Fuhrman’s patients, but as it turned out, he had his name removed when he learned of the following details.

Since Dr. Fuhrman’s weight-loss success rates seemed much higher than the body of research I had been following, I asked him for the raw data. In turn, he asked, co-author, Barbara Sarter, PhD, to send it to me. Dr. Fuhrman
and I had originally talked about his patients’ allegedly remarkable results in 2003 on my Manhattan cable TV show, *Lifetalk with Roberta Russell*, at which time he had told me he would inform me if their weight losses were independently verified.

On my subsequent examination of the raw data, the 53-pound average loss claim in the publication turned out to be wrong. I discovered that the published weight-loss was inflated by about 19 pounds, due to a mistake. I caught the error by simply subtracting the final, two-year weight of each patient whose score was reflected in the raw data from his or her starting weight. This did not equal anywhere near the study’s claimed mean or median weight loss of 53 pounds. Apparently the end weight in the study had been subtracted from the much heavier and larger starting group which of course spuriously created the appearance of a larger weight loss. Initially I tried to arrange for a correction by informing the co-author’s, Dr. Fuhrman and Dr. Sarter. Unable to accomplish this by showing them the error, I contacted, Dr. Campbell. Consequently, the raw data was then provided independently to T. Colin Campbell, PhD who confirmed the serious mistakes in the published study. Dr. Campbell also saw and heard Dr. Fuhrman’s recorded and broadcast public video and audio claims of no-backsliding in two years for all patients (on some occasions claiming these unprecedented results for up to 100 patients). Even though these extraordinary claims
were belied by Fuhrman’s own published study, which showed that most patients had dropped out by two years, no one else seemed to notice or care, even after they were informed of the misinformation (Appendix 1-3). Magical weight loss claims contribute to the more than 60 billions of dollars’ worth of weight-loss products and services sold every year in the USA (Williams, 2013).

Remarkably, Dr. Fuhrman’s repeated public claims of no-backsliding were directly contradicted by his own published study, and the claimed 53-pound loss turned out to be an egregious error. In fact, that 2008 retrospective study revealed, not as Dr. Fuhrman claimed, that there were no dropouts or backsliding after two years, but instead that most patients had dropped out by two years. Additionally, the raw data exposed the fact that the patients that remained in that initial study after one year had an average gain, not loss, for the second year. Consequently, Dr. Campbell had his name removed from the study and tried to correct the misinformation. Appropriate documents are presented in appendixes (Appendixes 1-3) and further discussed in section VIII.

In contrast, Report on Permanent Weight Loss is drawn from verifiable evidence which is not tarred by unproven and or commercially driven dogma. It offers the fruits of established results.
The goal of this account of the research on permanent weight loss is to examine the scope and consequences of the problem and then to report and disseminate what is actually revealed by verifiable research on effective long-term weight loss. Additionally, it will illustrate ways in which these findings can be put to use in a cost-effective way to assist people who are obese or overweight to achieve a normal weight and maintain that weight for life. This report will demonstrate how this has been done with motivated people in both supervised studies and with free ongoing support for participants themselves and for their communities (Janis, 1981; Jeffery et al., 2000; J. Latner et al., 2000; J. Latner, Wilson, Stunkard, & Jackson, 2002; J. D. Latner, Stunkard, Wilson, & Jackson, 2006; Roberta Russell, 2001; R. Russell, 2002; R. Russell, Laing R. D., 1992).

Some form of active vigilance or treatment is usually necessary for successful weight loss. However, when the treatment stops, whether it is in the form of a buddy, talk therapy, a commercial program, group support, or pharmaceutical remedies, the lost weight usually comes back (J. Latner et al., 2002; R. Russell, 1995a). According to Columbia University's Rudolph Leibel, M.D., "No current treatment for obesity reliably sustains weight loss, perhaps because compensatory metabolic processes resist the maintenance
of the altered body weight" (Leibel, Rosenbaum, & Hirsch, 1995, p. 621). In this report we will explore how, even in the face of these powerful and long-lasting metabolic forces that tend to defeat those who try to create a calorie deficit, long-term success is possible. Indeed, back-sliding need not be the case especially if the treatment—whether it is professionally administered or in the form of social alliances—is ongoing.

We will also more fully examine why the body tends to return to its former heavier weight after considerable weight loss. This state of affairs does not mean that long-term weight loss is not attainable, just that it is more difficult and complex than the simple universal mantra of calories in versus calories out would imply, even though that energy balance is truly the bottom line. Permanent weight loss is a real and viable alternative for those who choose to create a lifestyle that overcomes the disadvantageous forces of a body that biologically defends itself against weight loss and who are also willing and able to resist an environment that tempts one to over-consume calories and live a life that is too sedentary.

Overeating and insufficient activity—the root causes of overweight and obesity—can be viewed through the lens of addictive or compulsive behavior. As with the amelioration of any addiction, another source of valuation fills
the gap when one gives up the temporary "fix" of food and/or alcohol and finds the motivation to use better coping skills and create a more rewarding, healthier life. That source of increased meaning and consciousness that fuels motivation can be created or found through significant connections to others. This can be accomplished in various ways; sometimes in 12-step groups—through service to others—or just by one's own personal ability to design and establish appropriate natural relationship rewards and consequences. Rewarding relationships can fill the lacuna of loneliness and despair that we sometimes attempt to sooth with food and other addictions. Thus, we may establish more healthful alternatives. Even though our toxic, tempting environment, fraught with inexpensive fast food, makes overconsumption of calories all the more seductive, successful long-term weight losers must and do learn to cope with this reality. Additionally, resisting the temptation of a too sedentary lifestyle comprised of many inactive hours spent in front of a computer or television screen with the antidote of organically initiated doses of enjoyable activity contributes to the achievement and maintenance of normal weight goals.

People are more likely to relinquish addictions as they become more aware of the damage they are doing to themselves and those who are close to them by indulging in their addictive behavior. Increased meaning—in the
form of one’s own internal narrative—adds impetus and strength to the
motivation to stop using food and drink as compensatory drugs.
Furthermore, the people we engage with on a day-to-day basis have a
measurable effect on our well-being, positive or negative, which impacts not
only our sentience, but also our power to embrace more mindful healthier
behavior. The compensatory source of valuation that adds to one’s power to
abstain from over-consuming calories and to add sufficient recurring
exercise to one’s lifestyle may be attainable through our normal environment
through contact with people who have a healing effect. These healing effects
are not confined to professional practitioners of the healing arts, as this
report will reveal (Bachelor, 2000; Russell, 1981).

Throughout the population, empathy, as well as a host of other human
qualities, are distributed on a normal curve, with most people’s relationship
skills falling in the middle range and a few on the tail ends. The capacity for
empathy, warmth, openness, and vision are qualities that make for effective
interviewing, a technique developed by Drs. William Miller and Stephen
Rollnick, reveals that the therapist, not the method, is the best predictor of a
therapeutic outcome (W. R. Miller & Rollnick, 2012). Method and training are
less important than the relationship between the patient and therapist
(Lundahl, 2013). The potential for healing alliances is vast, if one knows how
to mine for this treasure. Genuine therapeutic alliances take courage. While there are no guarantees, fortune favors the bold.

Through my own 16-year-long experience of maintaining a normal weight with many failed attempts before 2000, and from the ongoing opportunity to work with the volunteers who have joined me in free groups, I have learned several research-verified ways to make this endeavor easier. For instance, some helpful experience-derived realizations include the knowledge that hunger is determined primarily by volume of food, not calories (Rolls, 1990; Rolls, 1989). Once the motivation to succeed is in place, techniques and specific useful information can be shared with others who join together to achieve long-term weight loss (R. Russell, 1995a; Roberta Russell, 2001; R. Russell, 2001b; R. Russell, 2002). Some of the most effective coping mechanisms will be presented in *Report on Permanent Weight Loss*. 
Section Two

Origins, Purpose, and History of this Report

My lifelong quest to understand why people behave as they do was formalized in 1979 when I arranged to be elected to take charge of a fact-finding committee of NAAP (National Association for the Advancement of Psychoanalysis), an American psychoanalytic accrediting body chaired by Arnold Bernstein, PhD (R. Russell, 2014). As an elected member of the public, I was asked to explore the research on "what works" in psychotherapy and make recommendations in the interest of protecting the public, the consumers of psychotherapy. At that point I had not yet discerned that overweight and obesity are problems best treated by specialized methodology in addition to the powerful therapeutic alliances that drive effective psychotherapy. Nevertheless, what I learned from the research about the healing power of a therapeutic alliance—as perceived by the client, rather than the therapist or helper—has proved valuable in arranging free, successful volunteer groups of people who maintain weight losses by using demonstrably effective techniques, at least while they stay in their therapeutic alliances (R. Russell, 2001b).
Although my path in 1979 began with my search to learn what worked in effective psychotherapy, it took me on a much more extensive and enlightening journey. The purpose of my first book, *Report on Effective Psychotherapy: Legislative Testimony*, Russell, 1981, 1993, & 1994) was to discover the common denominator of the "active ingredients" in the therapy process—http://www.effectivepsychotherapy.org—(R. Russell, 2012a). That study was undertaken with no allegiance to any particular school of thought. My intent then was to take a relatively unbiased look at verified therapy outcomes—and perhaps a more subjective exploration of the views of some professionals whom I thought to be seminal thinkers in the therapy enterprise.

Since the therapeutic relationship turned out to be more influential than the type of therapy, I also interviewed professional therapists to gain perspective on this rather counter-intuitive conclusion that was convincingly derived from peer-reviewed published psychotherapy outcome research. These investigative methods have also been used in the creation of this *Report on Permanent Weight Loss* with the added advantage of my video and audio interviews of influential thinkers, practitioners, researchers, and successful long-term weight-losers, all recorded in my quest for the holy grail of permanent weight loss. Some of these revealing interviews of leading

The research findings on effective psychotherapy are particularly relevant in this exploration (R. Russell, 1995b), but the achievement of long-term weight loss has been shown to require more than a therapeutic alliance for optimal verifiable results. The recalcitrant problem of endless recidivism for most overweight and obese people caught in the grip of weight-loss treatments can be altered by learning from substantiated behavioral and social methods and from examining the circumstances that have repeatedly proved to be the most reliable in achieving the best long-term weight-loss record.

The Report on Effective Psychotherapy: Legislative Testimony reveals facts that are not only useful for effective psychotherapy but also useful for the achievement of permanent weight loss (J. D. Latner & Wilson, 2007). For instance, according to R.R. Carkuff, compared to professionally administered psychotherapy, “therapy” by paraprofessionals consistently achieves outcomes equal to or better than professional outcomes (R. Russell, 1981). This finding provides a beacon of light in the search for cost-effective solutions for the pandemic of overweight and obesity that we are experiencing. Therapists who have undergone traditional training are no
more effective than those who have not. Empathy is a far better predictor of therapeutic outcome than training or method (W. R. Miller & Moyers, 2015; R. Russell, 1981; R. Russell, 1993; R. Russell, 1995b). Healing relationships can be formed outside the confines of psychotherapy with motivated companions who are committed to the common goal of permanent weight loss.

The *Report on Effective Psychotherapy* highlighted the importance of therapeutic skill, empathy and alliance — as perceived by the patient or client, not necessarily the therapist — to be predictive of a good outcome, while professional training often seemed to fail in that regard. This controversial report was written in American Psychological Association (APA) format at a time when insurance companies were demanding proof of therapeutic efficacy. Consequently, invitations to convey these surprising results arrived from The European Association of Humanistic Psychology and other psychological organizations. These *Report on Effective Psychotherapy* results were published in professional journals notwithstanding the fact that I was not a professional in the field of psychotherapy (R. Russell, 2012a). I was, instead, a very interested business woman, with more than a year of graduate study in psychology who, following a long-standing passion to understand the therapeutic process, was charged with the task of protecting the public by the Education and Accreditation Committee of the National

This serendipitous journey led me to R.D. Laing, M.D., the famed British psychiatrist whom I met at a European Association of Humanistic Psychology Psychotherapy Outcome conference in Zaragoza, Spain in 1980 where I was presenting my Report on Effective Psychotherapy findings. Laing found my controversial conclusions quite congenial as they were in accord with his own opinion, as evinced by this pithy one-minute video of him at — www.rdlaiing.org—(R. Russell, 2001a) in which he exclaims in his Scottish brogue, "How you treat people is the treatment... [Treatment] should be a verb not a noun." His simple summation captured the essence of my distillation of the research findings on effective psychotherapy.

Subsequently after considerable study of Laing’s controversial work and views, he and I entered into a contract to write a book together exploring the possibilities inherent in a healing alliance between peers. This collaboration eventually took form as, R.D. Laing and Me: Lessons in Love (Russell, R., Laing, RD 1992, Lake Placid: Hillgarth Press). Our conversations were recorded throughout a 9-year span in which we tried to convey and depict our manifestation of a therapeutic alliance. That book was actually a
novel verité, since we were characters in it, while our unfolding relationship provided its source material (R. Russell, 1995b; R. Russell, Laing R. D., 1992).

