The George Washington University
Weight Management Program

Weight Management
NEWS

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Controlling Hunger For Those On Formula Diets

By Arthur Frank, M.D.

Most people are not driven by distracting hunger on a formula diet. Why? The simplest answer, and probably the most precise, is that we don't know why, and we cannot fully explain it. Nevertheless, the question, and the difficulty in answering it, encourages us to consider the phenomenon of hunger, to explore the various theories about manipulating hunger, and to speculate on what is going on in our brains and throughout our metabolism.

Hunger itself is very difficult to measure because it is so subjective, so profoundly affected by social, situational and emotional factors, and so intensively linked to biological signals that protect us from starving. Survival depends on eating and the signals to eat are very intense and very difficult to manipulate. We have no simple and reliable way of measuring hunger and that's one of the factors that makes it so difficult to study or to understand. It's similar to pain—very real, but the magnitude of the pain, much like hunger, is always assessed by subjective, individual judgments.

We have known for 30 years that hunger is not a major distraction for most people on formula (very low calorie protein powder) diets. People living on comparable low calorie diets (those confined to prison camps or suffering from famine, etc.) are driven by the intensity of hunger, the enormous social disruption it creates and the preoccupation people have with food acquisition and survival. Inexplicably, none of this happens on a formula diet using the same number of calories.

There have been two theories of why there is a difference:

1. *Ketones*. There has always been a suspicion that ketones, which are created by the metabolism of stored fat, suppress hunger. This is illogical because ketones are formed whenever you burn fat. All successful weight loss diets are weight losing because you burn stored fat, and if ketones suppressed hunger, then all diets would be hunger free. This is obviously not the case. Moreover, it would be biologically counter-intuitive for nature to devise a system in which starving people, burning stored fat and forming ketones, would be forming the ketones to suppress hunger. Survival depends on food acquisition, not on a mechanism that makes you comfortable while starving. Ketones don't explain it.

2. *Protein*. Another theory of hunger suppression is based on the assumption that formula diets are high protein diets. Does high protein suppress hunger? Again, this

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"Good" Foods Low In Calories, High In Nutritional Value

By Kathy Glazer, M.S., R.D., L.D.

There's an abundance of information about bad foods, those that are loaded with calories, clog up our arteries and provide no nutritional value: junk foods. Now, to offer a different perspective, we have a tabulation of some *good* foods. You can find many foods with generous nutritional qualities that are relatively low in calories. There are some good foods that you might not ordinarily consider as special.

These foods are good for a variety of reasons and, like all things, there are degrees of value and benefit. For this reason, they are listed alphabetically. None is better than all of the others, and none is a perfect food that should displace everything else in your diet. Do not plan to use any as a basic foundation of your ongoing nutritional survival. Consider, however, that these foods are good for you and think about how you might use them and incorporate them into your eating patterns.

This is not a complete list of all the good foods and even these foods have

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Ratio Of Protein To Carbohydrate Suppresses Hunger

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doesn't explain the problem, mostly because formula diets are not high in protein. Most Americans get about 100-125 grams of protein a day, much more than is needed for good nutritional health. An adult woman losing weight needs about 60 grams and an adult man needs about 75 grams. The formula diets here at the GWU Weight Management Program contain approximately 70 grams for women and 85 grams for men. That's more than enough protein for good nutritional health, but still less than what could be considered a "high protein" diet. High protein intake alone doesn't explain it.

Some recent publications suggest an alternate explanation which seems to make sense—and fits our experience. A low calorie prison camp starvation diet is going to be mostly carbohydrate with very little protein. A comparable low calorie formula diet is going to be mostly protein with relatively little carbohydrate. The ratio of protein to carbohydrate is reversed in the one or the other; starvation diets have a low ratio of protein to carbohydrate, and formula diets have a high ratio of protein to carbohydrate. It may be that what's important is not the total amount of protein, but the ratio of protein to carbohydrate. People seem to be comfortable if it's high and uncomfortable if it's low.

