

Positive Communication

A Quarterly Newsletter of the Infectious Diseases Nutrition Dietetic Practice Group

Glutamine Supplementation of Individuals Infected with HIV

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Glutamine is the most abundant extracellular amino acid in humans. It is readily used by the cells of the gut, liver, and immune system. Glutamine is considered a conditionally essential amino acid because deficiency occurs in prolonged, serious illness and during periods of metabolic stress (1). It has received attention recently for its potential ability to maintain gut integrity and ameliorate diarrhea and for its potential ability to increase lean muscle mass. A population of particular interest is individuals infected with human immunodeficiency virus (HIV). HIV has effects on the gut ranging from subclinical abnormalities of intestinal permeability to villus atrophy, malabsorption, and diarrhea (2-5). In addition, certain anti-retroviral medications may have a side

effect of diarrhea. Diarrhea can reduce quality of life and decrease medication adherence.

Individuals with HIV may also experience unintentional weight loss and loss of lean body tissue. This paper reviews studies conducted to investigate the intestinal effects of glutamine supplementation in HIV positive adults and the effect of glutamine supplementation on gain of lean tissue.

A study by Huffman and Walgren investigated the effects of L-glutamine

on nelfinavir-associated diarrhea (6). Nelfinavir mesylate (NFV) is an anti-retroviral protease inhibitor with the reported side effect of mild to moderate diarrhea (7). HIV positive adults who had experienced NFV-related diarrhea for at least one month were enrolled in the study. Diarrhea was graded on a five-point scale (zero= less than three stools/day, four= more than seven stools/day). The researchers excluded individuals who had an opportunistic infection in the past two months or a history of hepatic or renal disease, chronic diarrhea, or who had used glutamine supplements in the past. The 25 subjects were randomly assigned to receive either ten grams L-glutamine or placebo three times a day for ten days. Bowel movements, food intake, and medications

were recorded. After this time period, the groups were crossed over to receive the alternate treatment for ten days, i.e.

those who received L-glutamine first now received the placebo and vice versa. Subjects were allowed to take over-the-counter anti-diarrheals for the first four days of either treatment. Because animal studies have shown that glutamine replenishment takes 24 to 48 hours (8) and the average turnover for human

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Letter from the Chair

Hello IDN DPG Members,

I am thrilled to be your incoming chair and have greatly enjoyed the responsibilities that have come with the position so far, such as organizing the spring planning meeting for the IDN DPG Executive Committee and putting together the DPG related events for FNCE 2011 in September in San Diego. In the past year my life has gone through a major shift. I went from working full-time as the Assistant Director of Nutrition at Gay Men's Health Crisis (GMHC) in New York City to being a full-time mom. Although I miss my clients at GMHC very much, I feel very lucky to be able to spend the first year of my daughter's life watching her learn and grow. Taking on the position of chair for the IDN DPG happened at the perfect time for me. Even though I have been home full-time, it has allowed me to stay connected to my peers in the field and has motivated me to keep up-to-date on the latest nutrition related information on infectious diseases. I look forward to working this year on enhancing your membership benefits and continuing to improve the benefits we have been working on since last year, such as the updated IDN DPG website and patient education handouts in the newsletter. Thank you for having me as your chair and for renewing your membership to the DPG! Below you will find the many activities related to Infectious Disease Nutrition at FNCE. Our remarkable presence at FNCE this year shows the importance and continued need for the work that we do.



Sincerely,
Jenny Torino, MS, RD
Chair, IDN DPG

FNCE 2011 IDN Highlights

- Sunday, September 25th, 10am-11:30am: ADA HIV/AIDS Evidence Based Nutrition Practice Guidelines (speakers Marcy Fenton, MS, RD and Saroj Bahl, PhD, RD, LD)
- Monday, September 25th, 10am-12:00pm: Member Showcase, booth #13
- Monday, September 25th, 3:30pm-5:00pm: Body Composition Management for Today's HIV-Positive Patient: Open Discussion (facilitators: June Pierre-Louis, PhD, MPH; Keiy Murofushi, MS, RD; Sarah Robertson, RD, CDN; Jenny Torino, MS, RD)
- Monday, September 25th, 6:30pm-8:30pm: Member Reception, Candellas Restaurant, 416 3rd Ave, San Diego

Food & Nutrition Conference & Expo 2011

IDN DPG Discussion Session: Body Composition Measurement for Today's HIV Positive Patient

The IDN DPG Executive Committee is pleased to inform DPG members that a proposed discussion topic for the Food & Nutrition Conference & Expo was approved by ADA. Four DPG members will be facilitating a discussion on body composition assessment in HIV disease. We selected this topic because it is an area many dietetics professionals have questions about, are uncertain about which method(s) to use, and are unclear about how to interpret and use the results. There have been two papers published in the IDN DPG newsletter, *Positive Communication*, on body composition in the past year, one on bio-electrical impedance analysis (BIA) and the other on anthropometric measurements (see Fall 2010 and Spring 2010) and there has been much discussion on the electronic mailing list on the topic.

