

Herbal and Dietary Support for Childhood Obesity

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One of every five children is overweight, while some estimates claim the number may be as high as one in three. In recent years, lap banding has become an increasingly common procedure among teens.

Fad diets, reasonable diets, and medically supervised diets are big business. The annual sales figures keep growing bigger. Yet as a cultural group, North Americans seem to exhibit collective stress at two ends of the spectrum—media adoration and reviling of two groups:

1. Girls with eating disorders
2. People consuming sugars, salts, fats and chemically laced foods until they cannot fit in regular chairs.

The juggernaut of industrial food, mass media, and commerce is not perhaps the clinician's first target. My belief is that childhood obesity is not the fault of the dreadful food that is pushed in mainstream culture. Rather, it's the attitude that allows parents, school dieticians, and growing children to think that processed convenience items are food at all. Our work is to educate patients about foods that help our nation's children meet weight goals safely. To combat advertising requires a change of consciousness, and it is this that clinicians can inspire while they focus on children's health.

Experts recommend that children cut down

on food, increase exercise, and drink more plain water. Not even adults can manage that with ease. New concepts as well as support from the realm of integrated medicine expand this routine advice to include a change in self-image, and healthier habits to normalize appetite and improve metabolism. Without hope and self-love, permanently changing weight for the better cannot occur. Some of the herbs given later in a possible formula are associated with changing entrenched mind-body patterns.

Overweight — What Is It?

Overweight is defined as a body mass index (BMI) of 25 to 29.9. Obesity is defined as a BMI of 30 or higher.

An individual's BMI is calculated by dividing their weight in kilograms by their height in meters squared. For example:

- 1) A 16 year-old girl who is 5.5 feet tall is 1.6764 meters.
- 2) Squared, that is about 2.8 meters.
- 3) She weighs 135 pounds, rounded down to 61 kilograms.
- 4) $61/2.8 =$ her BMI of 21.78.

That falls below the 25 BMI that defines the lower limit of overweight. If she gains 15 pounds, she just squeaks under the definition of overweight at a BMI of 24. To my way of thinking, a 16 year-old girl of 150 lbs. at 5'5" IS overweight. This official guideline, perhaps influenced by

Table 1: Prevalence of obesity among children and adolescents aged 2–19 years, by age: United States, selected years 1963–1965 through 2011–2012

— Data not available. Children aged 2–5 were not included in the surveys undertaken in the 1960s. Data for 1963–1965 are for children aged 6–11; data for 1966–1970 are for adolescents aged 12–17 (not 12–19).

Survey period	2–5 years	6–11 years	12–19 years
	Percent (standard error)		
1963–1965/ 1966–1970	—	4.2 (0.4)	4.6 (0.3)
1971–1974	5.0 (0.6)	4.0 (0.5)	6.1 (0.6)
1976–1980	5.0 (0.6)	6.5 (0.6)	5.0 (0.5)
1988–1994	7.2 (0.7)	11.3 (1.0)	10.5 (0.9)
1999–2000	10.3 (1.7)	15.1 (1.4)	14.8 (0.9)
2001–2002	10.6 (1.8)	16.2 (1.6)	16.7 (1.1)
2003–2004	13.9 (1.6)	18.8 (1.3)	17.4 (1.7)
2005–2006	10.7 (1.1)	15.1 (2.1)	17.8 (1.8)
2007–2008	10.1 (1.2)	19.6 (1.2)	18.1 (1.7)
2009–2010	12.1 (1.2)	18.0 (0.8)	18.4 (1.3)
2011–2012	8.4 (1.3)	17.7 (1.6)	20.5 (1.7)

food industry lobbyists, may be too lenient.

You can also calculate your patient's BMI using an online calculator.

Routinely, people underestimate how much fat they carry. The numbers on the scale don't help; lost body weight doesn't tell if patients have lost fat, lean muscle mass, or water (as can happen with high-protein diets). The best measure of addressing obesity is loss of total body fat. It is ideal before puberty but recommended at any age possible.

Conventional Approaches

“If you take in more calories than you burn, you gain weight.” The conventional view is that biology works on a simple basis: what goes in and doesn't get used turns to fat. There is some truth in this; 2,000 steps is a mile or 100 calories burned - about two chocolate chip cookies. Each day eating 500 calories more than you burn turns into a pound and a half of extra fat.