This theory (and it's just a theory) seems to fit and explain the phenomenon. Why or how the ratio of protein to carbohydrate suppresses hunger is not at all clear, but it does make sense and it is consistent with our experience. Yet it isn't absolute and it isn't foolproof. Some of our patients add vegetables, salads and fruit (all carbohydrates) to their formula program and do this comfortably. Other patients find that adding these carbohydrate foods actually increases their discomfort and increases their hunger. For some patients who add snack supplements to the formula diet, it may be best to use protein snacks, rather than carbohydrate snack foods. The difficulty is that there are relatively few protein snack foods available while there is an abundance of high carbohydrate snack foods.

This theory may also be a simplistic answer to the complicated problem of hunger, but it does seem to be taking us one small step closer to understanding the problem. It's clear that nature has devised an extraordinarily intense system that drives eating, avoids starvation and keeps us alive, although it also keeps us from losing weight. It's clear also that nature defends that system with remarkable tenacity. It seems obvious that there's a lot of redundancy in the system so that suppressing one part may not be sufficient to prevent other parts of the system from developing ways of compensating. We also understand that a sophisticated system for weight management will depend on developing ways of manipulating hunger and eventually managing eating in an effective and sustaining way. ■

What We Know From The Numbers About Our Eating Activities

Some of these amounts of time, costs and calories may surprise you, but that's exactly the point. Too many people are unaware how many minutes a day they spend eating and drinking or how much money they *really* spend on food. It's helpful to see how much time and how many dollars are expended each day. Perhaps if more people who are "too busy" to exercise reflect on these numbers, they might be able to make some healthy adjustments in how they spend their time.

Eating and drinking (as a main activity)	67 minutes
Eating (as a secondary activity – while working, watching tv, driving, etc.)	16 minutes
Drinking (as a secondary activity – while working, watching tv, driving, etc.)	42 minutes
Percentage of Americans who spend no time eating and drinking (as a main activity)	4%
Food cost (weekly) of an American diet (eaten at home)	
moderate level – women	$ 83
moderate level – men	$ 89
liberal level – women	$ 89
liberal level – men	$104
Added weekly cost of snacks and food away from home	$ 21
Cost of a regular package of Pepperidge Farm goldfish crackers	30¢/oz
Cost of 100 calorie snack pack of the same goldfish crackers	75¢/oz
McDonald's french fries, large	500–570 calories
Starbucks blueberry scone	480 calories
Quiznos tuna melt	1270 calories
Movie popcorn (large w/butter)	1200 calories

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Eating Impulse Analyzer Records, Recommends Response Options

By Bill Picon, Ph.D.

The Eating Impulse Analyzer (EIA) is a new clinical tool now being used by many of our patients and in a number of classes in our program. It is designed to be utilized as a major component of a comprehensive approach to the management of eating impulses. The EIA centers on a systematic analysis and a method of processing and understanding the characteristics of those impulses. It has been formulated to supplement the traditional therapeutic method which is based on the assumption that each patient's weight management motivation will override the impulses. The popularity and appeal of the EIA appears to derive from the usefulness of this kind of tool which focuses on modifying the forces that tend to bring about relapse and failure in weight management. (The EIA is easily accessed through Dr. Picon's website on eating impulse management (http://eatingimpulseanalyzer.org).

Guided by the program on the website, patients intercept automatic impulse eating by pausing to complete an EIA questionnaire. The questionnaire leads the patient through a process of studying the impulse to help identify what is driving it. The patient is then presented with a list of effective impulse response suggestions. This list is specifically related to the type of impulse driver identified, a process that has been built by patients as they have been working on the website. Similarly, at the point of identifying the driver, the patient is also presented a list of self-talk suggestions. Here, too, the use of the response suggestions has been customized by patients preparing the website.

The EIA questionnaire then charts the impact of the patient's responses to the impulse. In some instances, the impulse resolves with one intervention. When it takes a number of impulse response efforts to resolve the impulse, the patient charts these actions as well. The EIA session concludes with the patient writing lessons learned for future reference.