Having come to realize the extraordinary power of empathy and an emotionally charged therapeutic alliance, I mistakenly believed then that my goal-driven alliance with R.D. Laing might lead to a permanent solution for my seemingly intractable recurring problem of overweight. Although I reaped great value from my association with Laing and did lose the 35 pounds I was aiming for at that time, our empathic relationship was not enough to engender the life-changing motivation necessary for permanent weight loss. My initial weight loss, while augmented by Laing's motivating presence, later reversed to become a considerable weight gain. For me at that time and for the vast majority of overweight and obese people, weight loss ends in relapse in fairly short order. It would be years before I discovered what was needed to lose the weight permanently.

Undaunted, my explorations of constructive peer alliances moved across the globe. In New Zealand on a book tour for *RD Laing & Me: Lessons in Love*, during a television interview I presented my concept of Mutual Alliance Therapy (R. Russell, 2001) based partially on the surprising research findings that revealed the lasting benefits of peer alliances (Nowell, C. & Janis, I.L.,

Through this venue I tried to apply the benefits of a mutual alliance between motivated peers in order to address the real life problems of a group of volunteers, including myself. Since research had revealed that alliance, as perceived by the patient, not necessarily the therapist, was the best predictor of a good therapeutic outcome (Russell, R., 1994), I convened this group in a conference room at the University of Auckland for the purpose of trying out our mutually derived and agreed upon self-help strategies, culminating in a formal therapeutic alliance between peers for a variety of specific problems (R. Russell, 2012b). At this meeting I happened to be the only individual focused on weight loss as a presenting problem. After the one-day goal-setting workshop, pairs of volunteers, functionally paraprofessionals, promised to talk to each other by phone every day for six months about their progress in the process of solving their respective problems. This was all done within the context of the strategy that they had worked out communally during the Mutual Alliance Therapy workshop. The die was cast. Six months later my late partner-husband, Harold Krieger, and I returned to Auckland to review the results of the participants who had been talking to their chosen partner in the service of improving their diverse challenging situations. At this juncture everyone had made significant
progress in achieving their respective therapeutic goals, except me. Long-term weight-loss for me had once again proved to be too big a problem to solve through alliance alone.

Nevertheless, encouraged by the success of other paired peers in resolving their difficulties, I continued to try Mutual Alliance Therapy Workshops (R. Russell, 2012b). Consequently, I received a commendation for Mutual Alliance Therapy—the concept I had originated—from the Institute for Social Inventions, a think tank—set up in the UK in 1985 to publicize and launch good ideas for improving the quality of life (R. Russell, 1995b). This form of purposeful alliance might prove very useful when coupled with the methods of record keeping and accountability that have been demonstrated to be most effective in long-term or permanent weight loss.

However, permanent weight loss still eluded me. My weight had just gone down and up again, the classic yo-yo syndrome. I learned once more that for obesity and overweight alliance was not enough, a fact that this 2016 review of the long-term weight loss research still validates. However, there are, as we examine in section V, effective methods to employ in the quest to establish long-term weight loss that include record keeping and accountability (Latner, 2000; Latner, 2006; Latner, 2002; Latner, 2007).
Long-term success (at least 5 years) does exist even though it is relatively rare. Permanent weight loss is possible, even inevitable, if one discovers how to create a calorie deficit until normal weight is achieved followed by a way to stay motivated while maintaining a calorie equilibrium. That maintenance formula is usually at least as demanding as the requirements for the initial weight loss.

**Turning the Tide**

As for me, by 1995 all of the 35 pounds I had lost when hyper-motivated by my project with Laing had been regained with even more weight added (R. Russell & Laing, 1992). This is the typical 5-yr trajectory of 98 percent of weight losers: Lose weight then gain it back, often with even more extra pounds. My overweight problem had progressed to obesity. Fortunately, at that time, in my search for a solution, I had invited G. Terrence Wilson, PhD, a distinguished professor of Clinical Psychology at Rutgers University as a guest on my cable TV series, *Lifetalk with Roberta Russell* (R. Russell, 1995a). In speaking about his book, *Binge Eating Nature Assessment and Treatment* (1993), he informed me of the very high relapse rate characteristic of weight losers. Dr. Wilson normalized my personal experience by stating that of those who do manage to overcome the hurdles to losing weight, more than 60% will gain it back within a year, and about
98% will do so within five years, often with even more pounds added (R. Russell, 1995a).

He informed me of the results of the not-for-profit Trevose group which had by far the best peer-reviewed, long-term record of weight loss (J. Latner et al., 2000; J. Latner et al., 2002; J. D. Latner et al., 2006; J. D. Latner & Wilson, 2007). They used the methods of accountability, logging of calories, exercise and cognitive behavior therapy in a group with very strict performance standards for membership. Those who did not comply were dropped from the program. The Trevose group procedures and my eventual distillation and use of their technique allowed me to finally achieve my long-term weight loss and constant normal weight since 2000. Initially I had thought of joining the Trevose Group in New York City, but the free Trevose group was limited to Pennsylvania and New Jersey. When I asked Professor Wilson if he thought that a no-cost peer group offering treatment for life might work he prophetically endorsed my suggestion calling it a great idea (R. Russell, 1995a).

Consequently, by the year 2001 after many aborted attempts to solve my obesity problem for the long term, I had formally incorporated my rendition of the Trevose methods along with other volunteers whom I recruited to form free groups dedicated to losing weight steadily until the participants reached normal weight with the option of staying in treatment for life. I
formed the first 3 groups in New York State all operating under the rubric of the New York Calorie and Exercise Group (Roberta Russell, 2001; R. Russell, 2002). Our methods, the details of which will be described in this *Report on Permanent Weight Loss* and on —www.permanentweightloss.org—(R. Russell, 2001b) have empowered me to keep off the 70 pounds I lost: As noted, I have remained at normal weight for the past 16 years, with a current BMI of 20.5. A full account as well as before and after pictures are available on that web site.
Section Three

The Current State of Overweight and Obesity

Obesity has doubled since the 1960s and most people in the USA are now overweight or obese. The breakdown of this distressing growth in the prevalence of excess weight is described in more specific detail by various world tracking agencies in this chapter. By all counts the ongoing pandemic is a grave threat to health. Next to whether you smoke, your weight is the most important measure of your health.

How much you weigh in relation to your height, your waist size, and how much you gain after your early twenties—strongly influence your chances of having or dying from a heart attack, stroke or other type of cardiovascular disease; of developing high blood pressure, high cholesterol, or diabetes; of being diagnosed with post-menopausal breast cancer, or cancer of the endometrium, colon, or kidney; of
having arthritis; of being infertile; of developing gallstones; of snoring or suffering from sleep apnea; or of developing adult-onset asthma (Willett, 2001, p. 6).

The United States of America is the most overweight industrialized country in the world. More than one-third (34.9% or 78.6 million) of U.S. adults are obese (Ogden, Carroll, Kit, & Flegal, 2014). The estimated annual medical cost of obesity in the U.S. was $147 billion in 2008; the medical costs for people who are obese were $1,429 higher than those of normal weight.

The National Institutes of Health (NIH) reports that in America almost 3 in 4 adults (74 percent) are now overweight or obese. The prevalence of obesity is similar for both men and women (about 36 percent). More than one-third (35.7%) of adults are obese (National Institute of Diabetes & Digestive & Kidney Diseases, 2016).

According to The Centers for Disease Control "Obesity is common, serious and costly" (Centers for Disease Control, 2016). More than 1 in 20 (6.3 %) are considered extremely obese with a Body Mass Index (BMI) of 40 or obese at a BMI of 35 and typically experiencing obesity related conditions such as high blood pressure or diabetes. Morbid obesity rates are continuing to rise rapidly in the US (Sturm & Hattori, 2013).
A recent assessment of the enormous difficulties in overcoming the obesity problem has been published using the extensive electronic public health records in the UK (Fildes, 2015). In that publication it was determined that during a maximum of 9 years, follow-up of 76,704 men and 99,791 women in the United Kingdom’s Practice Research Datalink from 2004 to 2014 who were simply obese with a Body Mass Index (BMI) of 30-34.9 kg/m² the annual probability of obtaining normal weight was one in 210 for men and one in 124 for women. For the morbidly obese (BMI 40-44.9 kg/m²) the odds of achieving normal weight worsened to one in 1,290 for men and 1 in 677 for women. The authors’ concluded that the probability of attaining or maintaining normal weight is low and that existing treatment frameworks grounded in community based weight management programs may be ineffective.

World tracking agencies confirm the enormity of the scale of this trend: According to The Lancet's 2015 report on obesity (Kleinert & Horton, 2015, p. 2326) "the 2013 Global Burden of Disease Study, published in May, 2014, showed that world-wide 37% of men and 38% of women were overweight with a body-mass index (BMI) of 25 kg/m or greater." Since 1980 there has been a rise in the occurrence of overweight in this segment of 28% in adults and of 47% in children"(ibid). An estimated 2.1 billion people in the world are now overweight or obese. While some "developed countries have seen
an apparent slowing of the rise in the prevalence of obesity since 2006, no
country has reported significant decreases for three decades"(ibid).

The Lancet Commission on Obesity stated that the global pandemic of
obesity is ongoing: 2.7 billion adults are projected to be overweight or obese
by 2025. This rise in obesity "is driving global increases in Type 2 diabetes,
cardiocvascular diseases and several types of cancer" (Swinburn, Dietz, &
Kleinert, 2015, p. 1716).

The causes of this alarming world-wide rise in over weight and obese people
are not just because tempting, unhealthy food is more readily available and
increasingly sedentary lifestyles are on the rise— but also may be related to
other factors including increasing sleep deprivation, antidepressant drug use,
population and climate changes, etc. (S W Keith1, 2006).

According to the Lancet’s latest overview of global trends, the mean body
mass index (BMI) and the proportion of individuals classified as overweight
and obese is increasing. Their analysis of 1,698 population-based studies,
with more than 19 million participants representing most countries revealed
that from 1975 to 2014 the mean, age-corrected BMI increased from 21.7
kg/m² to 24.2 kg/m² in men and from 22.1 kg/m² to 24.4 kg/m² in women.
The prevalence of obesity also increased from 3.2% in 1975 to 10.8% in
2014 in men and from 6.4% to 14.9% in women (Smith, 2016).

Economic inequalities have increased worldwide, as have inequalities in weight gains. Increased disparities are not limited to body weight. “In terms of income and related measures of economic wellbeing, global inequalities have grown in the past four decades” (Smith, 2016, p.1350). In high income countries the poor are more likely to be obese than the better off. However, the reverse is the case in many parts of the world and the poor remain thin to an extent that compromises health and economic productivity (ibid). These related global inequalities in the prevalence of obesity, income and wellbeing are not explored in the scope of this report on permanent weight loss, but are a vital area for further investigation.

The Consequences of Rampant Obesity

Pierre J. Lefebvre, MD, PhD, FRCP, MAE, Honorary President of the International Diabetes Federation (IDF) reported that “387 million people in the world have diabetes, with over 95% Type 2 diabetes. Based on the trend that overweight, obesity and sedentarity [sic] are increasing, the incidence of diabetes is expected to rise more than 50%, that is to 592 million by 2035” (P.J. Lefebvre, personal communication, November 9, 2015).
According to statistics about diabetes data from the National Diabetes Statistics Report, 2014, in 2012, 29.1 million Americans, or 9.3% of the population, had diabetes.

"The percentage of Americans with diabetes age 65 and older remains high, at 25.9%, or 11.8 million seniors (diagnosed and undiagnosed)" (American Diabetes Association, 2016).

According to the Framingham Heart Study that examined 1,723 nonsmokers who were followed up from one to 23 years, the relative risk of death was almost twice as high for persons with a body mass index over 27.3 BMI, representing more than 70% at ages 55 and 65, compared to those in the rest of the study (Harris, T., 1988). The problem is escalating. In America in the last decade the percentage of adults over 20 years of age that falls into these categories has increased to 62%! In just the past 10 years the obesity rate in children has doubled. Nearly one fourth of all American children are officially overweight! The majority of people in the US are now overweight or obese. Before 1980, this was not the case.

The world authorities cited here provide data that makes evident the treacherous trend that obesity and its consequences are now arguably the
greatest preventable threat to life. Going further, T. Colin Campbell, PhD, has concluded after a lifetime of study of nutrition that the greatest threat to life is nutritional ignorance (personal communication, 6-23-16). This topic receives a thorough examination in his books, including *The China Study*, one that is not undertaken within the scope of this report.

Research has confirmed that the burden of carrying excess weight is an insidious time bomb that demonstrably cuts away at our most precious endowments: vitality, health and time. Even though the fastest growing demographic comprises those who have reached 100 years of age, my review of the research literature has not revealed any morbidly obese person who has lived 100 years.

Furthermore, research reveals that with all species of animals studied so far, those on reduced food intake live longer than overweight or even normal animals. Studies reported in The *New England Journal of Medicine* show that in addition to extending longevity in many animals, caloric restriction slows age-related deficits in learning, immune response, DNA repair and behavior. Health professionals across the board believe that avoiding obesity can help us live a long and healthy life (Weindruch & Sohal, 1997).
Section 4

THE METHODOLOGY

There are volumes of research on weight loss. What is different about this study?