But many more factors play a role in weight gain, including marketing of harmful non-foods, the prevalence of almost-sedentary activities like video games that mimic physical movement, and budget cuts that impact parental shopping choices and caused some public elementary schools to drop physical exercise to 30 minutes per week.

The standard conventional treatment for overweight is a very low calorie diet (VLCD) under supervision.

Gastric bypass, believed more effective than banding or other surgery, is reserved for people whose BMIs measure 35-40.

Drugs intended for short-term use (less than three months) are supposed to be available only from doctors but are cheap online. These are phentermine and similar drugs that increase the neurotransmitter serotonin. Their use in children is not recommended except when all else has failed. A problem exists when Internet-savvy minors (or their families) believe these drugs are a quick fix that sidesteps exercise or eating differently. Increased serotonin may decrease cravings for fat or carbohydrates, but studies show we cannot bank on this. Also, these drugs may not increase basal metabolic rate but may help food to be metabolized better.

Antidepressant drugs that work this way (SSRIs) are also used, but studies show that while they help weight loss at six months, they cannot guarantee lasting change at one year, and may even cause weight gain. Cholesterol-lowering drugs are sometimes prescribed to decrease fat absorption but these may interfere with nutrient absorption.

The problem with taking any one of the array of the drugs prescribed for weight loss is that it shifts focus away from eating less, moving more, and changing behaviors. Furthermore, many people are already challenged to accurately discern portion size, and that challenge is increased when servings are large. Studies show that the bigger the meal, the more likely we are to underestimate how big it is. In other words, big servings make us less able to judge them accurately as big servings. No pill unties that self-deception.

Common OTC Products

Many weight loss supplements are available over the counter.

Appetite suppressants, for good or ill, target the hypothalamus, which regulates healthy communication between various

organs, and between body systems with neurotransmitters such as serotonin.

Chromium-based pills help with craving carbohydrates resulting in only moderate weight loss; these are relatively safe.

Found in the herb *Garcinia cambogia*, hydroxycitric acid (HCA) interferes with carbohydrates turning into fat. Trials on HCA have not shown great success for sustained weight loss. *Garcinia* shows promise and has a reasonable safety profile, but claims for the most effective preparation and dose are mixed.

Fiber supplements taken before meals with abundant water swell up and decrease overeating, absorption of calories, and slow nutrient absorption. Excess consumption of these can cause constipation or symptoms of IBS. Fiber from greens, grains, fruit, seeds and nuts have multiple benefits, including lowering blood fats, balancing sex hormones in men and women, increasing the sensation of fullness with relatively few calories, and have been studied as effective components of sustained weight loss programs. The role of fiber supplements as opposed to food for children is poorly researched.

Conjugated linoleic acid (CLA) got a lot of media attention when animal studies showed weight loss but that was often in growing animals when weight loss is expected anyway. Human results have been modest.

Fat burners, also known as lipotropics, are made in the body and can be taken as OTC drugs to increase the breakdown of fats. These lack strong evidence to recommend them, and side effects of excess can be disruption of healthy metabolic pathways. Many low/no carb diets (Atkins, South Beach, the “ketogenic diet”) cause initial weight loss (mostly water) by forcing the body to burn stored fat since no easily burned carbs are available. This can drive pH toward acidity. These can be helpful in the short term, but

long-term use requires supervision and moderation – both to avoid serious side effects of ketoacidosis and regaining weight over time. When herbs or OTC products drive metabolism toward fat burning, similar changes to pH and metabolic health may arise.

Hoodia gordonii is a fat-fighting herb of celebrity status. Physically lean bushmen of Africa where the succulent plant grows used it traditionally when food was scarce, but it is endangered. Namibian growers have joined together to protect the quality of exports. Independent herbal researchers have found it is so limited as a raw supply that substitutions in the market are common. As many as 75% of the hoodia products sold may have little to no hoodia in them.

10 Foods to Improve Metabolism

Encourage parents to get kids in the kitchen, mixing up yogurt dips, tasting seeds and nuts, and generally having a meaningful role and input during meal and snack preparation. Invite them to replace familiar ad slogans and jingles with their own creative ability to ridicule, say, Lunchables. Show them the side panel of Pop-Tarts compared to Gorilla Crunch. Empower them and their parents to shop economically around the periphery of stores, reducing dependence on convenience items.