In addition to this guidance through the processing of each impulse, there is another important clinical yield from the use of the EIA. The impulse data that the patients accumulate by the regular practice of completing the EIA is automatically entered in that patient's database. Patients are taught how to use the data probes to gain insight into the impulse response patterns that need attention. Patients also use the analytic tools of the EIA to identify underlying emotional drivers to their eating impulses which helps pinpoint treatment of emotional eating.

The EIA has become an exciting and powerful addition to the tools that patients can use to support their weight management efforts. Many of our patients report that the EIA is what they use most in their work with us. They caution that its effective use requires a substantial amount of energy, focus and time. It is not a magic bullet or a simple solution. Although the EIA illuminates what can be uncomfortable feelings and issues, identifying these feelings and issues opens opportunities for facing and resolving them. The outcome is usually worth the investment.

FREE EIA PRESENTATION JAN. 27

The EIA website has been under development for the past year, with registration limited to current clinic patients. In conjunction with opening it to other subscribing users in early February, we are hosting an evening session on Tuesday, Jan. 27 at 7 p.m. The session is free and open to current patients and anyone else, and will feature Dr. Picon's presentation of the EIA as part of a broader discussion of the management of impulsive eating.

Program Welcomes Dr. Scott Kahan

The GWUWMP is pleased to welcome the newest addition to our medical staff, Scott Kahan, M.D., M.P.H., who is an associate faculty member at the Johns Hopkins School of Public Health and a specialist in preventive medicine.

Dr. Kahan is a highly respected author, having served as Editor-In-Chief for a series of 12 medical textbooks that have been translated into nine foreign languages. He also co-authored a nutrition guide for physicians that is distributed to every medical student in the country. His resume includes contributions to a number of public sector groups involved in diet- and nutrition-related projects, including the team that is creating the 2010 Dietary Guidelines for Americans.

Prior to completing a residency in preventive medicine at Johns Hopkins, Dr. Kahan received his medical degree from the Medical College of Pennsylvania and attended Columbia University, where he earned a B.S. in Bioengineering. He also received a Master's Of Public Health at the Johns Hopkins School of Public Health.

We are delighted to have Dr. Kahan join us and know that all of our patients will enjoy meeting and working with him. ■

Incorporating Better Choices Into Your Eating Patterns

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limitations and qualifiers. Yet you do have to make choices and these choices are better than some of the others you encounter every day.

1 **Blueberries.** Blueberries contain a number of antioxidants, including anthocyanins, which give the berries their deep blue color. The antioxidants may be helpful in lowering bad cholesterol, blood fats and blood sugar levels. They're relatively low in calories, high in fiber and provide a modest amount of vitamin C.

2 **Flax seed and flax seed oil.** Flax seed contains generous amounts of ALA (alpha linoleic acid), a form of omega-3 fatty acid. Omega-3 fatty acids may be helpful in decreasing the risk of heart disease. Flax seed (but not the flax seed oil) also contains fiber and the antioxidant/phytoestrogen substances found in lignans.

3 **Legumes and beans.** Black beans, lentils and garbanzo beans contain soluble fiber which may lower cholesterol and improve insulin resistance. Legumes are typically low in fat, a good source of protein and are high in folate, potassium, iron and magnesium.

4 **Milk (non-fat) of any variety.** On a per ounce basis, it's hard to beat the nutritional qualities of non-fat milk products. They are low in calories and high in protein, vitamins and calcium. Kids (and adults) in America don't get enough milk or dairy products.

5 **Oatmeal.** Oatmeal is a whole grain and a great source of B vitamins and minerals. It has soluble fiber which is thought possibly to lower cholesterol.

6 **Olive oil.** Olive and canola oils are high in monounsaturated fat, a much safer form of fat than the saturated fat of animal foods and tropical oils (palm or coconut). It's better to use the monounsaturated oils in cooking and baking instead of the saturated, hydrogenated or trans fat of shortening or margarine.

7 **Salmon and other fatty fish such as herring, blue fish and trout.** Fish contain two types of omega-3 fatty acids and generous quantities of high quality protein. Omega-3 fatty acids may reduce blood levels of total cholesterol, bad cholesterol and triglycerides and decrease the stickiness of blood-clotting platelets.