This investigation asks a central question: What has been shown to work most effectively for permanent weight loss (at least 5 years)?

The methods of investigation combined a variety of techniques:

- A general review of the weight loss outcome literature.

- Interviews with seminal thinkers whose experience has enabled them to report and explain the best long-term results, verifiable in published literature as well as video and audio recordings in freely available streaming videos (Russell, 1995; Russell, 2003).

- A critical investigation into and examination of allegedly “evidence-backed” claims of miraculous long-term weight loss results will be presented.
• Considerations of intervening variables such as the biochemistry of weight loss; the genetic predisposition to overweight and obesity; the relative effects of the nutritional components of foods and the rate of weight loss, as contributions to long-term weight loss results are examined. These intervening variables, influential in the process of weight-loss, will be evaluated in light of published evidence (Purcell et al., 2014; Sumithran et al., 2011; Sumithran & Proietto, 2013).

• *Report on Permanent Weight Loss* is structured to mobilize people to use research findings to enhance their ability to achieve permanent weight loss. For those who are receptive, forming social contracts in pairs or groups, that make use of research findings without the mystification that often clouds the facts, can aid in achieving long-term weight-loss results (Casazza et al., 2013; Janis, 1981; Roberta Russell, 2001; R. Russell, 2002).
Section 5  WEIGHT LOSS: THE BEST VERIFIED RESULTS

Long-term Weight Regain Has Been the Norm.

Normally treatment programs addressing overweight and obesity have resulted in repeated failures to effect long-term weight loss (Cooper et al., 2010; Jeffery et al., 2000). Cooper, et.al. tested a new cognitive behavioral treatment for obesity that was explicitly designed to minimize this posttreatment weight regain compared with a self-help group with a three-year follow-up; 150 randomized obese female patients were given behavior therapy treatment or guided self-help. Both groups lost about 10% of their initial weight, although the guided self-help group had slightly more modest weight losses. The great majority regained almost all of the weight they had lost during the follow-up period with the behavioral treatment being no better than self-help in this regard. The authors suggested that it is “ethically questionable to claim that psychological treatments for obesity ‘work’ in the absence of the data on their longer term effects” (Cooper et al., 2010).

We know that the long-term prospects for lasting weight-loss results (at least 5 years) are grim; almost everyone (about 98 percent) re-gains all the weight they lost by five years (R. Russell, 1995a). According to G.T. Wilson, PhD, one of the pioneer researchers in long-term weight loss, once the
treatment stops whether it is with drugs such as Orlistat or through behavioral methods, the results tend to dissipate over time (ibid). "Despite the well-documented success of behavioral techniques in producing temporary weight loss, treatment is typically followed by weight regain" (J. Latner et al., 2000, p. 893).

The Trevose Group and its Replications: Methods and Results

The Most Successful Verified Long-term Weight Loss

"Obesity is increasingly considered a chronic disease requiring continuing care, but professional long-term-treatment for most patients is not available" (J.D. Latner, A.J. Stunkard, 2006). The Trevose studies using components of group, self-help and continuing-care treatment program for obesity have the most impressive long-term replicated published results (J. Latner et al., 2000; J. Latner et al., 2002; J. D. Latner et al., 2006; J. D. Latner & Wilson, 2007; R. Russell, 1995a).

The Trevose program is lay-directed and administered. It is "A low-cost program offering treatment of indefinite duration..." (J. Latner et al., 2000, p. 893) that has "produced large long-term weight losses and may be suitable for widespread replication" (ibid). It uses standard behavioral
techniques including one hour weekly meetings in groups of 10 people. Weigh-ins, self-monitoring of food, physical activity, social support, and measures to slow the rate of eating are an integral part of their agenda (ibid).

The Trevose candidate must be a minimum of 20 pounds and maximum of 100 pounds overweight. First, the applicant selects a weight loss goal from a range of weights within a normal Body Mass Index (BMI). Both attending all meetings and achieving weight loss goals of at least 15 percent of total weight loss to one’s individual goal is required in the first five weeks. If the candidates do not achieve these goals they are dropped from the Trevose program. In that event, they can never come back. There is no bargaining nor are there second chances. The risk of being removed from the program and the fact that there is a long waiting list to get in explains the fact that those who finally get into the program tend to be highly motivated and results oriented.

After the first five weeks “cumulative weight loss goals are 22% of the total goal for the second month, 30% for the third month and so forth until 90% of the goal is achieved” (ibid).
By this point, absences may be excused, but only after two weeks’ advance notice. Failure to meet attendance or weight loss requirements in the first four months’ results in immediate dismissal. After that, participants are given a grace period of one month or a two-month parole in which to lose the required weight.

After four months the requirement for attendance drops to two meetings a month and then at eight months to one meeting a month. After 12 months they graduate to ‘independence level’ and are no longer required to attend meetings. About 10 percent choose to continue meetings and it is from this pool that new leaders are chosen.

The group described in the 2000 study was followed in person or by phone for five years. The most important aspect of the study was the long duration treatment. Three predictors of outcome as established by regression analysis determined 60% of the variance in weight loss. Those determinants were how many months in treatment, the amount of weight lost during the first month, and the initial BMI (the higher the better the outcome). In this study, the largest percentage of weight loss (20%) did not occur until 30 months of treatment. By contrast, maximum weight loss usually occurs at six months with traditional behavioral programs, after which re-gaining tends to occur.
Participants who remained in the Trevose program — 47% at two years and 22 percent at five years — had lost 19% of their initial weight at two years (39.68 pounds) and 17% at five years (35.27 lbs.) When asked about what parts of the treatment were most useful, they rated continuing care and group support as most important. The researchers concluded that the treatment appears to be portable (J. D. Latner & Wilson, 2007).

Although drop-out rates at earlier points in the study were similar to other treatment studies, the Trevose participants had far greater weight losses: for instance, compared to an Orlistat study the mean rate of weight loss at two years for Trevose was 19%, more than twice that for Orlistat (9%) or placebo (6%). “The effective elements of the Trevose program appear to be its model of continuing care and its implementation” It is likely that social support by the peer group might have influenced the treatment outcome more than the monthly contacts with the therapist (ibid, p. 229).

“The self-help format of the Trevose program does not appear to be responsible for its success, which was far greater than that of two other self-help programs for obesity: Take Off Pounds Sensibly (TOPS®) and Overeaters Anonymous” (J. Latner et al., 2000, p. 896). A comparison study of 21 TOPS® groups in Philadelphia revealed that the TOPS® dropout rate
was higher. No other treatment program in the US has shown the level of long-term effectiveness evinced by the Trevose groups (J. Latner et al., 2000). Apparently, obesity is a life-long problem that requires a life-long effort.

The facts that the Trevose program is presented as a life-time opportunity with many success examples who themselves sometimes become volunteers and that there are specific time-limited goals for weight loss, no bargaining, no second chances — which must be met for continued membership in the program contribute to its unique effectiveness. The authors of the study concluded that the time is ripe for replication and additional testing of the Trevose model on a large scale (ibid). Since that study, replications have demonstrated that the Trevose model of weight control, combining self-help and continuing care, accountability and commitment to specific goals can be extended and disseminated to other settings, with potentially significant public health consequences (J. Latner et al., 2000; J. Latner et al., 2002; J. D. Latner et al., 2006; J. D. Latner & Wilson, 2007).

The Look-AHEAD Study

More recently a major long-term study, called Look AHEAD (Action for Health in Diabetes) followed the progress of 5,145 people at 16 centers across the
United States for eight years (Group, 2014). Researchers were trying to
discover whether a lifestyle intervention resulting in weight loss would
reduce the rates of heart disease and stroke in people with longstanding
diabetes. Half were assigned to a group that received an intensive lifestyle
intervention and the other half had the benefit of a general program of
diabetes support and education, with far less contact (Wadden et al.,
2011).

In the lifestyle intervention group for the first six months, participants
attended one individual and three group sessions per month and were
encouraged to replace two meals and one snack per day with liquid shakes
and meal bars. They were advised to continue to replace one meal per day
for the duration of the program. Starting at month seven some were further
assisted with weight-loss drugs. In years two to four treatment was provided
on an individual basis with at least one visit per month and a second contact
by email, mail or phone. There were yearly campaigns and short term
refresher groups as well as motivational campaigns to combat weight
regains. A multidisciplinary staff including medical personnel was available
(Wadden et al., 2011).

The Look AHEAD study provided the largest and longest randomized
evaluation of a lifestyle intervention to date for weight reduction. It included
individual contact once or twice per month with periodic group meetings. It
demonstrated that extended intervention can facilitate weight loss for up to eight years (Group, 2014). “In summary, Look AHEAD advances the management of obesity by showing that a comprehensive, long-term lifestyle intervention produced \( \geq 5\% \) weight loss at eight years in 50% of participants.” (Group, 2014)

Even though this lifestyle intervention did not reduce the incidence of cardiac events, it did foster a far greater weight loss, reduce the need for diabetes medicine, decrease sleep apnea and maintain physical mobility. Apparently weight loss alone, independent of type of diet is not sufficient to decrease heart disease, even though it produced an initial weight loss of eight percent of body weight at the end of the first year and maintained a loss of nearly five percent of body weight at four years. This long-term treatment produced dissipating but longer-term results than is commonly reported. This is in accord with the recommended prospect of treatment for life, suggested by G. Terence Wilson, PhD, which would be affordable in a self-help setting (R. Russell, 1995a).

The Look AHEAD Study concluded that weight loss did not reduce heart disease, but as an aside, there is evidence that adherence to a Mediterranean diet is correlated with decreased cardiac risk (Salas-Salvadó et al., 2014).
It appears that in any therapeutic treatment increasing the alliance may increase the therapeutic effect, since that is the most important ingredient in behavioral therapy (R. Russell, 1995b). Indeed, there is anecdotal evidence for the effective application of Trevose-like procedures in a community and on-line setting (Roberta Russell, 2001; R. Russell, 2002).
Section 6

WEIGHT-LOSS:
A SUMMARY OF RESEARCH-BASED CONCLUSIONS

1. Although it is possible to lose weight—which most people can accomplish temporarily—keeping it off for five years or more is still a relatively rare achievement. Only about two percent of weight-losers fall into that category. (R. Russell, 1995a).

2. For long-term weight-loss results, there are clear winners in the research arena. The use of the methods of logging and tracking daily food consumption and exercise while being accountable to others yields the best results. Mutual accountability in creating and reporting a calorie deficit of 3,500 calories for each pound lost through increased exercise and reduced calories consumed increases the meaning one ascribes to this difficult lifelong endeavor. This method, informed by various coping strategies, produces the most
impressive long-term (five-year) results reported in published, peer-reviewed literature (J. Latner et al., 2000; J. Latner et al., 2002; J. D. Latner et al., 2006; J. D. Latner & Wilson, 2007).

3. Peer support, record-keeping, and accountability are a promising and fruitful option for permanent weight loss. The addition of even five weeks of peer support has demonstrably increased the long-term maintenance of weight loss with effects lasting for as long as 10 years (Janis, 1981).

4. According to Rena Wing, PhD, The National Weight Loss Registry’s long-term study of weight loss maintenance has revealed that the participants’ methods for keeping weight off are more similar to each than methods that they may have used to initially lose weight. On average Registry members reported eating about 1,400 calories per day and burning about 400, mostly in walking—along with the use of logging and frequent weigh-ins (R. Russell, 1995a; Shick et al., 1998; Thomas et al., 2014, p. 1597).
5. There is a biological concomitant to the problem of recidivism. It is not only our differing predispositions to obesity but also the biological cascade of events that occur after significant weight loss, which include the increased production of ghrelin, a powerful hunger-stimulating hormone, and the depletion of leptin and an appetite-depleting hormone. These changes are mitigated over time by ongoing maintenance of the goal weight, but they do not necessarily go away just because the lost weight is regained (Proietto, personal communication, 12-29-15). A person who has lost weight becomes biochemically very different from someone of the same weight who was never overweight or obese (Sumithran et al., 2011; Sumithran & Proietto, 2013).

6. Social networks can be effectively used to offer no-cost lifetime alliances for permanent weight loss (Roberta Russell, 2001; R. Russell, 2002). (www.permanentweightloss.org)
7. According to E.O. Wilson, PhD, "...most complex societies have arisen through eusociality—meaning, roughly, the 'true' social condition. E.O. Wilson (2014). *The Meaning of Human Existence* (pp. 17-26). New York, London: W.W. Norton & Company. This means that those species that foster cooperation and sacrifice for others have better survival skills, whether composed of ants or people (Wilson, 2014).
Section 7

The Way to Permanent Weight Loss and How It Works:
Studying the National Weight Control Registry

Even though reducing over-weight is a practical way to add years of healthy living to one's lifespan, all predicted by vital statistics, most people do not seriously consider embracing it—if it represents a challenging change in lifestyle. Surprisingly, the average person in the industrialized world is missing out on just such an opportunity. Too fat and inactive, the vast majority of people in the USA are voluntarily and mindlessly throwing away years of life expectancy, because they are not incorporating what is known about permanent weight loss into their lifestyles or into their children’s upbringing.

