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**Medicalizing Overweight/Obesity**  
**The Medical Model for Weight Management**  
**By**  
**Mitchell R. Weisberg, M.D., M.P.**

**Forward**

The purpose of this document is to lend support to the rational and scientifically based clinical approach to the treatment of overweight/ obesity and to debunk the numerous myths which surround this disease state. The target audience for this document is laypeople and physicians. This is a *white paper* as well as a practical guide to support the scientific basis of the clinical approach of this author. It is this author's intent to ensure that his own patients have a comprehensive understanding of his methods and that other health care providers may consider adopting this clinical approach to overweight/obesity in their own practices. Finally, the writing of this document was an exercise to help the author solidify and further cultivate his own clinical approach to the treatment of overweight/obesity.

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**Introduction**

Medicalizing Overweight/Obesity is a program in constant evolution; creatively and rationally incorporating the latest medical advances into its armamentarium in the battle against the overweight/obesity epidemic. It is based on the following premises:

1. Overweight/obesity is a *disease state* that has reached *epidemic* proportions (65% of the population) and ultimately results from a constant state of consuming more energy in the form of food than expending energy in the form of physical activity. (1)
2. Overweight/obesity directly causes multiple other medical conditions. (2, 3) These *co-morbidities* can be categorized in the following way:
  - a. Metabolic co-morbidities
    - i. Diabetes
    - ii. Hypertension (high blood pressure)
    - iii. Hyperlipidemia (abnormal cholesterol values)
    - iv. Vascular disease
    - v. Gout
    - vi. Gallbladder disease
    - vii. Infertility in women
  - b. Mechanical co-morbidities
    - i. Degenerative Arthritis
    - ii. Obstructive Sleep Apnea Syndrome
    - iii. Restrictive Lung Disease
    - iv. Exacerbation of asthma
    - v. Exacerbation of Gastroesophageal Reflux Disease (GERD)
    - vi. Venous Stasis (leg swelling)
  - c. Social co-morbidities
    - i. Low self esteem and social isolation
    - ii. Vocational and educational discrimination
  - d. Miscellaneous co-morbidities
    - i. Elevated risk for certain Cancers:
      1. Breast
      2. Uterine
      3. Colon
      4. Kidney
    - ii. Elevated surgical and obstetrical risks
    - iii. Elevated risk of death from all causes
3. There are disorders that cause or contribute to overweight/obesity:
  - a. Eating disorders
    - i. Binge Eating Disorder (B.E.D.) (4)
  - b. Endocrine disorders

- i. Thyroid disorders
    - ii. Cushing's Syndrome
  - c. Psychiatric disorders (5,6,7)
    - i. Depression
    - ii. Stress disorders such as Post Traumatic Stress Disorder (PTSD)
    - iii. Schizophrenia
    - iv. Sleep disorders
- 4. Medications that can contribute to overweight/obesity:
  - a. Medications for diabetes (8,9)
    - i. Sulfonylureas
    - ii. Glitizones (Actos, Avandia)
    - iii. Insulin
  - b. Medications for neuropsychiatric disorders (10,11)
    - i. Antidepressant medications
      - 1. Selective serotonin reuptake inhibitors (SSRIs)
      - 2. Serotonin and norepinephrine reuptake inhibitors (SNRIs)
      - 3. Tricyclics
    - ii. Mood stabilizer medications
      - 1. Antipsychotic medications
      - 2. Anticonvulsant medications
  - c. Medications for hypertension; beta blockers (12)
  - d. Long term use of systemic corticosteroids for inflammatory conditions (Prednisone and others) (13)
- 5. Overweight/obesity and its co-morbidities usually coexist with other physical and mental health problems in any given individual. Therefore, in order for overweight/obesity treatment to be optimal, it must be **individualized** taking these other conditions into account.
- 6. Clinically significant permanent weight loss, defined as a 5 to 10 % reduction from original weight, reducing the negative health consequences of overweight/obesity is rarely accomplished by lifestyle interventions, such as diet and exercise, alone. (14) A significant percentage of the total number of prescription and over the counter medications used in this country is for the treatment of the co-morbidities of obesity/overweight, yet they do absolutely nothing to help individuals lose weight
- 7. The rational and clinically supervised use of prescription medications to assist individuals permanently lose weight can play an important role in the treatment of overweight/obesity. (16) This approach, combined with diet and exercise, has been shown to be up to *four* times more effective in helping individuals permanently achieve a clinically meaningful weight loss than diet and exercise alone. (17) The medical approach to directly treating overweight/obesity not only improves the general health and well being of these individuals, but ultimately cuts down on the total number of medications required to treat the negative health consequences (co-morbidities). (18,19,20,21)
- 8. Weight loss medications are not intended to replace lifestyle interventions such as a high fiber, low fat, calorie restricted diet and daily exercise. Rather, by reducing abnormal cravings and appetite and improving satiety, and, in some cases metabolism, these medicines simply improve

