



MEDIFAST NEWS

Updates on clinical obesity management with Medifast



winter 2008

Welcome to Medifast News!

Here's what's new from Medifast, your resource for clinical management of obesity.

This month:

Program update - New thermogenic products that help patients overcome weight loss plateaus and maintain a healthier weight

Food science - Soy, the main ingredient in Medifast products

Nutrition - Managing Vitamin K for the patient receiving anti-coagulant therapy

Compliance - The "behavior chain" that helps or hurts patients embracing healthier habits

Medifast

Program Updates and News

NEW: Momentum by Medifast

Medifast has just introduced its new line of thermogenic products called **Momentum by Medifast**. Each serving contains 100 mg of caffeine and 90 mg of epigallocatechin gallate (EGCG), a catechin found in green tea. Together, EGCG and caffeine have been shown to increase energy expenditure.

Total Energy Expenditure (TEE) is comprised of three different factors:

- resting metabolic rate,
- thermogenic effect of food (TEF), and
- energy expenditure related to physical activity.

TEF: The effect of food ingestion on energy metabolism

TEF, a mechanism shown to be blunted in obese individuals, is comprised of two components, the first of which is obligatory thermogenesis, the energy required to digest, absorb, and assimilate food nutrients. The other component, facultative thermogenesis, involves activation of the sympathetic nervous system and its stimulating effect on metabolism from food ingestion, and this is a potential mechanism by which Medifast by Momentum increases energy metabolism.

Active ingredient: Epigallocatechin gallate (EGCG)

When EGCG, the most pharmacologically potent polyphenolic compound in green tea, is absorbed, it is distributed widely in the body and stimulates thermogenesis and fat oxidation through catechol-o-methyltransferase (COMT), the enzyme that degrades norepinephrine.

Also, EGCG has been shown to inhibit fatty acid synthetase, the primary tri-

glyceride-making enzyme, and increase the oxidation of fatty acids. Furthermore, this catechin powerhouse has been shown to induce anti-oxidant, anti-viral, anti-plaque forming, and anti-cancer activities within the body. EGCG is associated with decreases in blood pressure, serum glucose, triacylglycerol, and total cholesterol levels, as well as reductions in hepatic and body fat accumulation.

Active ingredient: Caffeine

Caffeine affects thermogenesis and fatty acid oxidation by inhibiting the phosphodiesterase-induced degradation of intracellular cyclic AMP (cAMP). Although acute ingestion of more than 400 mg of caffeine can cause palpitations, anxiety, and dizziness, regular ingestion of smaller doses does not appear to be associated with any major health consequences.

Both working synergistically

In the Momentum by Medifast products, EGCG and caffeine work synergistically

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to stimulate thermogenesis via COMT and phosphodiesterase, respectively. The synergistic relationship may also be related, in part, to the overlapping timing of their peak concentrations and half-lives.

Peak concentrations for caffeine occur at 30-60 minutes after consumption with doses ranging from 50 to 200 mg (Syed et al., 2005), and at 1.5 to 2 hours for decaffeinated green tea solids containing EGCG. The half-lives of caffeine and EGCG, 5.7 hours and 5 to 5.5 hours, respectively, are similar.

Clinical studies

One recent clinical study conducted over several weeks at Jason Pharmaceuticals Inc., stratified 30 participants (11 men, 19 women) into three groups.

- Following an overnight fast, baseline resting energy expenditure (REE) was measured using indirect calorimetry.
- REE and respiratory quotient (RQ) were measured 30 minutes, 60 minutes, 90 minutes, and 120 minutes after consuming a Medifast thermogenic meal replacement (Momentum by Medifast).
- Participants were also asked to evaluate their appetites using a visual analogue scale 30 minutes and 120 minutes after consumption.

Overall, mean REE increased 24% for the 2-hour period following consumption of a Momentum by Medifast product, or 6% over a 24-hour period. Increases in fatty acid oxidation and reductions in appetite were also observed.

This clinical study found the greatest thermogenic benefit among individuals who had lost weight and maintained a weight loss of >5% body weight for ≥3 months. This population experienced a 27% increase in REE for 2 hours after consuming a Momentum by Medifast product, or a 7% increase over a 24-hour period.

Patient information for Momentum by Medifast

Momentum by Medifast should be used with caution in patients/clients on certain pharmacological agents* such as:

- Acetaminophen with codeine
- Atropine
- Cardec DM
- Codeine
- Ephedrine and Pseudoephedrine
- Lomotil/Lonox
- Theophylline/Aminophylline
- Coumadin/Warfarin
- Quinolones (i.e., ciprofloxacin)

** Please note this is not a complete listing of medications that may be contraindicated for use with Momentum products.*

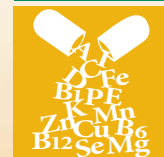
Momentum by Medifast is appropriate for patients/clients in the weight loss phase of the Medifast Program who have had an extended period of slowed weight loss or are experiencing a plateau. They are particularly appropriate for patients in the maintenance phase of the Medifast Program who are seeking a means to prevent weight re-gain, an otherwise common phenomenon.