There are many ways to lose weight, but keeping it off still remains a daunting challenge. Since that endeavor is made more difficult by the host of biological events that cause increased hunger and a slowed metabolism, contributing to a regain of lost weight in almost all weight-losers, increased coping strategies may be necessary.
Examining the successful behavior of the 10,000 long-term weight-losers in the National Weight Control Registry is a very revealing demonstration of just what it takes to keep excess weight off for the long-term.

Given the prevailing belief that few individuals succeed at long-term weight loss, The National Weight Control Registry (NWCR) was developed in 1994, by Rena Wing, PhD from Brown Medical School and James Hill, PhD from the University of Colorado to identify and investigate the characteristics of individuals who have lost significant amounts of weight and kept it off for long periods of time. It is the largest prospective investigation of long-term successful weight loss maintenance.

The Registry uses detailed questionnaires and annual follow-up surveys to examine the behavioral and psychological characteristics of weight maintainers, as well as the strategies they use to maintaining their weight losses. Up-to-date reports of its ever-increasing membership can be found on (http://www.nwcr.ws/).

These weight-losers are not paid, just studied (Butryn et al., 2007; Jeffery et al., 2000; McGuire et al., 1999; Shick et al., 1998; Thomas et al., 2014; Wadden et al., 2011; R. R. Wing & Hill, 2001; R. R. Wing & Phelan, 2005; R. R. Wing et al., 2006; Wyatt et al., 2002). In the Registry there are no endorsements of any products sold or recommended. The average weight-loss per person is 66 pounds, kept off for 5.5 years. As a member of this
anonymous group I have watched it grow and studied the habits of those rare (one or two percent) of individuals who try to lose weight, who actually do so and keep it off for more than five years.
Section 8

The Mystification of Permanent Weight-Loss

False or misleading claims of enduring success at weight loss abound. Although there are members of the nutrition studies community who report that their methods produce unique above average long-term weight-loss results with no back-sliding, such claims of unmitigated long-term weight loss for all participants are not reflected in the peer-reviewed research literature. Spectacular and unproven claims are more likely to be found in the sensational magazine headlines that one sees at the supermarket checkout line, in self-serving ads, or at times on the Dr. Oz show where they are shielded under the rubric of free speech, rather than held to the ethical standard of peer-reviewed research or doctor’s claims of past results to patients (Belluz, 2016). The Fuhrman incident mentioned on page 5 of this report is examined here in detail because it is well documented and also illustrates the extraordinary level of acceptance of extreme and inaccurate claims by health professionals engaged in the weight loss endeavor.

Rarely are the claims of unprecedented long-term weight loss so blatantly contradicted by the researcher or promoter’s own published evidence, as was the series of wrong and sometimes false claims of the well-publicized author, doctor, and PBS star, Joel Fuhrman, MD.
Dr. Fuhrman publicly and repeatedly announced in video and radio interviews, at professional conferences, and in a currently marketed movie called "Fat, Sick and Nearly Dead" (Joe Cross, 2010) that he had a published study that he co-authored with T. Colin Campbell, PhD, and B. Sarter, PhD (Fuhrman, 2008) that resulted in the best long-term weight loss results ever in the research history. “Nobody gained the weight back,” he said with a rush of animated enthusiasm at the video-recorded and web-posted World Preservation Foundation meeting (World Preservation Foundation, 2010b). Variants of this claim have been viewed by millions of weight-loss hopefuls, as the heavily marketed movie is also sold as a DVD and streamed free on the internet (Joe Cross, 2010). Just after the inaccurate 2008 study of Dr. Fuhrman’s patients was published Dr. Fuhrman set out on a publicity tour featuring his “amazing” results and affiliating himself with Dr. Campbell by reference as co-author. With the published study hot off the press, in a radio podcast on May 1, 2008 on www.vegan.com owned by Eric Marcus (post now removed, but initially posted), Dr. Fuhrman said “We’ve even completed a study where we followed 100 consecutive people following the plan and the average person lost 53 pounds which was more weight lost than any other program ever tested. But I think the interesting thing was that even after two years after the study nobody had gained any weight and as follow-
Soon after, in June 2008 he followed that claim on Dr. Oz’s radio podcast with this quote—“I just had a recent study published this month in a peer-reviewed medical journal where they followed 63 people following the diet plan and they lost more weight than any study in history and they kept it off. They followed them for two years. None of the participants gained any weight back and that was the major difference between other diet plans.”

Nevertheless, Dr. Fuhrman’s claims of no back-sliding by all patients were still belied by his own retrospective study. In fact, according to the published study, only 19 of the original 56 patients were left at the two-year mark. Most had dropped out by two years and according to Dr. T. Colin Campbell’s analysis of the raw data an average weight gain, and not loss, during the second year was revealed (Appendix 1).

The fact that Dr. Fuhrman’s own unprecedented public pronouncements of spectacular weight-loss results did not even match the results of his own published 2008 retrospective study, seemed to have escaped not just his notice, but notice or corrective action by professional listening audiences, by the producers who featured his claims, by professional board members of
the organizations who support his membership, and by the self-proclaimed, heathy-minded organizations that have benefited from his allegedly miraculous results, such as Whole Foods (Appendix 4). Undaunted by his own published facts, Dr. Fuhrman kept repeating these claims of no backsliding for all of his patients in the study on radio, video and at conferences.

Dr. Fuhrman is well-integrated into the lifestyle medicine alliance. He is founding member and formerly on the Board of Directors of the American College of Lifestyle Medicine (ACLM) whose official journal, *The American Journal of Lifestyle Medicine*, publishes Fuhrman’s research. He has also been invited as a guest at the podium at their professional conferences.

According to Dr. Fuhrman’s website, he is the research director of the Nutritional Research Project, a project of the National Health Association. He has raised funds for research.

A Whole Foods advertisement (Appendix 3) featuring Dr. Joel Fuhrman as Eat Right America’s Chief Medical Officer quoted the flawed study on line in its 28 Day Challenge plan, boldly quoting his “53-pound-weight-loss” study in its headline. Even after Dr. Campbell informed members of the Whole Foods board and its leader John Mackey that Fuhrman misrepresented not
just the longevity of the weight loss, and was discovered to be mistaken about the amount of weight loss, they did not remove the Whole Food’s wrong representations (Appendices 3 & 4). This retrospective study of Fuhrman’s own patients was apparently not checked against the raw data by the journal editors to compare it with the study’s conclusions. Actually, the mistake in the published claim of a 53-pound average weight loss for the 19 patients out of 56 or 63 would not have been revealed, had I not asked Dr. Fuhrman for the raw data.

I asked Dr. Fuhrman for the raw data for two reasons:

First, when I interviewed him in 2003 as a featured author on my cable TV show, *Lifetalk with Roberta Russell*, he estimated that about 80 to 85 percent of his patients had maintained their substantive weight losses at the five-year mark. Sometimes doctors are not the most impartial judges of their own success. Although these speculations were not verified claims for such outstanding results for his patients, they were completely at odds with the typical, much more temporary, outcomes with which I was familiar, both from the research literature and my own experience with the free community weight loss groups I had organized (R. Russell, 2001b).
Second, I thought it odd that both the published mean and the median of his patient’s published weight losses were exactly 53 pounds, although that did not in itself signify anything. As a result, I asked Dr. Fuhrman for the raw data. If he had known that the 53 pounds was not substantiated by his own data, he would have had no reason to provide it to me.

When I reviewed the data, sent months later from Dr. Sarter, the co-author of the study, I discovered that the 53-pound loss claimed for 19 out of 56 patients in the study was also grossly inaccurate. It turned out to be about 34 pounds, according to my calculations, not 53 as originally claimed in the published study.

As mentioned, the inflated 53-pound loss was the result of the fact that Dr. Sarter had subtracted the average weight of the 19 patients remaining at two years from the average weight of the 56 patients in the raw data or the 63 patients who were originally included in the study, not from the patient’s own starting weights. Had she subtracted the average two-year weight of the 19 patients that were left at the two-year mark from their own average starting weights the result would have been 34.25 not 53 pounds.
Even though the published result of a 53-pound weight loss was obviously wrong, it still did not state that all patients in the study had lost an average of 53 pounds. It only made that claim for the 19 patients remaining at two years. Those even more egregious claims about the at-least-two-year long success of all his patients in the study without any back-sliding rest entirely with Dr. Fuhrman, not Dr. Sarter. In recorded video and radio renditions of the results of his 2008 published study, Dr. Fuhrman repeatedly maintained that 56, sometimes even 100 of his patients in this same cohort had unprecedented long-term weight losses averaging 53 pounds with no back sliding in two years (Appendix 1) (Joe Cross, 2010; World Preservation Foundation, 2010b).

When I confronted Dr. Barbara Sarter—who was Dr. Fuhrman’s “independent” researcher, co-author, and formerly his intern—with the mistake in calculations, she said that although she had calculated the weight loss by subtracting the two-year weights of the 19 people left from the average weight of all the patients in the original much heavier and larger group, instead of from their own starting weights, this was just another way of measuring. She had done this with the medical measurements such as blood pressure as well. All of the errors noted were in one direction, to increase the beneficial result. Not all of the misleading information was corrected. Even in the finally published erratum (Sarter, 2010) the
comparison of the start and finish biological measurements of individuals remaining at two years with their own data was not offered. Instead a misleading comparison with the original group that had blood work measured was still presented as correct.

Presumably the researchers stopped the retrospective study early before the intended three years because only five patients were still losing weight without back-sliding at two years. This is particularly remarkable when one considers that this research sample was purported to represent “all participants seeking dietary counseling for weight loss from Dr. Fuhrman for three years” (Fuhrman, 2008). As an indication of just how selective this group was it is useful to compare it to the Whole Foods 28 Day Challenge claim that Dr. Fuhrman had seen 10,000 patients in the last 15 years (Appendix 3).

After examining the raw data and noticing the mistake in the claim of 53 pounds of weight lost, my efforts to get this error corrected were not enough to do the job. It took Dr. Campbell’s intervention to get the raw data and finally to get an erratum published.
Even Dr. Sarter’s belatedly published erratum had mystifying disparities. In it she eliminated one of the original 19 patients who remained in the study at two years (specifically patient number 23), allegedly because that patient was a 147-pound “man” who did not fit the inclusion criteria which was a starting weight of more than 170 pounds—the arbitrarily determined cut off point for men. The cut-off for women was a weight of more than 130 pounds.

My copy of the raw data was blind to the sex of the individuals in the study, but Dr. T. Colin Campbell’s was not. According to his raw data this 143-pound “man” was actually a woman who was wrongly eliminated. Dr. Sarter’s elimination of this person accounted for some of the difference between Campbell’s calculation of an average of 34.25 pounds lost for the 19 patients described in the original 2008 study, compared to Sarter’s correction from 53 to 37.6 pounds lost. Additionally, improvements shown on the medical data suffered from the same flaw of not comparing the starting and ending measurements of blood pressure and cholesterol of the 19 finalists with their own individual data, but instead with the baseline of the larger group of beginning patients who had blood measurements taken.
Errors in the erratum, just as the errors in the original study, all skewed the results to reports of greater losses and more impressive health improvements than the data supported.

Dr. Campbell said he had just lent his name to the Fuhrman study in order to help Dr. Fuhrman whose earlier reporting of these results were in fact twice rejected for professional publication. He had not participated in it. In fact, he did not know it had been published, as it had been rejected elsewhere (Appendix 1 & 2).

When “co-author,” Dr. Campbell, learned of this incorrect published 53-pound weight loss claim and Dr. Fuhrman’s inflated claims of no backsliding as differentiating his study of his patients from all others, Dr. Campbell tried to set the record straight. He reported to some of the publishers, movie producers and sales organizations publicizing these disproven assertions and pointing out that Dr. Fuhrman’s additional claims to professional audiences were at odds with the actual published results of his study. Dr. Campbell disclosed the fact that at two years, Fuhrman was claiming that all of his patients kept all of the weight off, when, in fact, according to the raw data from which the study was derived, and almost all of Dr. Fuhrman’s patients in this study either dropped out or regained some weight by two years (Appendix 1). He also noted that at differing times the number of patients who Fuhrman claimed kept off all of their lost weight were as many as 100,
with no regain. He made clear that the raw data provided to him showed starting weights for 63 patients, but the published study only mentioned 56. He drew attention to the fact that the 100 original patients mentioned in Dr. Fuhrman’s public pronouncements were also mysteriously absent from the published study (Fuhrman, 2008; Sarter, 2010).

After a long attempt to have adequate corrections published by the authors of this study, Dr. Campbell insisted on both removing his name and having his own comments published by the journal that published the study, *Alternative Therapies in Health and Medicine* (Appendix 1). Those comments were subsequently published but heavily edited by that journal.