the chances in any given individual that these lifestyle interventions are successful in helping them permanently lose weight.

Medicalizing Overweight/Obesity is a comprehensive, individualized, and medically supervised weight loss program that utilizes the judicious and rational use of prescription medications to promote healthy lifestyle changes in order to achieve not just **permanent, clinically significant weight loss**, but optimal health and well being for each unique patient.

### Setting Weight Loss Goals

If successful weight loss is defined as intentionally losing 10% of initial body weight and not regaining it, it can be stated that 20% of overweight and obese people in the United States have lost weight successfully. (22) The main reason people fail in weight loss programs is that they fail to recognize their success. (23) In this program equal emphasis is placed on weight loss as well as **optimizing** total health, physical and mental. **maintenance** of weight loss is a top priority -- for this is where the health benefits are seen. (24, 25, 26, 27)

Most people have preconceived and unrealistic notions about what constitutes “successful” weight loss based on myths perpetuated by the commercial weight loss industry and not supported by scientific evidence. (28) A permanent weight loss as little as 5% of initial body weight (i.e. 300 pound person losing 15 pounds) can confer significant health benefits such as reduction of blood pressure, cholesterol, blood sugar, pain from arthritis, improvement in control of asthma and gastroesophageal reflux as well as an overall improvement in subjective well being. (29, 30, 31) A typical patient in the Medicalizing Overweight/Obesity program achieves a 10 to 15% permanent weight reduction with the health benefits one would expect with such a weight loss.

From the author’s experience, setting short-term, obtainable milestones produces superior results over setting a single long-term goal; the author recommends his patients strive to lose **3 to 5% of their body weight quarterly (every 3 months) for one year**. This results in a weight loss in the 10 to 18% range for the year. As an example, a person who weighs 300 pounds can reasonably expect to lose between 9 and 15 pounds in the first three months and 30 to 54 pounds after one year.

The following facts regarding medical weight management must be understood by any individual embarking on a medical weight management program:

1. Since overweight/obesity is a chronic medical condition, any weight loss achieved with the use of medications, in most cases, will require the **continuation of these medications indefinitely** to maintain the weight loss. (32,33)
2. Depending on the weight loss medication being used, their weight loss effect usually plateaus somewhere between three and 18 months. The effect of the medication thereafter is no longer on weight loss but on **weight maintenance**.
3. As in the treatment of any other chronic disorder, **combinations of medications** are often necessary to achieve optimal results.
4. Weight loss medications may not work for, nor be tolerated by, some individuals, there simply are no guarantees.
5. Bariatric surgery may be a reasonable option for those individuals that meet the NIH (National Institutes of Health) criteria and are unable to achieve a clinically significant weight loss (greater than 10%) with this program.

## Lifestyle Modification in “Medicalizing Overweight/Obesity” Program

Weight loss can only occur when the amount of calories consumed by eating is less than the calories expended by physical activity. Weight loss medications do not change this equation, but merely tip the balance in favor of successful weight loss. Therefore, what one eats, how much one eats and how much one exercises are still the most essential determinants of long term weight loss success.

The best available scientific evidence for what works and what does not work for weight loss is from the National Weight Loss Registry established in 1994 by Rena Wing, Ph.D. from Brown Medical School and James O. Hill, Ph.D. from the University of Colorado. This is the largest prospective investigation of long-term successful weight loss and weight maintenance. The average weight loss in this group was 66 pounds and it was maintained for an average of five years. They found four types of behaviors common to the National Weight Control Registry participants: 1) Eating a low-fat, high-carbohydrate diet. The types of carbohydrates were high in fiber and low in sugars, 2) Eating breakfast almost every day, 3) Frequent self-monitoring of weight, 4) Participation in a high level of physical activity (the equivalent of walking for one hour briskly on a daily basis). (22)

To make claims or recommendations beyond these behavioral changes have very little scientific evidence to support them and, therefore, this author refrains from making any other specific behavioral recommendations. However, the author strongly recommends that these four successful behaviors are incorporated into his patients’ weight loss program.