Suggest that parents reward them for soaking a family serving of cheap organic bulk oats the night before weekday breakfast, with an extra half hour computer time, or whatever it takes.

The following 10 foods should be featured regularly on the weekly family menu.

1. Apples – One Brazilian study found that overweight women lost more weight snacking on unlimited apples a day than on “weight-loss” foods or oatmeal cookies (de Oliveira et al 2003). Organic apples are worth the extra pennies per apple for three reasons: commercial apples hold on to more pesticide residue; the

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Encourage parents to get kids in the kitchen, giving them a meaningful role and input during meal and snack preparation.

peel has the magnesium, Vitamin C, trace iron, and 1/2 the apple's fiber; and third, they explode with flavor instead of disappointing with mushy texture and boring blandness. Adults and children may inadvertently lose some benefits of exercise by overeating afterward. Carbo-loading before exercise with apples (instead of prepared products for athletes in training) keeps people from eating 75% of the calories burned up (1/2-1 cup unsprayed grapes or favorite fruit in season works, too).

2. Oatmeal has some protein and plenty of the right kind of fiber to help people feel fuller longer. Advise a client to add a tablespoon of dried cherries, berries or raisins to hot cooked cereal, let dried fruit plump up before eating, plus a drizzle of fruit juice if needed. Skip the added milk and brown sugar. Eating any cooked cereal (e.g., bulgur or quinoa with almonds) for breakfast over time results in a lower BMI.

3. Eggs. For some mornings, recommend an egg or two instead. Studies suggest we eat up to 400 fewer calories on those days than if we started with a bagel (Vander Wal et al 2008, Vander Wal et al 2005). That adds up to about 15 pounds a year. Families need not pay extra for "egg whites only" unless there is a genuine and compelling reason. Good quality whole eggs contain Vitamin E, which benefits every low-fat weight loss plan, plus omega-3 essential fatty acids. Whole eggs also contain appreciable amounts of choline which helps us use the cholesterol in them for increased energy - that means better fat metabolism. Finally, the quality issue is not only of importance to the individual's health. There is a greater community that benefits from purchasing organic, hormone-free, cage-free eggs.

4. Broth. In colder weather, encourage families to start the day with a cup of soup or broth. Stock

up for snacks and main meals, too, avoiding the cans loaded with salt and fat (added to hide the lack of real flavor). Two 10-ounce servings of broth or soup a day almost double the amount of weight lost in 6 months. The cooks in the family may add brown seaweed, especially *wakame*, and their own vegetables, so plain broth fills them and their school-age children longer. Sea vegetables burn fat and feed energy reserves without tasting too fishy for sensitive young palates.

5. Yogurt. The ads that feature actors consuming yogurt seconds before fitting into a bikini do not also inform us that well-known conventional brands are loaded with high fructose corn syrup. That sludge of fruit at the bottom isn't going to help much, either. But calcium in plain low fat yogurt three times day for three months does seem to increase fat burning, especially for truncal obesity. As motivation for teens especially, adding fresh berries in season promotes clear skin and immunity. A 3-ounce serving of plain yogurt can be turned into salad dressing or dip for cut vegetables like jicama, with a dash each of sea salt, oregano, parsley, turmeric, ginger, cayenne and coarse black pepper. Warming spices also turn on better fat metabolism.

6. Cauliflower. Encourage kids to eat this non-starchy, cancer-fighting vegetable as much as they like, but it has to taste good and have the right texture. Cauliflower's folate and Vitamin C help metabolism, also. Steam the florets of a whole head of cauliflower and mash with a clove of garlic, adding a drizzle of olive oil and a sprinkle of parmesan. Broccoli and bok choy work, too. Rediscover raw radishes, sliced and soaked in ice water for five minutes, to cut that harsher "bite" they sometimes have. These can be more addicting than potato chips, and are better for metabolism as well as nonspecific immunity.

7. Salad. Iceberg lettuce is water disguised as a vegetable. It is also one of the dirty dozen crops laden with pesticides that we sequester in adipose tissue. Why bother? Instead, spending

a little more on dark green leafy vegetables can help families save money in the long run. Eating a big plate or bowl of mixed greens, vegetables, and protein is a great way to eat real food until children are full, and helps keep them from digging in to the basket of white flour rolls or filling up on the pasta dish. Children who prefer crunchy white iceberg may need time to adjust to bitter dark greens. Use a little finely cut basil, Italian parsley, or cilantro in butter lettuce with grated carrot twice a week to start weaning off commercial, bland salad.