There is a very high tolerance in the lifestyle medicine community for this sort of failure to comply with scientific standards. Even though the amount of weight claimed to have been lost by the now “Fuhrman and Sarter”—authored study was about 19 pounds too high, and the miraculous claim of no back sliding was not true, both the 53-pound loss and the claim of no backsliding are still being broadcast on the internet and in the Joe Cross film, *Fat, Sick and Nearly Dead* in 2016 (Joe Cross, 2010). If we do not insist upon truth in advertising claims from professionals who are dispensing medical advice and selling weight-loss remedies, we will all pay the price. There is a danger that misleading marketing strategies can lead to powerful
policy-making positions, if not corrected in a timely manner by those in a position to know that reports of results are not genuine.
Section 9

Why Maintaining Weight After Losing It Is Harder Than Losing It

Increased difficulties in keeping lost weight off are not just due to a weakening of motivation, but to a change in body chemistry after weight loss. After weight loss “circulating levels of several peripheral hormones involved in the homeostatic regulation of body weight occur” (Sumithran et al., 2011, p. 1597). Knowing how long these changes persist may be important in understanding the high rate of weight regain (ibid). If we are to turn the tide, the battle to stop the epidemic of overweight and obesity must be fought on many fronts, physiological, societal, emotional and economic.

Researchers continue to discover more and more physiological events that relentlessly call one’s body back to its highest weight, contributing to a recidivism rate of about 98 percent within five years of reducing excess body fat.

In 2011 in an Australian study reported in the New England Journal of Medicine, fifty overweight or obese people enrolled in a 10-week weight loss program with a very low calorie diet. Before starting and at 62 weeks, researchers examined circulating levels of ghrelin, leptin, peptide YY, gastric
inhibitory polypeptide, glucagon-like peptide 1, amylin, pancreatic polypeptide, cholecystokinin and insulin along with subjective ratings of appetite. At one year after the initial weight reduction of about 30 pounds, the levels of these circulating mediators of appetite that encourage weight regain after diet-induced weight loss do not revert to the levels they were at prior to losing weight (Sumithran et al., 2011).

According to Dr. Joseph Proietto M.D., a physician and researcher at the University of Melbourne, a formerly heavy person who has reduced to normal weight is not the same as someone of the same weight who has always been of normal weight (J. Proietto, personal communication, December 30, 2015).

A series of complex biological changes occur during and after weight loss. Metabolism slows and hunger increases. Among the many transformations that occur in the body after weight reduction brought about by caloric restriction, is a rise in the production of ghrelin (pronounced GRELL-in), a powerful hunger-stimulating hormone that is secreted by the stomach and the duodenum, driving us to eat more and contributing to the difficulties that make long-term weight-loss so rare (Parker-Pope, 2011; Sumithran et al., 2011; Sumithran & Proietto, 2013).
The effects of ghrelin are noteworthy in the satiety cascade which is a collection of phenomena that influence appetite satisfaction. Researchers found that human volunteers injected with ghrelin became ravenously hungry and immediately increased their caloric intake. This response to naturally increased ghrelin was helpful in primitive times when humans had to prepare for famine. In the present day physiological mechanisms, increasingly revealed by research, have been shown to sabotage even the most genuine efforts to maintain a healthy and attractive body weight (Leibel et al., 1995; Sumithran et al., 2011; Sumithran & Proietto, 2013).

Higher ghrelin levels are only one among many other powerful physiological changes that slow metabolism and increase hunger, thereby calling the formerly overweight reluctantly back to their prior over-fat condition, one that they had worked so hard to remedy.

The rise in ghrelin is, however, not evident in those who lose weight after having the increasingly popular gastric bypass operation because the site of its production, the stomach, is affected by the surgical procedure. This unforeseen benefit probably helps post-operative gastric bypass patients keep weight off.

V. Ionut, PhD, et al observed that the mechanism by which bariatric surgery changes body weight is incompletely understood. The changes in gastro intestinal hormones that result could result in decreased weight beyond what
would be expected by calorie restriction and malabsorption. “Changes in gastro-intestinal hormones, including increases in GLP-1, PYY, and oxyntomodulin, decreases in GIP and ghrelin, or the combined action of all these hormones might play a role in induction and long-term maintenance of weight loss” (Ionut, Burch, Youdim, & Bergman, 2013).

Leptin (from the Greek leptos, meaning thin) is another naturally occurring hormone that dramatically alters appetite, this time in the opposite way, by depleting it. Secreted by the fat cells and available to all of the tissues of the body, leptin has important effects in regulating body weight, metabolism and reproductive function.

Leptin-deficient people eat three or four times as much as normal people do when they are at liberty to do so. Scientists believe that as fat cells increase in size due to accumulation of triglycerides, they also synthesize more and more leptin. Leptin thereby provides the body with an index of nutritional status. Leptin affects body weight through the hypothalamic centers that control hunger, body temperature and energy expenditure. With obese mutant mice that were unable to synthesize leptin, daily injections of leptin led to a dramatic reduction in food intake within a few days, and to roughly a 50% reduction in body weight within a month. Weight loss resulting from administration of leptin appears to result from a combination of decreased hunger and food consumption and increased energy expenditure. These
effects are mediated at least in part by inhibition of the synthesis of
neuropeptide Y, a very potent stimulator of feeding behavior. Researchers
are still learning about the complex mechanisms by which leptin exerts its
effects on metabolism. One remarkable difference between people who
reduce weight by dieting as opposed to those who lose weight through the
addition of leptin is that the latter are limited to just fat loss, whereas
dieters can and often do lose both fat and lean tissue.

Unfortunately, Leptin is not usually effective except where there is a rare
leptin deficiency. A treated genetic deficiency in two Turkish cousins
revealed a dramatic effect on weight. They lost 58% percent of their body
weight in just over 10 months when they were given daily doses of leptin.
Unfortunately, universally giving leptin to obese people would not have such
an effect, because they are usually leptin resistant (Farooqi & O'Rahilly,
2014; Gibson et al., 2004; Mazen, El-Gammal, Abdel-Hamid, & Amr, 2009;

Researchers with 10 years of experience in treating leptin-deficient humans
have had dramatic results. Three leptin-deficient adults and one boy
presented with childhood-onset morbid obesity. A recessive C105T gene
mutation was found. Metabolic assessments while on and off leptin were
conducted. After treatment, the adults’ body mass index (BMI) decreased
from 51.2 to 29.5. Insulin resistance decreased and one initially diabetic woman became normoglycemic. Leptin replacement therapy reverses endocrine and metabolic disorders associated with leptin deficiency (PazFilho, Mastronardi, Delibasi, Wong, & Licinio, 2010). Nevertheless, leptin deficiency is a rare occurrence and its leptin-induced reversal is not relevant for the average overweight or obese person who wishes to lose weight.
Section Ten

Intervening Variables

1. What controls the hunger that drives us to eat?

According to Dr. John E. Blundell, Director of Bio-psychobiology at the School of Psychology at the University of Leeds, who has been active in research on mechanisms of appetite control for the last 25 years, taste and density of food determine the amount that you eat (Blundell, 2005; Finlayson, 2007). He offers a satiety cascade of food with protein yielding the most satiation, followed by carbohydrates and fat, in that order. He reports that people eat twice as many calories with high fat foods without being aware of it. Even though fat is satisfying, its satiating effects do not last as long as those of protein. You can calculate a satiety quotient for certain foods, which quantifies the recovery of hunger. In general, the amount of food consumed determines how long it will be until you are hungry again. However, not just the amount, but also the type of food determines the onset of renewed hunger (Blundell, 2005).
The biochemistry of hunger has multiple determinants. GLP-1 is a peptide released from the gut that inhibits gastric emptying and thereby decreases hunger and reduces food intake (E NaÈslund*1, 1999).

Insulin also acts as a satiety signal. There is an inverse correlation between pre-meal insulin and meal size. In obese people there is a blunted satiety response to a high density meal. Since insulin is secreted in response to blood sugar, low-glycemic foods that take longer to digest food into blood sugar delay the onset of hunger. Consequently, a bowl of slow-cooking whole grain oatmeal in the morning delays hunger longer than a more quickly digested refined cereal.

PYY (3-36) a gut hormone that physiologically inhibits food intake, is creating a lot of debate at the moment. Researchers found that a 90-minute infusion of PYY suppressed hunger and reduced the size of meals consumed for 12 hours. Nevertheless, no solution is yet in sight for the epidemic of obesity that is rising throughout the civilized world. Even though scientists are increasingly exploring every facet of hunger and weight gain, the problem of obesity is still escalating (Finlayson, 2007).
2. Is it All in Your Genes?

With a gene map for obesity, more than 100 genes are now known to contribute to the risk for obesity. The bottom line is that some people are resistant to gaining weight and some are susceptible (Rankinen et al., 2006). Although weight loss is therefore particularly difficult for many of us, a caloric deficit in the energy balance will still produce weight loss. No combination of foods has been proven to supersede that consideration. Calories count for us all (Sacks et al., 2009).

Genetics plays a role. When both parents are overweight their children have an 80% chance of being overweight. A person who is genetically predisposed to be overweight often gains more weight on the same amount of food than one who is not when matched for size and exercise. Thus some people are inherently resistant to gaining weight while others are susceptible.

This risk for obesity, called the Lambda coefficient, rises with the number of obese relatives. Claude Bouchard, past-president of the International Association for the Study of Obesity and director of the Pennington Biomedical Research Center and Chair of Nutrition, one of the most-cited researchers in this specialized field, believes that even though genes have an effect, the current epidemic is not caused by genes, but by the way we
live.

Dr. Joseph Proietto also considers epigenetic effects important in the genetic contribution to weight gain. In 2002 research had not yet revealed the epigenetic contribution to weight regulation (personal communication, Bouchard, C., July 21, 2016). According to Dr. Proietto, “The fact that leptin is made in the fat cells means that there is a negative feedback system that prevents excessive weight being gained when food is abundant.” He believes that “if you are genetically lean, lifestyle can only cause 7 to 8 kg (15.42 to 17.63 lbs.) of weight gain. It is true that traditional genetic mechanisms (mutations) cannot explain the recent obesity epidemic. However, epigenetics can…” (personal communication, Proietto, J., June 23, 2016). Epigenetics is expression of otherwise dormant genes brought about by the environment.

Whereas specific gene defects that cause excessive weight gain are known to exist in 30 genetic loci, not just one or two, they are believed to account for only about four or five percent of obesity (Bouchard, 2002; Katzmarzyk, Pérusse, Rao, & Bouchard, 2000).

However, even with the genetic burden of a family that tends to be overweight, genetics alone are not enough to defeat those who are truly determined to do what works to keep trim.
When overcoming either a genetically determined slow metabolism or one that results from the body’s raised set point after losing weight, increasing the calorie burn and reducing calories consumed to create a calorie deficit, albeit at a lower level will still create a weight loss. In fact, Dr. Proietto who is one of the most knowledgeable authorities on obesity in the world believes that there are no cases of obesity caused by a slow metabolism. “YOU CAN NOT TINKER WITH METABOLISM. Low thyroid hormone will slow metabolism slightly, but this only causes modest weight gain, NOT obesity” (personal communication, Proietto, J. June 23, 2016).

In the course of writing an article for *The Lake Placid News* on the question of whether a morbidly obese person had ever reduced to normal weight and maintained it for at least five years without bariatric surgery, I searched the research literature and called many well-known diet doctors, but no such example had been revealed to me. By the time my deadline arrived only Dr. Joel Fuhrman could find such a successful example, Scott Cutshall. This remarkable man was not among his patients. Scott said that he had devised his own diet regimen using his unique sense of satisfaction with particular foods to create an appropriate diet that he could enjoy. He did not follow anyone’s else’s formula for success. This unique man lost more than 320 pounds, reducing from 501 pounds in 2005 when he was 42 to less than 168
pounds in three years and three months. He has now maintained a weight of 170 pounds varying no more than three pounds for seven years without feeling deprived or hungry, without bariatric surgery or drugs. He had to take extraordinary measures to insure remaining at a normal weight, but it was worth it to him. He rode his bike up to 53 miles per day in the beginning, walked many miles each day and ate the same plant-based food of his own design, selected for the textures and crunch and caloric requirements that would satisfy both his palate and his calorie equilibrium. He had the support of his family and extraordinary presence of mind which seems to be required for a rare feat of this magnitude (R Russell, 2014).

Help from one’s social environment appears to be crucial in maintaining the motivation for such a Herculean task.

3. **How is Knowledge of the Biochemistry of Weight Control Useful?**

Forewarned is forearmed. One can learn from research to stay both satisfied and trim, by compensating for increased hunger by eating bulkier, more filling, low-calorie-density foods such as melon, broth-based soups and salad with light dressings, while being careful to avoid the excessive consumption of hunger-stimulating sweet or salty foods. Knowing that our bodies will endeavor to return to their highest weight, we can avoid feelings of failure
and guilt when the same methods that we used to lose weight do not suffice to keep it off. Upping the ante, in response to this increased challenge to creating an appropriate energy balance—re-creating a lifestyle that allows us to burn off all of the calories that we eat, without feeling hungry—is the logical individual approach to permanent weight loss.

Diets can be tweaked to increase satisfaction on fewer calories by paying attention to the calorie density of foods eaten and the schedule of eating and drinking—water is important here too, because we often mistake thirst for hunger. It is important to think long-term and avoid unbalanced fad diets. Careful attention to diet will allow people to stay healthy on fewer calories, while eliminating surplus calories, primarily from non-essential foods that contain alcohol, saturated or trans fats, refined flour and sugar, wherever possible.