## Weight Loss Medications

The eleven prescription medications utilized in Medicalizing Overweight/Obesity have one thing in common – they reduce appetite and food intake thus enhancing one’s chances of complying with the dietary behaviors that are required for successful weight loss and weight maintenance. They cannot replace the requirement for participation in a high level of physical activity. They are all FDA (Food and Drug Administration)-approved, and some are approved specifically for the treatment of obesity. However, *most* of these medications were approved for purposes other than weight loss, such as depression, seizure disorder, migraine headache, type 2 diabetes, Attention Deficit Hyperactivity Disorder (ADHD) and excessive daytime sleepiness, but have been found to have the side effect of appetite suppression and weight loss. By taking advantage of this *anorexiant* side effect (side benefit) individuals prescribed these medications, either alone or in combination, are more successful at *losing* a clinically significant amount of weight and at *maintaining* this weight loss. Prescribing medications for a purpose other than its FDA-approved indication is referred to as “*off-label prescribing*” and is a common and accepted medical practice. Off-label prescribing is practiced by the majority of physicians for numerous disease states. (34, 35, 36, 37)

In many instances, these eleven medications may actually be prescribed for their FDA approved use while at the same time taking advantage of their anorexiant effect to help patients lose weight. Examples of this are the use of **Topamax** (Topiramide) to treat migraine headaches or seizure disorders, **Wellbutrin** (Bupropion) to treat depression or smoking cessation, **Adderall XR** to treat, **Glucophage** (Metformin), **Byetta** (Exenatide) or **Symlin** (Pramlintide) to treat type 2 diabetes mellitus and **Provigil** (Modafinil) to treat sleep apnea, shift worker’s sleep

disorder and narcolepsy . In these cases, the patient is getting a “*two for one*”; treating a medical problem with an FDA approved medication, while at the same time benefiting from the anorexiant effect and weight loss that is a typical side effect (side benefit) of the medication.

Below is a brief synopsis of the medications prescribed in the Medicalizing Overweight/Obesity weight management program (full prescribing information is provided at the time a prescription is written):

### **Medications FDA Approved for Long Term Use in the Treatment of Obesity and Weight Maintenance:**

1. **Meridia** (Sibutramine): Meridia is classified as a serotonin/norepinephrine reuptake inhibitor (SNRI) and was originally being studied to be an antidepressant medication when it was serendipitously found to be an effective weight loss medication. It has a similar mechanism of action as commonly prescribed antidepressants in that it enhances the activity of the neurochemicals, serotonin and norepinephrine, in the central nervous system (CNS) resulting in an increase in satiety with less food intake as well as an increase in the metabolic rate resulting in weight loss.

Meridia has been studied longer than any other appetite suppressant on the market with long term data confirming its safety and efficacy for up to three years of continuous use. Most people lose approximately 10% of their initial body weight and maintain most of this weight loss as long as the medication is taken. Weight loss plateaus at approximately six months with a slight weight regain. Meridia has been shown to be four times more effective than placebo in achieving a 10% weight reduction in long-term studies. (17)

Common side effects of Meridia are dry mouth, constipation and insomnia. Rarely, Meridia may cause a significant increase in blood pressure and pulse rate, and this should be closely monitored. If Meridia is going to affect blood pressure, it will do so within the first two weeks of therapy. Most side effects are mild and transient. Patients with history of a prior heart attack, stroke, uncontrolled high blood pressure or heart rhythm disorder should not take Meridia.

2. **Xenical** (Orlistat): Xenical is a nonsystemic medication (it does not get absorbed into the blood stream) that blocks the fat absorbing enzyme, lipase, in the small intestine and pancreas. By taking Xenical three times per day with meals it can block the absorption of 1/3 of fat consumed in the diet which can result in a 10% weight reduction in six months and maintain the majority of this weight loss if the medication is taken continuously. Xenical works best in conjunction with a low fat diet (30% of total calories consumed). Xenical has been proven to prevent type 2 diabetes in obese patients. (38)

Due to its mechanism of action in blocking fat, fat mal absorption with its resultant oily stools, excess flatus anal leakage and fecal incontinence causes many patients on this medication to discontinue its use. However, with proper diet and the addition of a fiber supplement such as Metamucil there is anecdotal evidence that these side effects can be at least mitigated and even entirely avoided. Xenical needs to be taken in conjunction with a standard multivitamin to avoid vitamin deficiencies.