8 **Soy protein.** Soy, available in forms such as edamame, soy milk and tofu, provides relatively high quality protein with fiber, and vitamins and mineral. It can contribute to the lowering of blood cholesterol.

9 **Spinach.** The dark color of spinach is caused by the phytochemicals, which are thought to be cardioprotective.

10 **Walnuts and other nuts.** Walnuts are high in omega-3 fatty acids. Various other nuts have vitamins and minerals, unsaturated fats and fiber.

11 **Wine: red wine and red grape juice.** One or two daily glasses of red wine or grape juice is associated with a decreased risk of cardiovascular disease. This is possibly due to the presence of resveratrol and the antioxidants in the red grape skins. ■

More–Or Less–Sleep Can Produce Hunger, Lead To Increase In Eating & Weight Gain

By Arthur Frank, M.D.

In many ways, eating is like sleeping, but we've recently come to realize that the linkage may be much closer and much more complex than anything we had previously imagined.

Eating, sleeping and breathing are regulated by our neurochemistry (our brain). The brain controls each of these activities—how you eat, sleep or breathe, how much and when you start and stop. Survival depends on eating, sleeping and breathing, and what's obvious is that there's an element of conscious control in all of these. We can choose to eat or sleep or breathe differently, more or less, and, although we can do this as a matter of choice (most obvious with eating), we now realize that eventually the brain's neurochemical signals control many of the details of how we do these things. We usually don't have to think about breathing. Eating and sleeping involve more conscious control because there's a bigger element of choice about these behaviors, but the magnitude of choice is only one of how much relative choice we have on any of these. We do realize that it is extremely hard to change

breathing in a sustaining way, and very difficult to change sleep. What is troublesome to those of us trying to eat less is the realization that it is also difficult to change the way we eat. Changing eating means overriding the brain's signals and superimposing control on a survival system that is set to eat more than we want to eat.

Now we've come to understand that sleeping and eating are tied together in ways we've not previously appreciated. We know now that people who sleep less than or more than average are more likely to gain weight. We can identify some of the neurochemical signals which are modified by sleep deprivation (or excess) and these are the same signals which cause people to eat more (or less). When humans are sleep deprived, there's a change in the blood levels of at least two hormones—an increase in ghrelin and a decrease in leptin—in ways that signal an increase in hunger and often lead to an increase in eating.

We also know that people who regularly sleep less than six hours or more than nine hours each night weigh more than people who regularly sleep seven to eight hours. It seems simple to suggest that sleep-deprived people increase their sleeping time to lose weight. One of the consequences of this, however, may be that the increased sleeping time cuts into exercise time. The one factor which is the biggest obstacle for exercise is "not enough time." If we spend more time sleeping, it eventually means more difficulty finding enough time for exercise

We've all known that it's not easy to lose weight—or to exercise. Now we are accumulating more scientific evidence to explain why. ■

NEWS & NOTES

Rebecca Mohning, M.S., R.D., L.D., a dietitian and the coordinator of our exercise program, had a healthy baby boy, Carter, born on August 7. **Jessica Donze Black, R.D., M.P.H.,** another dietitian, also gave birth to a boy, Fletcher, on October 29. Both mothers and sons are doing well and we extend our best wishes to the happy families.

Adina Shapiro, M.S,W., is joining our staff to help with the behavior therapy program. She has many years of experience in patient care, particularly in dealing with the complex issues of eating, eating disorders and weight management.

Shannon Settle, who was previously the coordinator of our medical staff, has been promoted to the position of Patient Care Coordinator. She will be responding to your questions about records, forms, insurance, billing, and all of the small stuff that, given her attention to detail and knowledge of our program, will simplify your life.

Ginga Colclough, M.S.N., FNP-C, has now turned 61 and we celebrated her birthday with appropriate joy and enthusiasm, and awe at the mystery of how she's managed to make it through another year. **Sandy Brockman**, who has worked with our program longer than anyone else (31 years), turned 70 and doesn't look a whole lot different than she did when she arrived in 1977.