Dr. Daniel Tomé, Professor of Nutrition and head of the Laboratory of Physiologie, Nutrition and Feeding Behavior at the Institute National Agronomique Paris-Grignon, reported evidence that protein is more satisfying than carbohydrates or fat in the short term (Lacroix, 2004). Given a high protein diet people will initially eat less, but this effect does not last.

The balance of calories in and calories out ultimately determine weight.
4. Does the Rate of Weight Loss Affect the Success of Long-Term Weight Management?

There is a widely held belief that weight lost rapidly is more quickly regained. The authors of an Australian study published in the Lancet contend that this problem stems from the belief that since successful long-term weight loss remains elusive, obesity is caused by inappropriate social habits and that gradual weight loss allows more time to change those habits (Purcell et al., 2014, p. 1).

Nevertheless, a controlled study has revealed that “scientific evidence does not support the superiority of a gradual approach in achieving or maintaining weight loss” (ibid).

In tandem with length of maintenance, the question of whether the rate of weight loss also affected changes in subjective appetite and in circulating appetite-mediating induced changes was investigated. In a two-phase dietary trial in a Melbourne hospital the researchers assigned 200 obese (BMI from 30.0 to 45.0) participants to gradual (n=103) or rapid (n=97) weight loss. Ages ranged from 10 to 70 years.

Those in the rapid loss group weight were given a commercially available very low energy preparation for 12 weeks. Three meals per day were
replaced with Optifast which contained a total of 450 to 800 calories per day aiming for a 15 percent weight loss (about 3.3 pounds per week).

In the gradual weight loss group participants reduced their calories to create an energy deficit of 400 to 500 calories per day, using one or two Optifast meals per day, with the aim of a 15 percent weight loss during 36 weeks.

All participants received meal replacements at no cost. All were given the same dietary educational materials, had appointments with the same dietitian every two weeks (six appointments for the rapid and 12 for the gradual weight-loss group). Both groups were prescribed the same energy deficit (105,000 calories) during either 12 weeks for the rapid weight losers or 36 weeks for the gradual weight losers. Participants who achieved at least a 12.5% weight loss in the allotted time were eligible to enter Phase 2.

In Phase 2, for 144 weeks, participants were instructed to follow an individualized diet for weight maintenance and those regaining lost weight were advised to follow an energy-reduced diet with a 400-500 calorie per day deficit. All participants throughout the study were instructed to do moderate intensity exercise such as brisk walking for at least 30 minutes per day. The total study duration was 156 weeks (three years) for the rapid group and 180 weeks (3.5 years) for the gradual weight loss participants.
The primary outcome was the mean loss at week 144. On the basis of the expected 50 percent attrition rate during the trial 200 participants were needed to detect a difference in mean weight regain of more than 11 pounds at a significance level of .05%. One hundred percent regain was assumed for non-completers.

In the gradual weight loss group two participants achieved the weight loss by week 12 instead of the 36 weeks allotted to them. Therefore, they were excluded, leaving 51 participants in the gradual weight loss group and 76 in the rapid weight loss group that started phase 2. Attrition rate in phase 2 was not significantly different between groups. Study completers regained most of their lost weight. By week 144 of phase 2, average weight regain was not significantly different between the rapid and gradual weight loss groups (22.708 lbs. for the rapid weight loss group to 22.98 lbs. for the gradual weight loss group).

This very comprehensive study refuted the widely-held belief that weight lost rapidly is more quickly regained. Instead, this study revealed that regain is similar after gradual or rapid weight loss. Furthermore, in Phase 1, the achievement of the weight loss target was more likely and the attrition rate was lower when weight loss was undertaken rapidly.

The authors of the study have speculated that the participants in the rapid group, more motivated by their immediate results, spontaneously increased
their activity compared with those in the gradual group. They also point out that the clear-cut nature of a prescriptive very low energy diet is simple compared to a low-calorie diet consisting of regular foods. A meal replacement diet improves compliance compared with a conventional diet.

In this study, a subgroup of 40 patients in the rapid weight loss group had higher concentrations of 3-Beta-hydroxybutyrate during the weight loss phase than the gradual weight loss group.

According to Wikipedia, beta-hydroxybutyrate is synthesized in the liver from acetoacetate, the first ketone produced in the fasting state. This hormone is raised during ketosis.

Since “Ketosis suppresses appetite, increases the satiety hormone cholecystokinin, and mitigates the rise in the orexigenic hormone ghrelin reported after weight loss...,” rapid losers may have been less hungry than gradual weight losers (Purcell et al., 2014, p. 7).

The highly discredited prospect of rapid weight loss is clearly worth reexamining.

5. Are Weight-Loss Results Affected by the Kind of Food, Fat Protein and Carbohydrates, Consumed?
Is a calorie just a calorie? Or is just getting the calorie-in versus calorie-out balance right all it takes to achieve and maintain long-term weight loss?

Advocates for special combination diets such as Atkin’s high-fat, high protein, low carbohydrate or on the other extreme, whole food plant-based low-fat, low protein diet combinations, say no, but the long-term evidence drawn directly from human studies belies this conventional wisdom (Sacks et al., 2009, p. 859).

A comprehensive two-year study that compared weight-loss diets of differing nutritional compositions of fat, protein and carbohydrates found that the possible weight-loss advantages of diets that emphasize protein, fat or carbohydrates has not been established (ibid). “Reduced calorie diets result in clinically meaningful weight loss regardless of which macronutrients they emphasize” (ibid).

This ground-breaking study published in the New England Journal of Medicine in 2009 demonstrates that weight-loss advantages conferred by diet composition are short-term.

The Sacks team of 17 researchers randomly assigned 811 overweight adults to one of four diets; the targeted percentages of energy derived from fat, protein and carbohydrates in four diets were varied from one with 20 percent fat, 15 percent protein and 65 percent carbohydrate, a second group
consumed respectively 20, 25 and 55 percent; third group, 40, 15, and 45 percent, and then fourth group consumed and average composition of 40, 25 and 35 percent of fat, protein and carbohydrates. All participants were offered group and individual instructional sessions for two years.

At six months the participants in each diet had lost an average of 13.2 lbs. which was 7% of their body weight (ibid). After one year they began to gain weight. By two years all the groups had similar weight losses. No combination of fat, protein and carbohydrates conferred a long-term advantage in weight loss. Among the 80 percent of participants who completed the two-year trial the average weight loss was (8.8 lbs.), however 14 to 15 percent of participants had a reduction of at least 10 percent of body weight. “Satiety, hunger, satisfaction with the diet, and attendance at group sessions were similar for all diets; attendance was strongly associated with weight loss (0.2 KG per session attended)” (ibid). The diets also improved lipid-related risk factors and fasting insulin levels.

Since attendance is strongly correlated with continued weight loss, it is useful to contemplate arranging one’s environment to provide cost-effective, ongoing treatment for life.

6. What effect does thermogenesis have on the burning of calories?
Food composition as a factor in weight loss and maintenance has other subtle components that fall under the rubric of thermogenesis. The relatively little-known effect of thermogenesis can also be considered in exploring ideal food compositions for a healthy long-term weight loss. Although it is generally accepted that the metabolizable energy of food consumed must be accounted for by either changes in weight, changes in body composition or physical activity, there is an important paradox that has been revealed in animal experiments showing that some food combinations divert the use of more calories consumed into the expenditure of heat, known as thermogenesis and therefore will keep weight constant even with increased calorie consumption. British researchers, Drs. D.S. Miller and P.R. Payne, examined this variable in pigs and concluded that food energy may be converted directly into heat (D. Miller & Payne, 1962). Additionally, environmental temperature, particularly exposure to cold, stimulates heat production in rats, known as non-shivering thermogenesis (NST) which also is observed through diet-induced thermogenesis (DET). According to Rothwell and Stock, extra energy consumed by rats at 24° C (75.2° F) was expended as heat and less retained as body weight compared to rats stored at 29° C (84.2° F). The colder rats expended energy at a much lower efficiency (28%) compared to a much greater efficiency (43%) of the warmer rats. This suggests that when energy is consumed it is utilized by a different metabolic process. (Rothwell & Stock, 1986). Exercising in cold
weather may therefore divert some calories eaten through the less efficient metabolic process of thermogenesis to preserve warmth.

T.C. Campbell and J. Chen observed from a comprehensive study of human diet, lifestyle and disease mortality, from 65 counties (6,500 adults) of rural China (Campbell & Chen, 1999), when comparing Chinese males with American males of the same body weight, that the food intake was about 30% higher in rural China which represented a diet high in plant-rich food. This higher calorie diet was comparably low in fat (14.5% of energy), relatively low on protein (65.8 g per day) and high in fiber (33 g per day). The authors concluded that the excess energy intake without comparable weight gain of the Chinese adults in their extensive epidemiological study was primarily due to their greater physical activity. However, they hypothesize that based on animal experiments with rats and pigs showing that substantially reduced intakes of protein allow animals to consume more energy, but gain less weight, that some of the lower weight result of the Chinese adults is likely to resulting from non-post-prandial (non-after-meal) basal metabolism (Campbell & Chen, 1999). Also they demonstrated in other experiments with rats that a low protein diet induced greater consumption of oxygen that leads to greater metabolism of energy as body heat, which was
consistent with a greater content of brown adipose tissue (Horio, F., Youngman, L. D., Bell, R. C., & Campbell, T. C. 1991).

Exercising in cold weather burns more calories notwithstanding the effects of thermogenesis.

7. **Do the kinds of foods eaten influence the amount of weight Lost, using appetite as a guide, without intentionally holding the calories constant?**

Even though 3,500 calories, whatever their source of ingestion is equal to one pound, gained, lost or used, the kinds of foods you eat do definitely influence your appetite and your health.

In a study on weight-loss with a low fat diet evidence that the body can lose weight merely by reducing the fat content of food was revealed (Kendall, Levitsky, Strupp, & Lissner, 1991). Thirteen families were randomly assigned to either a low-fat (20-25% of calories as fat) or a control diet (34 to 40%) calories as fat. After a 7-week period the conditions were reversed for another 11 weeks. On the low-fat diet increased energy intake only compensated for 35 percent of calories at the end of the 11-week period. This failure to compensate calorically on the low-fat diet resulted in a calorie deficit sufficient to create a 5.5-pound difference between the control group and the low-fat group. “These results demonstrate that body weight can be lost merely by
reducing the fat content of the diet without the need to voluntarily restrict food intake” (ibid, p. 1124).

However, not all people exposed to a high fat diet become obese; some remain lean. “This means that some people are susceptible to weight gain (in a weight-promoting environment) and others are resistant” (Blundell, 2005, p. 614). Even though there are individual differences in metabolism, weight loss is still due to a calorie deficit.

8. How does our toxic society promote overweight & obesity?

Professor Kelly Brownell, former director of the Yale Center for Eating & Weight Disorders, has coined the phrase “a toxic society” to describe the current environmental factors contributing to overweight and obesity. These include decline in energy expenditure for work, transportation and personal chores, together with the easy availability of high energy foods. Fast food, enormous portion sizes, sedentary lifestyles, computer usage and TV viewing and dependence on labor-saving machines and automobiles all contribute to the problem. Our social lives tend to revolve around eating rather than exercise (Brownell & Jeffery, 1987).

Dr. Marion Nestle, author of Food Politics and chair of nutrition and food studies at New York University, declared that just a one percent reduction in
intake of saturated fat across in the USA would prevent more than 30,000 cases of coronary heart disease annually (Nestle, 2013).

According to Dr. Jean-Pierre Després, researcher at Quebec Heart Institute in Canada we have created a toxic environment by taking the path of least resistance. We have designed devices and living and working environments that spare us from exerting ourselves. Our environment becomes less and less appropriate for the maintenance of normal weight culminating in the current situation in which more than 30 percent are obese in the USA (Després, 2005).

In Germany statistics show a dramatic jump in the number of overweight children. According to a new study by the German Society for Nutrition, every fourth to fifth German child is considered too heavy for his age and size by the time he or she starts school. When compared to statistics from 25 years ago, the number of "fat" children in the 5-7 age range has more than doubled. Among ten year olds, the number has quadrupled. Renate Künast, consumer protection minister, in an interview with the Bild am Sonntag newspaper, reported that an increasing number of children are too fat, "Among the 10-year-olds, about 40 percent are massively overweight."

Obese children are likely to become overweight adults. A large percentage of children and adolescents suffering from obesity also have considerable
comorbidities, such as type II diabetes, a disease that used to be found in adults, rather than children.

In the US the Center for Disease Control and Prevention concluded that a combination of dietary factors and sedentary activity patterns accounts for at least 300,000 deaths each year.

9. How Does Fat Kill Us?

Fat kills through pervasive wear and tear on all of our life-supporting systems. Excess weight substantially raises the risk of death from high blood pressure, dyslipidemia (high LDLs and low HDLs), type 2 diabetes, coronary artery disease and stroke. “If LDL is high, it is not due to obesity, but is separately inherited” (personal communication, Proietto, June 23, 2016). Additional morbidity is reflected in an increased occurrence of gallbladder disease, osteoarthritis, sleep apnea, respiratory distress and endometrial, breast, prostate and colon cancer. Diseases caused by over-eating and inactivity are some of the biggest killers in the industrialized world today. Depriving us not only of energy, health, looks, confidence, vitality, and money, being overweight also steals years of life itself.