Each of the facilitators at FNCE will lead a discussion on a different method for measuring body composition in the HIV positive individuals. June Pierre-Louis, PhD, MPH, CDN and Keiy Murofushi, MS, RD will lead a discussion of anthropometric methods including, skinfold measurements and body measurements in relation to body composition. Sarah Robertson, RD, CDN will lead a discussion of BIA measurements. Jenny Torino, MS, RD will facilitate the discussion on dual absorptiometry X-ray analysis (DEXA). Each facilitator will briefly explain what the method measures and what it is an indicator of, then will pose a key question to the participants involving practical challenges and pitfalls of methods, training needs and guideline development. The discussion session is a place where the participants can share their thoughts, knowledge and opinions about the key questions raised as well as a place to brainstorm how we can best use body composition measurement to ensure quality nutrition care for our patients.

Biosketches of the facilitators is included below:

June Pierre-Louis, PhD, MPH, CDN received her doctorate in nutritional sciences from Cornell University. She is currently employed at New York State AIDS Institute in New York City and is the newsletter co editor of *Positive Communication*.

Keiy Murofushi, MS, RD received his Master's in Nutritional Science from California State University, Northridge. He is currently employed at Kindred Hospital Los Angeles and is the Chair of the Nominating Committee for the IDN DPG.

Sarah Robertson, RD, CDN received her Bachelor of Science in Nutrition from New York University (NYU) and did her dietetic internship at New York Presbyterian Hospital. She is currently employed at Gay Men's Health Crisis in New York City and is Treasurer of the IDN DPG.

Jenny Torino, MS, RD received her Master's Degree in Clinical Nutrition from NYU. She was formerly at Gay Men's Health Crisis in New York City and is currently Chair of the IDN DPG.

Medicaid Redesign: Medicaid Coverage for Oral Nutrition Supplements in New York State

Naima Sullivan, MS, RD, HIV Nutrition Specialist, Gay Men's Health Crisis (GMHC), New York, NY, naimas@gmhc.org

On April 1, 2011, New York State's 2011-2012 state budget took effect, cutting \$2.85 billion in Medicaid spending and eliminating coverage for enteral nutrition formula (oral nutrition supplements) for most individuals. Medicaid coverage for enteral formula in New York State is now limited to tube-fed individuals who cannot chew or swallow food, those with inborn metabolic disorders, and children with growth and development problems. A fourth coverage category, underweight adults, was considered but not included in the final plan. In its proposal, the Medicaid Redesign Team, appointed by Governor Andrew M. Cuomo, stated that while the health of beneficiaries losing coverage could suffer, this measure "preserves the benefit for those most in need" and eliminates "payment for formula consumed as a convenient food substitute (1)."

This new measure will result in an estimated \$15 million in savings this year and represents a shift in priorities in the care of the HIV positive community in the context of nationwide cuts in Medicaid spending. Previously, Medicaid coverage for enteral nutrition formula was available to all New York State residents with documented medical necessity and prior authorization. In addition to the above criteria, formula was covered for significant unintentional weight loss (>5% weight loss over two months) or with documented objective evidence supporting the need for supplementation, such as malnutrition documented by serum protein levels, albumin levels or hemoglobin or other physiological changes.

While the new criteria will initially save the state millions of dollars in Medicaid spending each year, it may potentially result in increased health care costs and may place an increased burden on food programs, especially those that serve people with HIV/AIDS and other chronic disease conditions. Savings could be achieved through stricter enforcement of previously existing cover-

age criteria of medical necessity, thereby discouraging the use of enteral nutrition formulas for convenience, and truly preserving the benefit for those who are most vulnerable and needy.