MOMENTUM
by Medifast



Clinically Proven



Fully Fortified



Heart Healthy



Medifast
CHOOSE HEALTH

In the next issue of

MEDIFAST NEWS

Program update: Omega-3

Food science: Diabetic Study

Nutrition: Medifast with thyroid disease

Compliance: Setting realistic expectations for weight loss

Food



(excerpt from *The Bottom Line: Soy and Health*.
For the Healthcare Provider.

Lisa Davis PhD, PA-C, CNS, LDN)

Soy protein is considered a complete protein in that it provides all the nine essential amino acids (leucine, isoleucine, valine, lysine, tryptophan, threonine, methionine, histidine, and phenylalanine). The quality of plant-protein found in soy is equivalent to that found in animal protein. Most people can benefit from soy protein as part of a healthy diet plan.

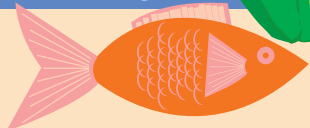
Solae™, the soy protein used by Medifast in its meal-replacement products has the highest obtainable score using the FDA-recommended benchmark for qualifying protein, the Protein Efficiency Digestibility-Corrected Amino Acid Score (PDCCAS). The brand's soy protein is water extracted to retain naturally-occurring isoflavones (genistein, daidzen, and glycitein), which work together to yield lower blood cholesterol, decrease in vasomotor menopausal symptoms, and reduce risk of heart disease. Other products' alcohol-extraction methods remove a substantial amount of soy isoflavones.

Medifast is a pioneer in recognizing the double benefit that can be potentially gained by offering the highest quality soy protein as part of their clinically-tested weight control program.

Nutrition

Corner:

Vitamin K



For additional comments or questions regarding nutrition, please contact:

NutritionSupport@ChooseMedifast.com

The 5 & 1 Plan is the weight loss phase of the Medifast Program, and the average amount of Vitamin K/day provided by 5 Medifast Meals is 90 mcg. The current Dietary Reference Intake (DRI) for Vitamin K is 120 mcg/day for men and 90 mcg/day for women 19 years of age and older.

The 5 & 1 Plan provides a consistent daily intake of Vitamin K by promoting the consumption of six small meals every day. Medifast recognizes the need for consistent Vitamin K intake day to day for effective medication therapy.

The average Vitamin K content in the 3 servings of vegetables in the Lean & Green Meal is 74 mcg/day, which is in

addition to the 90 mcg provided by the 5 Medifast Meals. The moderate to high Vitamin K vegetables in the approved vegetable list are:

- Kale
- Spinach
- Turnip greens
- Collard greens
- Mustard greens
- Broccoli
- Romaine lettuce
- Endive lettuce

Medifast encourages all patients who are on anti-coagulant medication to speak with their physicians prior to starting the Medifast Program.

Compliance:

Understanding the behavior chain

A behavior chain is a sequence of events that can end with negative ramifications for an intended health goal. For patients using Medifast, behavior chains can result in the patient eating something that is not on the 5 & 1 Plan.

Here is an example of how a behavior chain could occur:

- 1 A patient has a horrible day at work, including a bad review from her boss.
- 2 She leaves work upset, and becomes more so on the commute home.
- 3 The patient sees several pizza shops on her normal route.
- 4 A reckless driver cuts her off, adding to her distress.

- 5 The patient passes a billboard advertising Pizza Hut® deep dish pizza.
- 6 She continues to ruminate on the day, the reckless driver, and her increasing hunger.
- 7 She drives into the next pizza shop, parks the car, and goes inside to wait in line to order.
- 8 Still feeling the frustrations of the day, she decides to reward herself with a large supreme pizza.
- 9 She gets the pizza and becomes intoxicated by the smells and sights of the “forbidden” food. She vows to have just one piece.
- 10 The patient consumes the whole pizza as the flavors and aroma make her numb to the day’s frustrations.
- 11 She leaves and continues the drive home, feeling stuffed, embarrassed, and defeated.
- 12 Guilt and depression give way to hopelessness and a sense of being trapped. The cycle of self-defeated talk resumes.

A behavior chain like this one can occur quickly and unconsciously, many times throughout the day. However, with support and practice, patients can learn to identify behavior chains early in their sequence and successfully break them.

Counseling can help patients break out of a behavior chain, by encouraging them to identify:

- 1 Problem behaviors
- 2 Precipitating events
- 3 Vulnerability factors
- 4 Potential and actual consequences
- 5 Specific solutions to the most critical “links” of the chain
- 6 A prevention strategy for future events based on alternative behaviors.

IMPORTANT! To continue receiving “Medifast News” and updates, please email Doctors@ChooseMedifast.com with your name, address, and email information **TODAY!**