8. Vegetarian protein. Avoid GMO soy protein isolate in chicken nuggets, breaded fish sticks, and convenience foods. Instead, encourage a rediscovery of affordable beans and lentils in soups and stews, or cooked and added to salads. I add a pinch of cinnamon, *epazote* (from the Mexican spice aisle in most grocery stores) and a pinch of red pepper to taste, to reduce the gassy effects of eating beans. It may sound counter-intuitive, but a tablespoon of organic peanut butter with fresh alfalfa sprouts on whole grain bread is a great quick meal on the run and contains enzymes for protein digestion.

9. Steamed white cod or halibut with lime or lemon is the #1 most filling food. Swedish studies suggest that eating fish for lunch means eating 11% less at dinner (Ramel et al 2009). That's enough for some people to drop 15 pounds in eight months. Oily fish from the coldest water also satisfies with intense flavor. If children can't or won't eat fish, or parents are worried about mercury pollution in our oceans, consider hormone-free chicken or turkey, or the occasional grass-fed organic beef dinner if budgets allow. But beware: eating much red meat antagonizes plans to gain fitness as well as the remaining wild places on the planet.

10. Nuts. Ten to 20 almonds, roasted unsalted peanuts, or raw cashews with a 10-ounce glass of water fills up a growing child for two hours, providing protein, carbohydrates and fat, with fewer calories than one might guess, unless one eats great handfuls. Grind a tablespoon of flax seeds into protein smoothies, salad



dressings or breakfast cereal. Many store-bought “flax” cereals and breads have too little in them. Seeds and nuts provide the most concentrated array of health-boosting nutrients, while preventing blood sugar from dipping.

Herbal Support for Weight Loss

The following herb formula, free of caffeine, stimulants, laxatives, or cathartics, may work on re-setting the self-governance of metabolism while initiating a gentle cleanse.

Studies suggest that in addition to improving nutrient uptake and supporting circulation, ginger may help weight loss. Long used to improve digestion and circulation, regular use of ginger stimulates the pancreas and other digestive structures to make more enzymes. Animal

Cinnamon sticks and powder.
Photo by Rosalee de la Forêt

Ounces	Cut and sifted dried organic herb	Function
2	<i>Taraxacum officinale</i> (dandelion) leaf and root	enhances liver function, mild diuretic, improved hormone metabolism
1	<i>Urtica dioica</i> (nettle) leaf	nourishing alterative
1	<i>Lagerstroemia speciosa</i> (banaba) leaf (if available)	improves sugar metabolism, studies suggest improved weight loss
¼	<i>Elettaria cardamomum</i> (cardamom) seeds (the dark, small seeds inside the large papery green seed coat)	improves flavor, digestibility of the formula, may help sugar metabolism
½	<i>Cinnamomum spp.</i> (cinnamon) bark	improves sugar metabolism
1	<i>Zingiber officinale</i> (ginger) root	anti-inflammatory, reduces nausea, slows gastric emptying for better satiation (feeling full longer)

Table 1: Herbal Support for Weight Loss

research shows that ginger tea reduces blood fats even after eating a meal rich in fats. When a water-based extract made up 3% of the diet of rats on a high-fat diet, weight was significantly lower after two months (Han, Gong et al 2005). Long-term daily use of ginger in food and tea have been shown to be safe as a culinary addition to the human diet for centuries.

Besides its well-known effect on reducing nausea, ginger slows gastric emptying, so the same meal eaten within an hour of drinking this tea may help a patient feel full longer. Additionally, the gastrointestinal tract has more time to extract various nutrients without a spike in blood sugar. In the formula above, cinnamon helps this effect.

Resistance to dropping suspect foods is one area where herbalists may have the edge with digestive bitter nervines, and matching plants to patients. One of my favorites, just to name one example of a nervine with digestive benefits, is *Artemisia vulgaris* (mugwort). While herbalists are familiar with its bitter effects promoting healthy function of the whole GI tract, mugwort is also a mild relaxing nervine. Explore *Matricaria recutita* (chamomile), *Verbena hastata* (vervain), or *Leonurus cardiaca* (motherwort) for their nervine as well as digestive benefits.