Oral nutrition supplements are widely used among the elderly and in the management of HIV/AIDS, cancer, renal disease, diabetes, and other chronic diseases. They are often an important source of calories, protein, and micronutrients for those who are unable to obtain or maintain a therapeutic diet and for those experiencing, or at risk for, malnutrition. Data show that among people living with HIV/AIDS, weight loss and wasting remain common and are associated with increased mortality and risk for complications (2,3). Oral nutrition supplements have been shown to increase energy, protein, and micronutrient intakes and improve weight and other clinical measures (4-7). Some suggest that measures to prevent malnutrition such as oral nutrition supplementation could result

in fewer and shorter hospital stays and decreased healthcare costs overall. A 2007 study found that hospitalization

accounted for over 50% of New York State Medicaid expenditures among the state's highest cost-incurring HIV-infected residents, who represented only 9% of HIV positive Medicaid recipients (8). These findings highlight the need to focus on prevention to decrease hospitalizations and healthcare costs overall.

Many individuals living with HIV/AIDS experience the challenges of weight loss or wasting coupled with psychosocial barriers to eating adequately and appropriately. These can include substance use, inadequate housing, mental illness, and limited financial

resources (9,10). Studies have found associations between food insecurity and HIV medication non-adherence, suggesting that efforts at improving food access and diet quality among disadvantaged HIV positive individuals might impact treatment adherence and health outcomes (11,12).

New York State dietetics professionals and others who care for HIV positive individuals have been advocating for the restoration of funding for enteral nutrition formulas. In response to the proposed changes, Susan Branning, MBA, RD, CNSD, President of the New York State Dietetic Association, wrote a letter urging Governor Cuomo to restore coverage of oral nutrition products, stressing that they provide necessary nutrients, improve patient outcomes, can result in decreased health care costs, and are an essential part of the diets and comprehensive medical treatment of HIV/AIDS patients. Although this part of the Medicaid Redesign has been ap-

proved, concerned New York residents are encouraged to reach out to New York State legislators to communicate the potential negative

impact of this measure on the health and nutrition status of HIV positive individuals.

As part of the care team, dietetics professionals play a vital role in ensuring that patients are able to meet their nutritional needs. In particular, patients losing coverage for oral nutrition supplements would benefit from nutrition services and close follow-up. Dietetics professionals can help ameliorate the loss of coverage by providing education and guidance about budgeting, purchasing, and preparing appropriate foods. In

(See Medicaid, page 10)

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Nutrition Outreach to HIV Case Management Programs

By June N. Pierre-Louis, PhD, MPH and Mark Perez, MSW
New York State Department of Health AIDS Institute, New York, NY

Case management can be a cost effective tool when working with the chronically ill (1). It has been defined as activities aimed at linking the service system with a consumer, and coordinating the various system components to achieve a successful outcome, and as a problem-solving function designed to ensure continuity of services and to overcome systems' rigidity, fragmented services, misuse of certain facilities, and inaccessibility (2). The New York State Department of Health AIDS Institute defines HIV case management as a multi-step process to ensure timely access to and coordination of medical and psychosocial services for a person living with HIV/AIDS and, in some models, his or her family/close support system (3). Primary outcomes for HIV case management include access to an HIV medical provider, retention in care, determination of hepatitis C status, adherence to HIV anti-retrovirals, treatment for substance use, meeting needs for mental health services, and access to safe, adequate, and stable housing.

How do case managers work?

Case management includes intake, assessment, service plan development and implementation, reassessment, service plan updating, and implementation of interventions, such as client advocacy and case conferencing (3). Service plans are done in conjunction with assessment/reassessments and should correspond to client needs as prioritized during the assessment or barriers or remaining needs at reassessments. A nutritional problem might be mentioned at intake, assessment, or reassessment. If so, it should be considered for inclusion in the client's service plan. For example, the goal of a case management service plan for an individual with diabetes might be to evaluate its management. The short-term objective may be to obtain any needed nutrition services, for instance, an appointment or case conference

with the HIV care provider about the diabetes, referral to a registered dietitian for assessment and medical nutrition therapy (MNT), diabetes education by a certified diabetes educator, food assistance tailored to diabetic needs, and/or monitoring individual adherence to medications, diet and exercise recommendations. Each one of these objectives has activities/tasks that are listed and tracked.