## **Medications Approved for Treatment of Obesity but Only for Short-Term Use:**

**Phentermine:** Phentermine is a stimulant medication that works in the brain to increase the neurochemicals, dopamine and norepinephrine. This results in a decrease in appetite with a resultant weight loss of approximately 10% of original body weight. The reason for its FDA approval for short-term use only is not related to safety issues; rather it has to do with the era in which Phentermine came to market. In the 50s and 60s, obesity was widely viewed as a character flaw, not as a chronic disease that required long-term treatment as we now know that it is. Phentermine has been prescribed off-label for long-term therapy as long as it has been on the market and can be done safely as long as it is closely monitored.

Phentermine can be associated with many side effects such as dry mouth, constipation, insomnia, nervousness, agitation, tremor, increase in blood pressure and pulse rate. Phentermine should not be taken by patients who have previous heart attack, heart rhythm disturbance, stroke or uncontrolled blood pressure. Phentermine can rarely be addictive.

## **Medications FDA Approved for Other Disorders but Can be Prescribed *Off Label* for Weight Loss or as a “Two for One”:**

1. **Adderall XR** (amphetamine extended release): Adderall XR is a stimulant medication that is approved for the treatment of ADHD in children and adults. It works by increasing the amount of the neurochemicals dopamine and norepinephrine in the brain which is associated with an increased state of alertness and focus. It can often be associated with a decrease in appetite and weight loss. There are no controlled studies specifically investigating Adderall XR for the treatment of overweight/obesity.

The most common side effects of Adderall XR are dry mouth, loss of appetite, insomnia and headache. Adderall XR should not be taken by patients who have uncontrolled high blood pressure, previous stroke or heart attack, uncontrolled glaucoma, or emotional instability. Most individuals can use Adderall XR safely, however, Adderall XR is an amphetamine and ***abuse may lead to dependence***. Misuse may lead to serious adverse cardiovascular events.

2. **Byetta** (Exanidate): Byetta was approved for type 2 diabetes and hit the shelves in June 2005. It is the first drug in its class called incretin mimetics. This medicine increases gut hormones that help regulate blood sugar and insulin levels thus improving diabetes control without causing hypoglycemia or low blood sugar. One of its most common side effects is weight loss which is exactly what most people with type 2 diabetes need. This medicine must be injected subcutaneously twice daily with meals, but is conveniently packaged in order to make this simple and painless.

The most common side effects are transient nausea, vomiting and diarrhea, headache, dizziness, feeling jittery, weakness or unusual sweating. There are no controlled studies specifically investigating the use of Byetta for the treatment of overweight/obesity. Studies for Byetta in the treatment of type 2 diabetes showed a statistically significant weight loss for subjects receiving Byetta compared to subjects receiving placebo. (39)