Kathy Glazer, M.S., R.D., L.D., our senior dietitian and the coordinator of our nutrition program, has done several tv interviews in recent months. She appeared on a local Fox 5 News segment dealing with high fructose corn syrup and was interviewed by Northwestern University's Medill News Service for a piece on healthy eating on a limited budget.

Our new, more interesting and exciting website is now online. It replaces our old but functional site, which, while filled with useful information, surely was among the world's most boring, least attractive and least user-friendly. The website address remains unchanged: **www.washingtonweight.com**.

C-reactive Protein, Statins and Weight Loss

A number of recent media reports have commented about C-reactive protein (CRP) and the use of statin drugs to lower blood levels of CRP. Patients with an elevated blood level of CRP have a substantial increase in cardiovascular risk. Therapy with a statin drug (Lipitor, Mevacor, Crestor, etc.), which lowers blood levels of CRP, significantly reduces cardiovascular risk and the possibility of major cardiovascular events (heart attack, stroke, etc.).

The GWUWMP is proud to have been one of the research facilities to study CRP. Our participation has given us a bit more insight into the complex issues surrounding CRP that haven't received as much press coverage. One is that weight loss alone is another method of lowering CRP, either with or independent of statin drugs. The other is that, since CRP is not routinely measured, most people do not know if they have an increased blood level. It's worth knowing the level of your CRP and it's worth considering weight loss as a means of lowering it.

We can provide a laboratory measurement of your CRP and, if it is elevated, you might want to consider taking a statin drug or starting a weight management program (or both). The economy and the usual complexities of life are obstacles, but you should not neglect this relatively important simple intervention which could significantly affect your health.

Call or set up an appointment so that we can respond to your questions and consider your options.

Post-Surgical Patient Group Formed

Two issues frequently arise with patients who have undergone one of the surgical procedures for weight loss. One is the very limited opportunity they have to discuss post-surgical matters with other patients. The adjustments to eating differently, rapid weight loss and the emotional and psychological impact of losing weight are all subjects that patients might benefit from discussing. It's unfortunate that these topics tend to get neglected with the distractions of other life events.

The other issue involves the complexity of long-term (years) nutritional management; eating properly, and the metabolic and nutritional monitoring of post-surgical patients are very different from losing weight on a medical program and vary significantly with different surgical procedures. Patients do require special monitoring, and need to exercise dietary and nutritional caution and devote long-term attention to these unique issues. A standard, healthy American diet and routine medical care are not sufficient to solve the complex nutritional issues that might occur with post-surgical patients.

The GWUWMP has created a new group for patients who have had any surgical procedure, regardless of where it was done and notwithstanding any other experience the patient has had in our program. The new group will be led by Marilyn Sperling, Ph.D, an experienced, senior member of our staff for the past 25 years.

We would also like to try to help patients who are considering the medical and nutritional aspects of their long-term post-operative care. Our medical staff and dietitians are experienced in these issues and in the procedures and protocols for monitoring and long-term management.

Call our office if you're interested in a post-surgical group or to discuss the long-term medical management of your post-surgical medical care.

Medications and Non-program Patients

We have always recommended that our patients use a comprehensive program for weight management. Nutritional counseling, exercise, behavior therapy and psychological support clearly improve results, both in losing weight and in maintaining weight loss.

Nevertheless, we recognize that some of our patients are unable to commit to such a comprehensive program. The demands of time, distance, family, travel logistics and the complexities of working in the Washington area are all obstacles to overcome.

The GWUWMP has had patients who are unable to participate fully in our program and while we are convinced that this is not the best approach, we believe that we can still be helpful to these "non-program" patients. A "non-program" approach is particularly helpful for patients with time or travel constraints, those who want to use medications as a primary method of losing weight, and those who are using long-term medications as part of their maintenance program.

If any of these circumstances apply to your situation, please call and schedule an office visit with one of our medical staff members. We can discuss the options and develop strategies that might be helpful for you. It is our hope that we can accommodate the particular circumstances of all of our patients. We recognize that one format does not work for everyone, so perhaps we can create an approach that could be helpful for you.

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