The case manager perspective on nutritional problems

Nutritional problems may not be prioritized or perceived as a barrier, and/or case managers may not know where to refer the client for nutritional support. Obesity, for example, may be ignored by case managers due to a lack of knowledge or a level of discomfort about how to address or even discuss it with the client. Furthermore, individuals with HIV and AIDS frequently present with a variety of nutritional problems, from the simple issue of whether to take medications with or without food to the complex issues of body image,

Chart reviews indicate that case managers generally do assist clients with food assistance through entitlements or food programs; however, recognition of and referral for weight problems and nutrition-related co-morbidities occur infrequently.

lipodystrophy, wasting syndrome and/or they struggle with low income and limited access to food. Side effects from many of the medically effective drug regimens may be present as well as co-morbidities, such as viral hepatitis, hypertension, obesity, or diabetes. In order to provide appropriate referrals, it is important for case managers to be aware of nutrition interventions and nutrition resources and dietetic practitioners available in the community. Interventions include food assistance, medical nutrition therapy, and community nutrition group education.

Resources include food pantries and meal programs. Clients should be referred to dietetics practitioners to be educated on making better food choices with limited income and the benefits of these choices. Chart reviews indicate that case managers generally do assist clients with food assistance through entitlements or food programs; however, recognition of and referral for weight problems and nutrition-related co-morbidities occur infrequently.

Nutrition outreach and referral

Nutritional support should be an essential part of integrated service delivery and not a vertical stand-alone program or service. It is important for registered dietitians to reach out to case management and other service providers and educate them about HIV and nutrition, reasons to make a nutrition referral, and eligibility criteria for nutrition programs. The 2011 American Dietetic Association (ADA) evidence-based recommendations for HIV state that registered dietitians should

collaborate with other healthcare

professionals and administrators to ensure that all people with HIV infection are referred for MNT based on nutritional risk (4). Some hospital programs that have dietetic practitioners on staff are able to do this; however, for most case management providers, a short list of reasons for a nutrition referral would be more practical given the current level of collaboration between nutrition and case management providers. Nutritional risk factors or "red flags" for case managers might include food insecurity, unintentional

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(Glutamine, from page 1)

enterocytes is approximately three days, four days were allowed for glutamine to be replenished and effects to be seen. The results of the study showed that those who received L-glutamine first had a significantly lower mean grade of diarrhea after ten days and at the end of the study. A significant crossover effect was seen when placebo was given during phase two. A washout period was not part of the protocol and one must question if the crossover effect would have been seen if a washout period was part of the protocol. Those who received L-glutamine second had a mean grade of diarrhea that was improved but the effect was not statistically significant. The limitations of this study include a small sample, the scale used to track diarrhea was not specific enough to capture subtle changes in stool, such as frequency and consistency, and stool was not cultured.

A study by Heiser et al. also examined the ability of L-glutamine to reduce nelfinavir- or lopinavir/ritonavir (LPV/r)-related diarrhea (9). This study enrolled HIV-positive subjects who had been on NFV or LPV/r for more than six months, had stable weights for six months, and experienced water or loose stool at least two times per day. Individuals with renal and hepatic disease were excluded. Subjects met with a registered dietitian and standard diarrhea-reducing diet instruction was given. This included education on adding 12 grams of a soluble fiber (Procter and Gamble) supplement and a probiotic (Acidophilus and Bifidobacteria) supplement of 1.2 grams. At four weeks, subjects were reassessed. If diarrhea persisted, they were additionally supplemented with ten grams of L-glutamine, which was titrated up to 30 grams per day. The control group did not meet with a registered dietitian but was given loperamide by their primary care physician. After four weeks, 15 of the 28 subjects in the treatment group had continued diarrhea and were supplemented with L-glutamine. At the end of the 12-week study, those who received L-glutamine at the fourth week had a significant reduction in mean daily diarrhea. The changes in the control group were not significant. Although the results of this study seem promising, there were disproportionate numbers in the treatment and control

groups, 28 versus seven, respectively.

Bushen et al. also examined the effects of glutamine supplementation on diarrhea (10). Two forms of glutamine were used in this study: alanyl-glutamine, which is more soluble and stable in solution, and glutamine, form unspecified. Forty one HIV positive adults, who experienced more than three stools per day for more than 14 days and who had lost more than ten percent of their body weight, were enrolled. Individuals with hepatic or renal impairment were excluded and the stool was cultured to rule out other causes of diarrhea. Subjects were randomized to receive one of four iso-nitrogenous treatments: placebo, 30 grams glutamine, four grams alanyl-glutamine, or 44 grams alanyl-glutamine. The supplement was taken for a total of seven days and stool patterns and consistency were monitored. At the end of the study period, eight of the nine subjects in the high dose alanyl-glutamine group had improvements in diarrhea while only three of the eight subjects in the control group had improvement. Twenty-six of 30 subjects receiving any treatment improved compared to the control group. When comparing the glutamine and high dose alanyl-glutamine groups to the control group, there was also a significant improvement in diarrhea. Again, this study had a relatively small sample size, the methods to assess diarrhea were subjective, and the study duration may not have been long enough to see maximum effect. Interestingly, the study found that there was an improvement in anti-retroviral absorption with the use of glutamine and alanyl-glutamine.