3. **Glucophage (Metformin):** Glucophage is a medication that has been around for nearly 20 years and is FDA approved for diabetes. Unlike most other medications for diabetes which can cause weight gain, Glucophage typically leads to weight loss, as well as to a decrease in blood pressure and cholesterol. Glucophage virtually never causes a severe lowering of blood sugar or hypoglycemia even in patients who have a normal range blood sugar to begin with. Glucophage must not be used in patients with impaired liver or kidney function and must be taken with food in order to diminish its gastrointestinal side effects. There is ample evidence to support the prescribing of Glucophage in overweight/obese patients both with and without diabetes. (40,41)
4. **Provigil (Modafinil):** Provigil is an FDA approved medication indicated for the treatment of excessive day time sleepiness associated with narcolepsy, Obstructive Sleep Apnea Syndrome and Shift Work Sleep Disorder. Provigil is classified as a stimulant medication, but has a mechanism of action that is distinctly different from other drugs in the stimulant class. This difference results in a calmer wakefulness than that associated with other stimulants. In some individuals, it can cause appetite suppression and weight loss. However, there are no controlled studies specifically investigating Provigil in the treatment of overweight/obesity. The most common side effects of Provigil are anxiety; headache; nausea; nervousness and trouble sleeping. It is typically very well tolerated and does help improve day time wakefulness and alertness. It has been studied and may ultimately be FDA approved for use in ADHD. (42)
5. **Symlin (Pramlintide):** Symlin is an injectable medication FDA approved for the control of blood sugar levels in patients with diabetes already on insulin. In addition to controlling blood sugar it causes appetite suppression and weight loss; a very desirable side effect for a patient with diabetes that has overweight/obesity. The most common side effects include nausea and low blood sugar (hypoglycemia) requiring careful monitoring and frequent adjustments of the patients' insulin injections. There is ample evidence that Symlin causes weight loss in patients with type 2 diabetes. (43, 44) The manufacturer of Symlin, Amylin, is in the midst of investigating the use of Symlin for the treatment of obesity in non-diabetic subjects and shows much promise for this use in the future. (45)
6. **Topamax (Topiramide) and Zonigran (Zonisamide):** Topamax and Zonigran are FDA approved for long-term use in epilepsy. Topamax has also been approved for the treatment of migraine headache. These medications have appetite suppressant side effects that seem to be more specific for *binge eating* and *carbohydrate cravings* such as those seen in bulimia and *Binge Eating Disorder* (BED). (46, 47,48,49) It is estimated that up to 30% of obese individuals have BED. (50) The dosage of these medications needed to treat obesity and binge eating is less than that required to treat seizures, significantly reducing their side effects, which include sedation, cognitive impairment and tingling sensations in the extremities called paresthesias. Topamax and Zonigran may increase the risk of forming kidney stones and may rarely cause an eye problem known as acute angle closure glaucoma. Many of the side effects can usually be avoided by very slow increases in the dosage until an effective appetite suppressant level is reached.
7. **Wellbutrin XL (Bupropion long acting):** Wellbutrin has been around for nearly 20 years. It was originally FDA approved for long-term use in depression. In subsequently received FDA approval for smoking cessation. It works by increasing the levels of the stimulatory neurochemicals norepinephrine and dopamine in the brain. It appears that these same

neurochemicals play an important role in mediating addictive behavior as well as appetite. It has anorexiatic side effects (benefits). It is an ideal medication for overweight, depressed patients who also smoke. However, it can work as an appetite suppressant even in individuals who don't smoke and are not depressed. There is evidence to support the use of Wellbutrin in the treatment of overweight/obesity. (51, 52) Side effects can include nervousness, insomnia and tremor. **Wellbutrin should not be used in patients with a history of seizures.**

### **Weight Loss Medications Awaiting FDA Approval:**

**Acomplia** (Rimonabant): Due out soon, this is a novel antiobesity medication that is also seeking FDA approval as a smoking cessation medication. It works by blocking the *cannabinoid receptor* in the brain that is responsible for producing the “munchies” in response to marijuana. Preliminary trials in human subjects looked promising enough to be before the FDA for impending approval.

## Are you a Candidate for Medicalizing Overweight/Obesity?

Using the chart below, find your own Body Mass Index (BMI):

BMI	BODY MASS INDEX															
	19	20	21	22	23	24	25	26	27	28	29	30	35	40	45	50
Height	Weigh in Lbs.															
4'10"	91	96	100	105	110	115	119	124	129	134	138	143	167	191	239	263
4'11"	94	99	104	109	114	119	124	128	133	138	143	148	173	198	248	272
5'0"	97	102	107	112	118	123	128	133	138	143	148	153	179	204	257	282
5'1"	100	106	111	116	122	127	132	137	143	148	153	158	185	211	265	291
5'2"	104	109	115	120	126	131	136	142	147	153	158	164	191	218	273	301
5'3"	107	113	118	124	130	135	141	146	152	158	163	169	197	225	283	311
5'4"	110	116	122	128	134	140	145	151	157	163	169	174	204	232	291	320
5'5"	114	120	126	132	138	144	150	156	162	168	174	180	210	240	301	331
5'6"	118	124	130	136	142	148	155	161	167	173	179	186	216	247	310	341
5'7"	121	127	134	140	146	153	160	166	172	178	185	191	223	255	319	351
5'8"	126	131	138	144	151	158	164	171	177	184	190	197	230	262	329	362
5'9"	128	135	142	149	155	162	170	176	182	189	196	203	236	270	338	373
5'10"	132	139	146	153	160	167	174	181	189	195	202	207	243	278	349	383
5'11"	136	143	150	157	165	172	179	186	193	200	208	215	250	286	359	394
6'0"	140	147	154	162	169	177	184	191	196	206	213	221	258	294	369	406
6'1"	144	151	159	166	174	182	189	197	204	212	223	227	266	302	379	417
6'2"	148	155	163	171	179	186	194	202	210	218	226	233	272	311	390	428
6'3"	152	160	168	176	184	192	200	208	216	224	232	240	279	319	400	440
6'4"	156	164	172	180	189	197	205	213	221	230	238	246	287	328	411	452