Seeds of Transformation – Potentially Helpful Lifestyle and Communication Ideas for Children

Losing weight is dull. Children need playtime and joy like they need shelter, food, water, and love. Gaining fitness is something children of all ages can enjoy if given the framework. We may set the stage for a client to drop out of the race to lose weight and instead, gain fitness by degrees. Building muscle burns fat. We can present not just the opportunity, but the support, to make a permanent life change that is viable, inviting, and has some joy in it every day.

To safeguard our patients' new way of living happily while they gain fitness, we can find age-appropriate ways to say that metabolism runs according to what our bodies are used to eating most recently. If one overeats and then starves, the body holds on to fat, in response to signals that more food isn't coming soon. Our patients can all learn to optimize metabolism by eating four times a day; some of those meals will be just a light snack—an apple, a few nuts with water, or raw vegetables for satiation from fiber plus pro-metabolism nutrients.

To increase metabolism, plan menus so patients don't eat too predictably. Every few days, switch your patients' mix of protein, carbohydrates and fats. Some days a child may get leftover chicken reheated thoroughly for breakfast, an egg salad sandwich with lettuce at lunch, and nuts after

Help your young patients to avoid grasping at straws; literally, that is all that is in some natural weight loss products.

school or around 3 p.m. At night, allow children several helpings of fruit and vegetables, such as kale with garlic, walnuts and a drizzle of maple syrup, or zucchini and string beans with a drizzle of balsamic vinegar, Bragg's Aminos, and olive oil. Other days that child or teen may want to start the day with oatmeal and raisins, have a lunch of yogurt dip with carrots, and for dinner a bed of brown rice cooked in vegetable broth, covered by a cup of organic yellow squash and sweet red peppers, with a side dish of avocado and hummus.

If we share specific and palatable ways for our clients to eat a wide variety of real food instead of packaged convenience items, they don't have to be forever calculating "glycemic index," mistakenly avoiding peas and carrots because they are "starchy." Sweet potatoes, rich in vitamins A and E, can lower blood sugar. The real food replacing convenience food has to taste good.

We might teach families and children who are motivated to be different from their obese relatives that complex carbohydrates release starch into our bloodstreams slowly, so it is the rate at which plant starches raise blood sugar that matters. This is why swinging from comfort meals to just eating lettuce for a whole day leads to diet failure, with people wondering why they cannot stay on a diet. No one should "stay on a diet." Everyone deserves to eat well and live happily, so that their attention is free for whatever else they are motivated to pursue in life.

Give permission to the children we see to express their strong feelings with their friends and family if they sabotage a new way of getting more fit. Help them be specific: "Mom, don't bake the Splenda and Cool Whip pineapple upside down cake as a reward for my eating apples yesterday."

We can tell our patients: "Go out to eat with people and relax. Have a big salad and one slice of pizza loaded with every vegetable and ONLY those you like, but do avoid the high-salt, high-fat, highly chemical-laden pepperoni, sausage or beef."

Beverages are another territory requiring mindful navigation. If your patient wants a Coke some weekend at a party, let him have it instead of a slice of pizza, bread, a serving of pasta or rice, or the garlic mashed potatoes. Diet soda has been shown to increase weight and can bring on food

cravings. Protein smoothies can be great—or a trap, if one drinks a meal and then eats one, too. Water is our best friend. If your patients' water doesn't taste delicious to them, see to that. Lemon, or a few sprigs of mint from a small pot on the kitchen counter, or cucumber slices in water all can be used. Also remember that chemicals in tap water build up in the body fat we still have, and water filters aren't as expensive as medical treatment. Retail diet teas may still use diuretics, laxatives, and stimulants other than *Ephedra* (a medicinal plant herbalists never used for weight loss; our loss of this healing herb is a sad phenomenon of small-minded marketing).

Our role as herbalists is to envision with children and their families the whole path they can walk. Make it easy, tasty, and fun to succeed at the game of meeting their goal. Help your young patients to avoid grasping at straws; literally, that is all that is in some natural weight loss products. Start with walking or stretching plus satisfying amounts of even one new healthy food. If we are willing to face ourselves as we are with love instead of shame, our innermost desire to self-heal will meet us more than halfway. Start where you can. ■

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