It has been estimated that 20% of individuals with HIV infections have abnormal intestinal permeability (11) which may contribute to diarrhea. A study by Noyer et al. was conducted to explore the effects of glutamine on intestinal permeability and diarrhea (12). HIV positive patients with acquired immunodeficiency syndrome (AIDS) underwent standard intestinal permeability tests and had an intestinal biopsy performed before and after treatment. Subjects with inflammatory bowel disease, sprue, hepatic or renal disease, or who were on anti-inflammatory drugs were excluded. Twenty-four subjects were randomized to receive either placebo, four grams glutamine, or eight

grams glutamine (type not specified) for a period of 28 days. They were also asked about presence and frequency of diarrhea. The study showed that while there was a trend toward improved intestinal permeability in the treatment groups, it was not statistically significant. There were also no changes in the intestinal villus heights and bowel habits before and after treatment. This study, in comparison with the previous, used very small doses of glutamine. Significant results may have been observed with a larger sample size or if the study had been conducted for a longer period of time.

Glutamine has also been studied for its role in maintaining and increasing lean body mass. Shabert et al. examined the effects of a glutamine-antioxidant supplement on increasing body weight and lean body mass in HIV-infected individuals with more than five percent unintentional weight loss (13). Individuals had an average baseline body composition as determined by bioelectrical impedance analysis (BIA). Twenty-one subjects were randomized to receive the treatment (40 grams glutamine, vitamin C, α -tocopherol, β -carotene, selenium, and N-acetyl cysteine) or placebo (40 grams glycine) for 12 weeks. A weekly weight was taken, BIA performed, and nutrition education provided. At the end of the 12 weeks, the glutamine-antioxidant supplemented group had a significant increase in body weight and lean mass compared with controls. There was no difference in dietary intake between the two groups, negating this as the cause for the changes seen. The study cannot completely attribute the observed weight gain to glutamine since antioxidants were also part of the supplement. However, the sample size was very small, making it difficult to extrapolate the results.

The Journal of Parenteral and Enteral Nutrition published an article regarding the use of glutamine, arginine, and β -hydroxy- β -methylbutyrate (HMB) for HIV-associated wasting (14). Individuals with more than five percent weight loss over a period of three months were enrolled. Body composition was measured using air displacement plethysmography, skinfolds, and computerized tomography of the thigh. Forty-three subjects were randomized to receive treatment (14 grams glutamine, 14 grams argi-

nine, 3 grams HMB) or an isocaloric placebo. Body composition and weight were analyzed at baseline, four weeks, and at study end at eight weeks. At eight weeks, the treatment group had gained significantly more weight (a mean of 2.9 kg) and significantly more lean mass (a mean of 2.6 kg). Unlike the previous study discussed, subjects were followed after discontinuation of treatment. The gains seen in the study were not maintained eight weeks after cessation of supplementation. An unexpected significant drop in viral load was seen in the supplemented group, which, in itself, is beneficial. Like the previous study, the results seen cannot be attributed solely to glutamine because of the other components in the supplement.

In all of the studies discussed in this review, the glutamine or glutamine-containing supplements were well tolerated and no adverse reactions were reported. Although the studies were small and short-term, the results suggest benefits in reducing diarrhea and improving lean body mass in individuals infected with HIV. One study estimated the monthly cost of 30 grams of glutamine per day to be \$22, which is relatively inexpensive when compared with anabolic steroids, human growth hormone, and anti-diarrheals (9). Nevertheless, there is not sufficient evidence and long-term studies to support the recommendation of glutamine for HIV related diarrhea or wasting.