**BMI is under 20**

Weight Gain Advisable

**BMI is 21-25**

Acceptable Weight

**BMI is 26-27**

Escalating Health Risks

**BMI is over 27**

Dramatic Health Risks

A BMI of 20 to 25 is normal and carries minimal additional risk of premature death or health-related problems. As the BMI rises above 25 there is a direct linear correlation to the risk of premature death as well as all of the overweight/obesity co-morbidities. It is based on this increased risk of co-morbidities and premature death that we designate a BMI of greater than 25 as being *overweight* and BMI of greater than 30 as being *obese*.

The BMI by itself may rarely be misleading. For instance, Arnold Schwarzenegger at 74 inches tall and a weight of 235 pounds (when he won Mr. Olympia) would be considered obese on the BMI chart. This is due to the fact that the BMI does not take muscle mass into account. BMI is a more powerful predictor of co-morbidities and premature death when it is used in conjunction with *waist circumference* as measured around the umbilicus (belly button). The waist circumference discriminates between those individuals who carry most of their body weight around the waist known as *truncal obesity* (apples) from those who carry most of their excess weight in their thighs and buttocks (pears). It is truncal obesity that carries the risk of having co-morbidities and premature death. Pears that are overweight may have a perceived cosmetic issue but they *do not* have a medical problem. Like the BMI, waist circumference and risk of co-

morbidities and premature death is on a spectrum the larger the waist circumference, the higher the risk. In men, a waist circumference of **40 inches or greater** and in women, a waist circumference of **35 inches or greater**, has been correlated with an extremely high risk of overweight/obesity related co-morbidities. Waist circumferences add the most clinical information to the BMI for those individuals with BMIs in the range of 25 to 30. (To measure your waist circumference, place a tape measure around your body at the level of the uppermost part of your hipbone. This is usually at the level of your navel)

Any individual that has a BMI of 27 or higher or a waist circumference of 35” or higher for a female and 40” or higher for a male, is potentially a candidate for the Medicalizing Overweight/Obesity program.

### **Getting Started on the Program, Safety First**

The principal precept in medicine is from the Latin phrase *primum non nocere*, “first do no harm.” Due to the fact that overweight/obesity has virtually been ignored by much of the medical community, this author is concerned that individuals, in their desperation to seek help will turn to less than credible sources such as the Internet and fly-by-night “weight loss clinics.” The successful and safe use of these medications is a combination of an art and a science and, while there are clearly benefits to this approach, the reader must be cautioned regarding the potential risks of the medical approach as well. Every medication prescribed in the Medicalizing Overweight/Obesity program can pose serious risks for any given individual. For instance, most individuals with serious heart disease are undiagnosed. If such an individual were to take Meridia, Phentermine or Adderall XR, they can suffer a fatal heart attack with a single dose of these medications! Similarly, individuals with undetected kidney or liver problems can suffer a rare, but often fatal side effect if they were to take Metformin. Individuals with mental health disorders such as depression, anxiety or bipolar disorder can suffer significant neuropsychiatric side effects from several of the medications prescribed. **Medicalizing** an approach to a disease state does not simply mean taking a medicine to treat it. It means rationally incorporating the use of medication into a comprehensive approach to the treatment of a disease state.