Weight-loss can also affect mobility. “The combination of modest weight loss plus moderate exercise provides better overall improvements in self-reported measures of function and pain in performance measures of mobility
in older overweight and obese with knee OA (osteoarthritis) compared with either intervention alone” (SP Messier, 2004, p. 4).

A new focus on the particular risks of abdominal obesity is now emphasized. Indeed, a waist of 35.4 inches carries the same risk of death as a prior heart attack and should be treated accordingly! Dr. Lefebvre emphasized that the American cut off for increased risk at 41 inches is spuriously high and without supportive evidence. He and his co-authors have shown that people tend to underestimate their weight and overestimate their height when asked to self-report (DelPrete, 1992).

The effect of excess weight on longevity has been examined, not just on a statistical basis, but also on a molecular level. Most importantly the mechanism of chronic molecular inflammation has been identified as a major biological mechanism underpinning the aging process and age-related diseases (Chung, 2009). The key mediators of inflammatory reactions have been shown to be up-regulated during the aging process. The signaling pathways that mediate inflammation are modulated by both calorie restriction and exercise. The fact that excess weight correlates with decreased life-expectancy is made more comprehensible in light of the finding that the activation of specific “pro-inflammatory molecules appear to be the molecular mechanism underlying numerous age-related diseases including dementia, cardiovascular disease, cancer, obesity, metabolic
syndrome, and osteoporosis” (Chung, 2009, p. 16). “Thus, accumulating evidence indicates molecular inflammation is a primary factor underlying age-related diseases and aging processes” (ibid).

Excess adiposity accelerates the process of aging is in other ways in addition to molecular inflammation. Increased oxidative stress accelerate aging by causing damage to DNA and RNA as assessed through white blood cell and urine analysis. Experimental evidence indicates that caloric restriction or increased exercise induced weight loss in humans causes a significant reduction in markers of oxidation (Group, 2014).

Another alarming problem that accelerates the aging process is sarcopenia, “a debilitating condition that involves loss of muscle mass and function and can lead to frailty and ultimately disability” (Anton, 2016 (in press)). This affects virtually everyone as they age. Sarcopenia was previously determined by a relative muscle mass that is 2 standard deviations below a younger reference age group and now muscle strength in addition to muscle mass is included the determination of sarcopenia. This creates a much larger population of adults that is at risk for sarcopenia. Furthermore, a new category called sarcopenic obese consisting of normal weight people according to their BMI, but not according to their muscle strength is now considered in predicting accelerated aging caused by overweight and
obesity. The state of sarcopenic obesity usually includes increased abdominal fat and symptoms of prediabetes (ibid, 2016, in press).

Short term weight loss due to temporary diets rather than life-style changes usually includes about 25% of the weight in loss of muscle mass which is not necessarily replaced with the regain of weight that usually occurs (Anton, S., personal communication).

The long-term hardships and damage caused by yoyo dieting far exceed the fact that the temporary results that short-term dieting produces are disappointing. Thus, a long term lifestyle assessment, and the resulting incorporation of appropriate lifestyle changes that result in a decrease in calories eaten and increase in calories burned is clearly the most prudent solution for the overweight and obese.

The problem is mushrooming as are the reasons to engage in an effective remedy. In America in the last decade the percentage of adults over 20 years of age that falls into these categories has increased to 62 percent! The number of obese adults has doubled since the 1960s and in just the past 10 years the obesity rate in children has doubled. Nearly one in four of all American children are officially overweight! Most people in the US are now overweight or obese. Before 1980 most people were not overweight.
There are many ways to lose weight, but keeping it off remains a daunting challenge, even though it can be realistically addressed by assessing reliable evidence instead of myths.

Maintaining a lower weight is made more difficult by the host of biological events that engender increased hunger and a slower metabolism causing a subsequent regain of lost weight in almost all weight losers. Therefore, in spite of the fact that last year 117 billion US dollars and more throughout the world were spent on overweight remedies, the World Health Organization has declared a growing world-wide epidemic of overweight.
Section 11

How is long-term success at weight-loss actually possible?

Many repeat dieters have failed so many times at permanent weight loss, that they do not believe success is possible. Although failure to achieve long-term weight loss—defined as five years or more—is the norm, success is notably achievable. The National Weight Control Registry has tracked the behavior of more than 10,000 people who have lost an average of 66 pounds and kept it off for 5.5 years.

Considering the diversity of weight loss advice that abounds, the consistent long-term weight losers in the National Weight Loss Registry are remarkably homogeneous, reporting that they consume about 1,400 calories per day with just 24% from fat, and devoting about 400 calories per day to physical exercise, mostly in the form of walking. The lack of representation of adherents to long-popular high fat, high protein fad diets in this finely honed group of people who have actually managed to keep their lost weight off for an average of 5 years is notable and significant. This is an ideal natural laboratory to examine just what it takes to rise above social temptations and a body that is biologically called back to a former heavier basepoint by a slowed metabolism and increased hunger; a toxic, very tempting
environment, and a too-sedentary existence, bogged down by stationary computer and television screens.

What are these unusually successful long-term weight-losers like? They appear similar to normal individuals in terms of resting metabolism. About 45% lost the weight on their own without any type of formal program. Two thirds of these registrants were overweight as children and 60% report a family history of obesity.

**In order to achieve successful long-term, even life-time weight loss and maintenance the appropriate calorie and exercise balance must be achieved and sustained.**

Obesity is a chronic disorder that requires long-term treatment. Temporary success at weight-loss is well documented, but it is typically followed by weight gain. Since the best-documented long-term success has been attributed to the Trevose Behavior Modification Program (TBMP) that began in Philadelphia in 1970 with ten members and has since treated over 1000 people in Pennsylvania, their methods can inspire grass roots alliances to aid in achieving a lifetime success at weight loss.

They can claim a 10% success rate for keeping off 17% of body weight after 5 years. Remarkably, that record is way ahead of any other documented
claim. Normally, 60% of weight losers gain everything back the first year and by 5 years almost everyone has gained it all back.

What parts of the Trevose method that helped maintain weight loss are available to the person desiring to lose weight and keep it off? Like many self-help groups the Trevose format includes weekly one-hour meetings in ten-person groups. In addition, the Trevose group logged their food prior to eating and logged their exercise as well. To document the effectiveness of their method researchers compared similar groups of weight losers in Philadelphia, instructing one half of the leaders in the logging method. Those who used this method lost four times as much weight and also had a lower drop-out rate (41% compared to 67%). The secret was in the method.

The free www.permanentweightloss.org group that I founded uses the methods of logging and accountability, effectively incorporating research knowledge into its group weight loss strategy.

Using the best documented methods—logging and group support—both freely available to potential community groups I, along with some of the group members, have thus far, enjoyed unusual success at keeping weight off. I believe that this time-honored model could and should be successfully adopted internationally without commercial interests. There is no magic
formula for long-term weight loss. It is difficult and usually requires enormous motivation.

The solution to the current obesity epidemic requires a creative and vigilant effort to change our long-ingrained behaviors. In the service of creating a healthier lifestyle, families, friends and community groups, informed by research findings, instead of fads and wishful thinking, can make real strides in reversing this deadly fat epidemic. This may help to negate health experts’ grim prediction that children growing up today will have a shorter life expectancy than their parents. Even though some people are resistant to gaining weight and some are susceptible, a caloric deficit in the energy balance will still produce weight loss.

**Clearly, failure to keep lost weight off is not necessarily just due to a lack of motivation, but also to the increasing difficulty of this seemingly Herculean task.**

No combination of foods has been proven to supersede that consideration. Calories count for us all. We can help each other change our environments and our temptations by joining together to commit to and plan for a lighter life.
Other people influence us as we do them. We can form therapeutic alliances with others who have permanent weight loss goals and the motivation to use what has been verifiably shown to work. There is great strength to be found in alliances with other like-minded, well-intentioned and motivated people who are committed to doing what works.

Looking through a wider lens, E. O. Wilson, an entomologist and author of *The Social Conquest of Earth* and winner of the Pulitzer Prize talks about the adaptive concept of euosociality (from the Greek eu: “good/real” + “social). This state is defined by cooperative brood care, overlapping generations and division of labor into reproductive and non-reproductive groups. This exists in certain insects. Partly because they cooperate they have survived as a species for millions of years longer than human beings. Today there are many more ants surviving in the world than people, or even vertebrates, when measured by weight.

So focusing on people, we can see that we have before us a pandemic of overweight and obesity. To combat it billions of dollars are spent on what are often short-sighted, commercially hyped and ultimately ineffective remedies. If one consults the research—and from that learns what is actually known about the problem of overweight and obesity—treatment for life without charges is truly available, either by summoning sufficient resolve or
by also joining up with others, logging one’s exercise and calories eaten and being accountable. We can see what works in terms of behavior by studying the prototypical person in the National Weight Control Registry.

To put what we know in the service of reaching our weight-loss goals we must exercise our critical faculties and not get side-tracked with quick fixes and wishful thinking. We can share coping strategies. We can and must mend our ways, because doing the same thing will only produce the same result. According to the late renowned behaviorist, B.F. Skinner, PhD, ethics indicate the use of only positive reinforcement. Punishment or negative reinforcement can easily be manipulative (Naour, 2009). Accordingly, in order to be part of the movement to encourage healthier weights and more wholesome lifestyles, reward effective behavior when you see it. Be a part of the solution.
Report on Permanent Weight Loss by Roberta Russell

References

E NaÈslund*1, B. B., N King3, M Gutniak4, JE Blundell3, JJ Holst5, S RoÈssner2 and PM HellstroÈm6,. (1999). Energy intake and appetite are suppressed by glucagon-like peptide-1 (GLP-1) in obese men

*Journal of obesity, 23.*


Joe Cross, K. E. (Writer). (2010). *Fat, Sick and Nearly Dead*


SP Messier, R. L., GD Miller… - (2004).] Exercise and dietary weight loss in overweight and obese older adults with knee osteoarthritis: the Arthritis, Diet, and Activity Promotion Trial


Appendix 1

Rescission of authorship
[7-24-2011]

Editor, Alternative Therapies:


The project director was Dr. Fuhrman while the lead researcher was Dr. Sarter. Because of my long career in experimental research and my several hundred peer-reviewed papers, I was asked about 2003-2004 by Dr. Fuhrman for a favor, namely, to help him and his colleague publish the findings in a peer-reviewed journal. I agreed to do so because the unusually promising health benefits of a whole-food plant-based diet had not been previously reported for individuals who are counseled in a clinical setting.

I had nothing to do with organizing or conducting the research nor did I review the raw data for this study. Like virtually all reviewers of manuscripts, I simply accepted the tabulations of the data for the manuscript as prepared, made a few editorial and substantive comments and allowed my name to be added as a co-author so that this information might be published.

Since then, the findings of this study have been widely publicized by Dr. Fuhrman and used to advertise the benefits of this diet. Unfortunately, his claims are being challenged by a third party who has relied on these findings and who has not been able to duplicate these impressive results. This critic then sought an explanation from Drs. Sarter and Fuhrman and has obtained only an incomplete and inconsistent response.

Upon recently receiving and reviewing the raw data myself and learning of the publicity given to these findings by Dr. Fuhrman, I found substantial, inconsistent and very serious errors that seriously question Dr. Fuhrman’s public representations. A few examples, of many, illustrate.

1. Of the 20 patients who continued for 2 years on this diet, a median weight loss was 34.5 lbs (mean was 34.2 lbs), not the 53 lbs widely advertised, supposedly supporting the claim by Dr. Fuhrman that this was more weight loss than ever reported in medical history.

2. Unlike Dr. Fuhrman’s claim that all patients sustained weight losses for 2 years and “kept it off”, only 20 of the original 56 initial patients (36%) continued for 2 years and of these, most of their weight losses occurred during the first year. Thereafter, (from year 1 to year 2), 10 subjects re-gained weight and 5 lost slightly more weight. In addition, 18 additional patients dropped out of the study after year 1 (average body weight slightly increased from year 1 to year 2).

3. In radio presentations of this study to large audiences (one was on Dr. Mehmet Oz’s program), he has claimed that 63 patients (on one occasion) and 100 patients (on another occasion) were part of this study and they all kept their weight off for two years. The paper refers only to 56 patients (the raw data that I now see shows 53 patients), only some who complied and they all
did not keep their weight off. Only 17 patients remained for documentation from year 1 to year 2, with 10 regaining weight, 5 losing weight and 2 with no change.

4. Dr. Fuhrman incorrectly repeats the claim of 53 pounds body weight loss per person on a website of a well known food company (over 300 stores) that sponsors demonstration trials with this same diet and these same claims.

5. This same paper reappears in the Archives of your journal but in this case, the order of the authors has been mysteriously changed to Campbell, Sarter and Fuhrman, leaving me and others with the impression that I was the lead researcher, not Sarter. This is blatantly false.

These are major errors and false claims that discredit the otherwise impressive health benefits of a whole food plant-based dietary lifestyle. I must emphasize that I have only examined the body weight data, not the clinical data in this study and am concerned that these latter data may show similar problems because of the methods used to calculate results.