References:

- Gropper SS, Smith JL, Groff JL. *Advanced Nutrition and Metabolism*, 9th ed; Thomson Learning, Inc. Belmont, CA. 2005.
- Tanowitz HB, Simon D, Weiss LM, et al. Gastrointestinal manifestations. In: *Management of the HIV-infected patient*, part I. *Medical Clinics of North America*. 1996;80:1395-1414.
- Antony MA, Brandt LJ, Klein RS, Bernstein LH. Infectious diarrhea in patients with AIDS. *Digestive Diseases and Sciences*. 1988;33:1141-1146.
- Gillin JS, Shike M, Alcock N, et al. Malabsorption and mucosal abnormalities of the small intestine in the acquired immunodeficiency syndrome. *Annals of Internal Medicine*. 1985;102:619-622.
- Lim SG, Menzies IS, Lee CA, Johnson MA, Pounder RE. Intestinal permeability and function in patients with human immunodeficiency virus. *Scandinavian Journal of Gastroenterology*. 1993;28:573-580.
- Huffman FG, Walgren ME. L-Glutamine supplementation improves nelfinavir-associated diarrhea in HIV-infected individuals. *HIV Clinical Trials*. 2003;4(5):324-329.
- Medline Plus. Drug and Supplement Information: Nelfinavir. Revised 09/01/08. <http://www.nlm.nih.gov/medlineplus/druginfo/meds/a697034.html>. Accessed 11/29/08.
- Panigrahi P, Gewolb IH, Bamford P, Horvath K. Role glutamine in bacterial transcytosis and epithelial cell injury. *Journal of Parenteral and Enteral Nutrition*. 1997;21(2):75-80.
- Heiser CR, Ernst JA, Barrett JT, et al. Probiotics, soluble fiber, and L-glutamine reduce nelfinavir- or lopinavir/ritonavir-related diarrhea. *Journal of the International Association of Physicians in AIDS Care*. 2004;3(4):121-129.
- Bushen OY, Davenport JA, Lima AB, et al. Diarrhea and reduced levels of anti-retrovirals: improvement with glutamine or alanyl-glutamine in a randomized controlled trial in Northeast Brazil. *Clinical Infectious Diseases*. 2004;38:1764-1770.
- Tepper RE, Simon D, Brandt LJ, Nutovits R, Lee MJ. Intestinal permeability in patients infected with human immunodeficiency virus. *American Journal of Gastroenterology*. 1994;89:878-882.
- Noyer CM, Simon D, Borczyk A, et al. Double-blind placebo controlled pilot study of glutamine therapy for abnormal intestinal permeability in patients with AIDS. *American Journal of Gastroenterology*. 1998;93(6):972-975.
- Shabert JK, Charmaine W, Lacey JM, Wilmore DW. Glutamine-antioxidant supplement increases body cell mass in AIDS patients with weight loss: a randomized double-blind controlled trial. *Nutrition*. 1999;15:860-864.
- Clark RH, Feleke G, Din M, Yasmin T, et al. Nutritional treatment for acquired immunodeficiency virus-associated wasting using β -hydroxy- β -methylbutyrate, glutamine, and arginine: a randomized double-blind placebo-controlled study. *Journal of Parenteral and Enteral Nutrition*. 2000;24(3):133-139.

Meet the New Co-editors: Lillian Pinault, MS, RD

Baltimore VA Medical Center, Baltimore, Maryland

How did you get into dietetics?

I am a runner, and I first became interested in nutrition in high school while looking for ways to improve my athletic performance. The more I read about nutrition, the more I became interested in the myriad of other ways in which lifestyle and eating habits impact health. Also, I am passionate about food, cooking, fitness, and overall wellness. I think all of these things come into play when studying or counseling others about nutrition.

What do you think the biggest challenge facing dietitians today is?

Since obesity and other lifestyle-related diseases are major contributors to soaring healthcare costs, dietitians and the medical community as a whole have their work cut out for them.



There is a wealth of nutrition information available via the internet, the media, and both genuine and so-called nutrition “experts.” As a result, the general public and even some healthcare professionals do not always view nutrition as a science in its own right. To combat this, I think it is crucial for nutrition professionals to keep up with the latest research, particularly within their subspecialty of practice. It is also important for more dietitians to be directly involved with research, investigating potential interventions for obesity and other chronic diseases directly impacted by nutrition. I believe that as a group, we have the enthusiasm and creativity to meet the many challenges that lie ahead.

What do you like to do in your spare time?

Running is a passion of mine, but I also enjoy rock climbing, cycling, and basically anything that gets me outdoors. I also play the piano, am a voracious reader, and enjoy cooking and experimenting with new foods and recipes.

What is your favorite recipe to make?

My favorite recipe is focaccia bread with mozzarella, fresh basil and rosemary.

What is your favorite food?

Pretty much anything that involves cheese. I am also a big fan of chocolate. If I had to give up one of the two, I would definitely have to sacrifice chocolate.

Where is your favorite place to be?

Running on the beach, barefoot, in the early morning.