### **Initial Evaluation and Comprehensive Physical Examination**

In order to actually medicalize overweight/obesity, it must be treated like any other chronic medical disorder. For one, a person’s weight problem can not be treated in a vacuum. Rather, it must be viewed in the context of their “total health.” In Medicalizing Overweight/Obesity, each individual undergoes a Comprehensive Physical Examination in which they are thoroughly screened and examined for heart disease, diabetes, hypertension, kidney disorders, liver disorders and thyroid disorders. Multiple mental health screenings are also incorporated into the initial evaluation in order to get a total picture of each individual prior to any prescriptions being dispensed. All aspects of each patient’s health, including overweight/obesity co-morbidities, co-existing physical and mental health disorders, family history, smoking, alcohol or illicit drug use, current medications and prior responses to medications are all vital information that must be ascertained accurately in order to assure the best possible safety and benefits. Based on this initial evaluation, further diagnostic screenings may be indicated on a case-by-case basis. This

author works either independently or often in conjunction with referring health care professionals including psychiatrists, orthopedic surgeons, primary care physicians and others..

At the conclusion of the Comprehensive Physical Examination, each patient will be presented with a detailed Health Report which includes the following:

1. A **General Health Assessment** with emphasis on “active” medical problems.
2. An outline of **Health Goals** for the commencing year.
3. A **Plan of Therapeutic Action**, including Lifestyle and Pharmacologic interventions to help each patient achieve their goals.
4. A **Medicalizing Overweight/Obesity Literacy Test** which each participant must pass prior to receiving any prescriptions.
5. **Complete Prescribing Information** for any medication prescribed that reviews, in detail, exact dosages as well as all potential risks and adverse events of each medication prescribed.
6. Precise instructions for **Follow Up** and contact information for reporting adverse events.

### **Follow- Up Visits**

The frequency of follow-up visits is individualized and depends on multiple factors such as co-morbid and coexisting disorders, complexity of the medical regimen and the personal preference of each individual patient. Initially, patients are seen every two weeks for the first six to eight weeks and then monthly, thereafter. In addition to monitoring for the safety and efficacy of the medications being prescribed, follow up visits serve the purpose of reinforcing lifestyle modifications, the success of which, the medications are designed to enhance, not replace.

### **Conclusion and Commentary**

It is this author’s opinion that if we are going to win in the battle against the overweight/obesity epidemic that is rampant in our society, we must *medicalize* our approach. Overweight/obesity is a disease that has reached epidemic proportions. People’s unrealistic weight loss expectations, promoted by the commercial weight loss industry and not substantiated by any scientific evidence, is certainly one obstacle that must be overcome. While lifestyle interventions such as diet and exercise are integral to any weight loss program, scientific evidence clearly demonstrates that by themselves they are only rarely effective. At the same time, there is abundant evidence in the scientific literature that a permanent 10% weight reduction can promote improved health and well being and reduce the burden of co-morbidities. There is further evidence that the rational use of medications on an individualized and clinically supervised basis can assist individuals in attaining this important health milestone. While some of the medical interventions reviewed in this document are FDA-approved, many are not. Yet, the evidence to support the rational use of these medications to directly treat overweight/obesity is substantial. As pointed out in this document, most individuals suffering with overweight/obesity are already on numerous medications to treat the co-morbidities and yet these medications do nothing to help these individuals lose weight.

Finally, for no other disease state is society demanding a *magic bullet* as it is in overweight/obesity. In the treatment of every other chronic disease, from hypertension to cancer, it is acceptable by patients and physicians to use several medications simultaneously for treatment. It is an accepted part of medical practice that medications may have risks and that these risks have to be balanced by their potential benefits; let's not forget that there are the inherent risks of not treating a disease at all. It is a common and accepted part of medical practice to utilize medications "*off label*" in order to help patients improve their health and relieve suffering. However, when it comes to overweight/obesity, somehow the expectations change; it should be cured with one medicine and there should be no risks and no side effects. This attitude toward overweight/obesity is antiquated and only serves to further marginalize what is arguably the most significant disease state in our society today. It is time for a change in our approach and attitude. It is this author's sincerest hope that this document contributes in some way to this change.

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APPENDIX 1:  
NIH GUIDELINES FOR SURGICAL INTERVENTION IN THE TREATMENT OF  
OBESITY.

## Surgical Intervention: NHLBI Recommendations

- Clinically severe obesity (BMI  $\geq 40$ , or  $\geq 35$  with comorbid conditions)
- Less-invasive methods have failed
- Patients suffering from complications of obesity
- Well-informed, well-motivated patients

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