Please publish this letter and do whatever is possible to disassociate my name from this paper.

Thank you,

T. Colin Campbell

Jacob Gould Schurman Professor Emeritus
of Nutritional Biochemistry
Cornell University
Ithaca, NY
Appendix 2

Letter from T. Colin Campbell, PhD to John Mackey, Whole Foods

Dear John,

I have a very troubling concern.

As you may know, I spent several years supporting Joel Fuhrman, both professionally and personally, including an invitation to lecture at Cornell, helping him to publish a peer-reviewed paper in the professional literature (his first) and an invitation for him to be on an advisory board of a to-be-funded project which I had organized and which I later shared with you.

The peer-reviewed paper that I co-authored with him was submitted, as I understand it, to JAMA. It was not accepted, then it was sent to another journal that also rejected it. Being somewhat out of the loop for a couple years, I wrote to Joel to inquire about the whereabouts of the paper and learned it was published in May 2008 in the Journal of Alternative Therapies, a second or third tier journal, at best. The authors were Sarter, Campbell and Fuhrman.

About 7 or 8 years ago I was contacted by Roberta Russell in New York, who was producing a local TV series featuring authorities on diet and health. She also ran a free weight loss group and used what she learned from experts to enhance her results. She did a 1 hour interview with me and in 2003 she also interviewed Joel Fuhrman, among many others.

During her interview with Joel she noticed that his estimate for the effectiveness of his long term weight loss with patients seemed unusually high, 80 to 85 percent kept their lost weight off after 5 years. When she questioned him he had told her he would check for accuracy and get back to her, but failed to follow thorough. Consequently, without verification, she did not air the second half hour of the video because it had unrealistic and unverified claims of success. In 2003 Joel also had told Roberta that he would be doing a study on these patient's results with Barbara Sarter.
In early 2011 Roberta read his retrospective study that was co-authored by Barbara and myself and published in Alternative Therapies in Health and Medicine in 2008. These results did not confirm Joel's original estimate, as it reported that all but 19 out of 56 patients had dropped out by 2 years, but she was curious about the representation that the median and mean weight loss was 53 pounds and called Joel to ask for more information. He then offered to give her the raw data through Barbara.

Months later Barbara did finally email twenty before and after weights to Roberta who promptly subtracted the end weights from the beginning weights, but did not get the 53 pounds reported in the article. The article was almost 20 pounds off! Roberta notified Barbara asking for clarification. When that failed she contacted Joel directly. Finally, Barbara responded and revealed that she did not derive the 53 pound weight loss by subtracting the final weights of those who completed the study from the starting weights. She later also emailed Roberta that the cholesterol and other biological measures were also not derived by comparing the start and end measures of the individuals, an email that Roberta forwarded to me. Only after Roberta failed to get a satisfactory correction, she contacted me, the third author, whom she already knew. I told her that I had not previously seen the data and after reviewing it confirmed her finding of a grossly inaccurate published weight loss report.

As a listed co-author I tried to encourage Joel and Barbara to write an erratum and coordinate with Roberta, but they did not produce one that corrected all of the errors revealed in Barbara Sarter's emails to Roberta Russell. It was then that Roberta found numerous misrepresentations of fact on Joel's website and the web, some falsely claiming before large audiences that there were 100 patients and that all had averaged a 53 pound weight loss with no regain after 2 years. The more she looked the more false public representations she found. I was astounded to listen and view these shameless and grandiose recordings.

I became more involved and insisted that both Roberta and I see the complete raw data. It was then that we discovered that the patients were selected from 62 who started, then 56 who were left at 6 months. By one year most had dropped out.
Between 12 months and 24 months only 4 patients were still losing without any regain, not 100 as Joel had publicly claimed.

To make matters even worse, these misrepresentations and findings were erroneously attributed to me, as a first author, making me responsible for the study. The notion that I was first author mysteriously arose in the Journal Archives, published in May 2008, as Campbell, Fuhrman and Sarter instead of Sarter, Campbell and Fuhrman. In the professional research community, this reordering of the names would be regarded as a serious misrepresentation.

I previously copied you and Joel on my letter to the journal intended to rectify this situation and to dissociate me from the authorship.

Although Joel’s recorded and publicly presented video and audio claims belie even the faulty data as published in the article without correction,

I am including some of the details so that you can appreciate the scale of his misrepresentation and understand why I do not wish to sully my reputation by association with him.

Once you truly comprehend what this will imply when it is ultimately made public I believe you will be able to see that his dishonest behavior is a potential liability to the reputation of Whole Foods where he is billed as Director of Research.

Here is the material that I included in my letter to the editor:

1. Of the 20 patients who continued for 2 years on this diet, a median weight loss was 34.5 lbs, not the 53 lbs widely publicized by Joel that he grandiosely claims was greater than ever reported in medical history.

2. In spite of Dr. Fuhrman's claim that all (56?, 65? 100?) patients sustained weight losses for 2 years and "kept it off". In reality only 20 of the original 56 patients (36%) continued for 2 years and of these, most of their weight losses
occurred during the first year. Thereafter, from year 1 to year 2, 17 patients remained for documentation, with 10 of these subjects regaining weight, 5 losing weight and 2 having no change. On another note, 18 additional patients dropped out of the study after year 1 (average body weight slightly increased from year 1 to year 2). For me, the entire selection of patient data to be analyzed is uncertain.

3. In radio presentations of this study to large audiences (one was with Dr. Mehmet Oz), Joel claimed that there were 63 patients and on another occasion, there were 100 patients and they all kept their weight off for two years. The paper refers only to 56 patients (the raw data that I now have shows 53 patients??), only some of whom complied and they did not keep their weight off for the full 2 years of the study.

Then there are audio and video clips about this study already out in the public in which Joel makes his false claims.

I will not sacrifice my reputation by association with Joel Fuhrman's false representations of research findings, especially with my name attached. I have worked very hard to develop my career with care and with integrity and I am not now about to compromise it.

In my opinion, Joel's behavior is consistent and will not change. Thus any changes due to embarrassing exposure at this time will not be convincing of a personal change of values.

As you know, we agreed in our recent NY meeting for me to come back on the advisory committee. But it was after that meeting that Joel's fraudulent claims came to light.

Therefore, I am extremely uncomfortable doing anything that Joel Fuhrman may be involved in.

In all my years of writing and reviewing papers, testifying at length (3 years) for the U.S. Federal Trade Commission on the reliability of scientific evidence and in
developing national policy for the National Academy of Sciences and similar agencies, I find Joel's representation of research findings to be about as reprehensible as any I have ever witnessed. His advertising of self-serving distorted findings and his arrogant refusal to make amends when challenged is unacceptable to me. In professional research and policy communities this behavior can ruin personal careers as well as seriously distort the credibility of this field.

I hope that you will remedy this situation so that the fine contribution that you and the Whole Foods enterprise can make in revealing the important benefits of plant based whole foods will not be obscured by false claims and faulty research. Please confirm your receipt of this letter.

I welcome your response.

To the best of present knowledge, this is my letter to John Mackey at Whole Foods, as shown on the e-mail header, I say "to the best of my knowledge" because it was sent on a previous computer, where much of the data was lost when transferred by Apple technicians to the new computer. Therefore, I cannot find it on my present computer.

R. Campbell
May 13, 2011

Appendix 3
28-Day Challenge February 15th - March 19th

Succeed in your health goals this year! Starting February 15th - March 19th our Healthy Eating Specialist is leading customers in a 28-day Healthy Eating Adventure! As a participant you may opt to create your own path or follow one of two getting started programs designed by our Health Partners: Joel Fuhrman M.D. and Rip Esselstyn.

Pick your Healthy Eating Path For The 28-Day Challenge:

**eatRIGHTtamerica**

A 2008 peer review published in Alternative Therapies Magazine noted this program produced an average weight loss of 53 pounds per participant in only two years!

- Eat Right America’s Chief Medical Officer, Joel Fuhrman M.D., has treated more than 10,000 patients in 15 years, proving that a properly nourished body can:
  - Conquer food cravings
  - Seek its ideal weight
  - Reverse chronic conditions
  - Have more energy
  - Retail to brighter, healthier kids

Based on a simple premise “we are what we eat,” Eat Right America has developed the Nutrition Prescription, the nation’s only online personal nutrition assessment and eating plan designed to ensure you’re fully nourished. Whether you are vegan, vegetarian or include meat, seafood and/or dairy in your diet, this eating plan can work for you. For more information about the 28-day getting started plan, visit eatrightamerica.com/wfm or wholefoodsmarket.com/healthstartshere.

Suggested Support Materials (available at WFM):
- “Eat for Health” by Joel Fuhrman M.D., 2nd-1 paperback edition.
- “Eat Right American Nutrition Handbook” by Joel Fuhrman M.D.
- A convenient pocket-size guide to understanding and eating like a Nutritional with a full guide to ANDA scores

**Rips Diet**

Created by Rip Esselstyn, former professional tri-athlete and firefighter, The Engine 2 Diet can help you lower cholesterol, significantly reduce the risk of disease and lose weight in four weeks. The Engine 2 Diet is a plan of action for following—and sticking to—a heart-healthy, mind-healthy, body-healthy and taste-bud-tempting, plant-strong diet. If a firehouse in Texas can do it, any house in America can!

“A whole food, nutrient-packed, plant-based diet, filled with fruits, vegetables, whole grains and beans—these are the life-changing foods that will make you feel better, feel stronger and make you bulletproof to Western disease as well!”

- Rip Esselstyn

For more information about the benefits of living plant-strong, or to learn more about the 28-day Healthy Opportunity visit wholefoodsmarket.com/healthstartshere or engine2diet.com.

Suggested Support Materials (available at WFM):
- “The Engine 2 Diet” by Rip Esselstyn.
- Get to know Rip, how and why this plan developed, and you’ll have all of Engine 2’s mouth-watering recipes at your fingertips!
- “New Good Food” by Margaret Winnenberg.
A great resource for in-depth food knowledge

Save these dates!

**Orientation Meet N’ Greet**

Tuesday, February 15th - 6 - 7 pm

Enjoy healthy snacks and meet your fellow challengee! Attendees will get briefed about the 28-day challenge and will have the opportunity to ask any last minute questions regarding your 28-Day challenge specifics.

**Workshop Classes**

Tuesday, February 22nd - 6 - 7 pm

Wednesday, March 2nd - 6 - 7 pm

Tuesday, February 8th - 6 - 7 pm

Wednesday, March 16th - 6 - 7 pm

Sage in the groove and come out to our workshop classes! Each week new topics will be discussed including: cooking techniques, recipe development and converting family favorites. Members will try new healthy foods and have an opportunity to discuss their progress or ask questions with our Health Eating Specialists. All workshop details can be found on the store webpage (http://wholefoodsmarket.com/norms/philadelphia)

Register Today!

Complete and detach the registration form below and drop off at customer service, or register by emailing the following information to susanna.gieske@wholefoods.com!

You are invited to call 215.557.0015 or email susanna.gieske@wholefoods.com and schedule a personal tour of our store, designed to help you identify the health-supportive foods available to you during your 28-day challenge!

---

**Contact Information**

Name

Street Address

City, State, Zipcode

Primary Phone Number

Email Address

(your email will be used for communications regarding 28-day Challenge Workshop Events)

---
Acknowledgements

The report had its genesis in 1995 through the teaching of Professor G. Terence Wilson who has supported my desire to know the verifiable facts about the conquering of obesity since he opened the door to the Trevose group, the most effective research-based treatment to effect long-term weight loss.

I am grateful to Barbara Wallace, PhD, my professor at Teachers College, Columbia University, for encouraging me and forging my way to bring Report on Permanent Weight Loss to fruition by providing me with the on-going opportunity to study and report on the relevant research independently, in the enriched environment of Columbia University.

I wish to thank the dedicated researchers who shared their knowledge freely and welcomed my queries in the spirit of mutual inquiry especially Joseph Proietto, MD, an endocrinologist who is a world-renowned investigator of the management of obesity and Professor of Medicine at the University of Melbourne, Stephen Anton, PhD, Chief of Clinical Research on Aging and Geriatric Medicine at the College of Medicine, University of Florida, T. Colin Campbell, PhD, Professor Emeritus of Nutritional Biochemistry, Cornell University and Stanley Krippner, PhD, Professor of Psychology, Saybrook University.

I am thankful to the many friends including Robert Sterling, JD Michael Wolff, Terry Gillette, JD, Janet Reichert, Kristi McCormick, Kendra Schechter, PhD, Cheryl Hayley, Charles McCutcheon, PhD, John Banta, JD, Noreyana Fernando and Charles A. Opsahl, PhD, Chief Psychologist at Yale Health, all of whom generously shared
their responses and suggestions for this report on permanent weight loss.

Most of all, I am indebted to my late husband, Harold Krieger, for his bountiful love and support, and for video recording—wherever the search for knowledge took us—my interviews of some of the distinguished world leaders in the vanguard of research who generously shared their hard-won knowledge including Hans J. Eysenck, PhD, G. Terence Wilson, PhD, Rena R. Wing, Ph.D., T. Colin Campbell, PhD, Jerome D. Frank, MD and David McClelland, PhD.

R.R.
September, 2016
New York