What was the last book you read?

I am actually reading two books right now: Musicophilia by Oliver Sacks, and The Complete Sherlock Holmes by Sir Arthur Conan Doyle.

What was the last nutrition related book you read?

The last nutrition book I read was In Defense of Food by Michael Pollan.

What do you do and where do you work?

I am an outpatient dietitian at the Baltimore VA Medical Center. I provide individual counseling in a general outpatient clinic, as well as in the Infectious Diseases and Endocrine clinics. I also teach a variety of group classes on diabetes, weight management, and lipids. In addition to counseling and teaching, some current projects include working with my facility’s clinical informatics department to develop a computerized template consistent with the Nutrition Care Process, and organizing a journal club for the nutrition department.

If you could convince all of your patients to do just one thing, what would it be?

Turn off the television. My family did not own a television when I was growing up, and I think getting rid of their TV was one of the best decisions my parents ever made. It always astounds me when I see statistics on the number of hours we spend in front of the TV. Since “time” is one of the most common excuses for not exercising and for choosing fast food or convenience foods over a home-cooked meal, I think this is an obvious place to carve out more time in your day for a healthy lifestyle.

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Meet the New Co-editors: Naima Sullivan, MS, RD

Gay Men's Health Crisis (GMHC), New York, NY

How did you become interested in the field of dietetics and nutrition?

Dietetics is my second career. My first career was professional modern dance. I studied dance at New York University (NYU) in New York City. Afterwards, I danced professionally in New York City and performed throughout the U.S. and overseas. I've always enjoyed cooking and eating but as a dancer I had friends and colleagues who had anxieties about food and weight. I finally decided to go back to school for nutrition because I wanted to help people have a healthier relationship with food.



Where did you go to school and where do you now work?

I studied nutrition at NYU and earned a Master's degree. I did my dietetic internship at New York Presbyterian Hospital. My first job as a dietitian was as a Food Service Manager at an eating disorders clinic where I worked for about one year. I am now working at GMHC as a HIV Nutrition Specialist. I was interested in working at GMHC because I enjoyed my Infectious Diseases internship rotation and I had been exposed to HIV issues in the dance community. GMHC is community based, offers an array of social services and programs, has a good reputation, and is passionate about HIV issues and public policy advocacy.

What does your work day look like?

About half of my time is spent on nutritional counseling. GMHC has Part A Ryan White funds for nutrition programs including a food pantry and congregate meals. I help run the pantry program by ordering food, managing inventory enrolling clients in the program, and supervising volunteers. I also do nutrition education groups, work with kitchen staff and provide guidance on menus. I am involved in training kitchen staff, for example, on the sodium content of foods and why this is important.

What challenges you the most in your job?

Because GMHC is community based, part of my job is being available to meet with clients. I have an open office and there are many interruptions during the day and sometimes crises. While I like having an open office, it can be challenging to stay focused on my work. Another challenge is educating clients who have mental health problems. It is challenging to help them decide what changes to make in their diets and to engage them in care. I refer clients with mental health problems to licensed mental health counselors and social workers in the mental health department at GMHC and we work with these clients as a team.

What do you think is the greatest obstacle facing dietetics today?

A big obstacle is communicating clear nutrition messages to the public. Many nutrition messages are confusing or complicated and therefore inaccessible to the public. There is also a lot of misinformation about nutrition and dieting. Dietitians need to find ways to communicate to the public about nutrition. With regard to HIV nutrition, we need to keep advocating for the special needs of the HIV positive community, now that HIV has become a chronic disease.

What advice would you give future dietetic practitioners?

There are so many different types of work one can do as a dietitian and the scope of nutrition is large. As a student, I explored the many different areas of nutrition and I would encourage others to do the same.

...we need to keep advocating for the special needs of the HIV positive community, now that HIV has become a chronic disease.

What is the favorite aspect of your job?

I love the process of nutritional counseling. I like to empower people to make positive changes in their lives. I have developed relationships with clients and have seen a lot of positive changes in self esteem, diet, and engagement in health overall. I have learned a lot about myself in the process.

What do you enjoy outside of dietetics?

My newest hobby is gardening. I live in Queens and have vegetable and flower gardens. I am growing strawberries, tomatoes, herbs, cucumbers, carrots, and pumpkins. I have lilies, lavender, azaleas, rhododendron, and bleeding hearts. I am trying to grow nasturtium, which are edible flowers, this year. I continue to enjoy dancing and cooking as well as music. I am particularly excited about coming on board as the co-editor of the newsletter.

(Medicaid, from page 4)

addition, dietetics professionals can help patients who suffer from gastrointestinal complications by identifying underlying causes and employing dietary strategies for symptom management. Finally, dietetics professionals can educate their patients about affordable homemade alternatives to oral nutrition supplements, such as smoothies, shakes, and fortified soups and beverages, which can help meet increased energy, protein, and micronutrient needs. Faced with changes in public policies that may impact the nutritional status of people living with HIV/AIDS, dietetics professionals with expertise in HIV nutrition care are well-suited to helping patients address diet and nutrition related issues and influencing future policies.

References:

1. New York State Department of Health. Proposal to Redesign Medicaid. Available at: http://www.health.state.ny.us/health_care/medicaid/redesign/docs/descriptions_of_recommendations.pdf. Accessed May 30, 2011.
2. Mangili A, Murman DH, Zampini AM, et al. Nutrition and HIV infection: review of weight loss and wasting in the era of highly active antiretroviral therapy from the nutrition for healthy living cohort. *Clin Infect Dis*.2006;42:836-842.
3. Tang AM. Weight loss, wasting, and survival in HIV-positive patients: current strategies. *AIDS Read*. 2000;13:S23-27.
4. Leyes P, Martinez E, De Tallo Forga M. Use of diet, nutritional supplements and exercise in HIV-infected patients receiving combination antiretroviral therapies: a systematic review. *Antiviral Ther*. 2008;13:149-159.
5. Stack JA, Bell SJ, Burke PA, et al. High-energy, high-protein, oral liquid, nutrition supplement in patients with HIV infection: effect on weight status in relation to incidence of secondary infection. *Journal of the American Dietetic Association*. 1996;96:337-341.
6. Sattler FR, Rajcic N, Mulligan K, et al. Evaluation of high-protein supplementation in weight-stable HIV-positive subjects with a his-

tory of weight loss: a randomized, double-blind, multicenter trial. *Am J Clin Nutr*. 2008;88:1313-1321.

7. De Luis DA, Bachiller P, Palacios T, et al. Nutritional treatment for ambulatory patients with acquired immunodeficiency virus infection and previous weight loss using a formula enriched with n3 fatty acids: a randomized prospective trial. *Eur Rev Med Pharmacol Sci*. 2010;14:449-454.
8. Chestnut TJ, Laufer FN, Carrascal AF, et al. An expenditure analysis of high-cost Medicaid recipients with HIV disease in New York State. *J Health Care Poor Underserved*. 2011;22:330-345.
9. Hendricks KH, Gorbach S. Nutrition issues in chronic drug users living with HIV infection. *Addic Sci Clin Prac*. 2009;April:16-23.
10. McMahon J, Wanke C, Terrin N, et al. Poverty, hunger, education, and residential status impact survival in HIV. *AIDS Behav*. 2010 July 15.
11. Kalichman SC, Cherry C, Amaral C, et al. Health and treatment implications of food insufficiency among people living with HIV/AIDS, Atlanta, Georgia. *J Urban Health*. 2010;87:631-641.
12. Kalichman, SC, Grebler, BA. Stress and poverty predictors of treatment adherence among people with low-literacy living with HIV/AIDS. *Psychosom Med*. 2010;72:810-816.

(Case Management, from page 5)

weight loss, obesity, underweight, supplement use, diabetes, and liver disease. It is incumbent on registered dietitians to get involved with and train case management providers and give them the knowledge and tools (for example, training on what these conditions entail and a brief nutrition screening form) so that they can successfully integrate nutritional care into their case management processes and make appropriate nutrition referrals.

References:

1. Gawande A. The Hot Spotters. *The New Yorker*, January 24, 2011, 41-51.
2. Hahn A, Aaron P, and Kingsley C. Case Management with At-Risk Youth. The Center for Human Resources, Brandeis University. http://smhp.psych.ucla.edu/qa/case_mgmt_qt/Overhead-Definitions_of_Case_Management.pdf
3. New York State Department of Health AIDS Institute. Community Follow-Up Program Standards. <http://www.cobracm.org/uploads/Guidance%20&%20Standards/CFP%20Standards%209.07.pdf>
4. HIV/AIDS Evidence-Based Nutrition Practice Guidelines. American Dietetic Association Evidence Analysis Library, 2011.

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Pinault L, Mittelsteadt A. **Measuring Body Composition of HIV Patients Using Bioelectrical Impedance Analysis.** Fall 2010;15;3.

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