

Field Experience Report in Public Health Nutrition

by

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Field Experience Report

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Priscilla Brenes

Chapter 1 - Field Experience Report

Summary

This field experience objective was to provide public health experience outside academia in order to apply the skills and knowledge acquired during the public health courses as well as emphasis courses. Meadowlark Hills (MLH) Retirement Community, a not-for-profit organization located in Manhattan, Kansas, served as the agency to complete my field experience. MLH has an innovative senior living approach that embraces a person-centered philosophy.

The specific objectives of this field experience were to integrate public health nutrition knowledge in a practice setting; experience organizational structure, program administration, coordination, and community relationships; create nutrition education handouts for residents and staff of MLH; and demonstrate creativity and teamwork in the development of public health activities. This field experience consisted of nine weeks of rotations in the following departments: administration, home health, finance, social work, resident services (transportation), Parkinson's program, memory program, and dietetics. My main project at MLH was to develop educational materials for staff and residents about hydration, constipation, bone health, and possible dietary protein-drug interactions.

Subject keywords: public health nutrition, nutrition education, older adults.

Purpose

As a requirement to earn a Master in Public Health degree, a field experience is required. The objective of this field experience is to provide public health experience outside academia and allow the student to apply the skills and knowledge acquired during the public health courses as well as emphasis courses.

Agency

Meadowlark Hills (MLH) Retirement Community served as the agency to complete my field experience. MLH is a not-for-profit organization located in Manhattan, Kansas, and was founded in 1980 as a better living option for elders. MLH is recognized worldwide for its innovative senior living approach that embraces a person-centered philosophy (Meadowlark Hills, 2016). This agency offers to seniors: independent living, assisted living, 24 hours per day skilled nursing care, post-acute recovery nursing care, support with memory and dementia issues, and home health care services. It also offers several amenities, for example, exercise classes, Thai chi, yoga, chair exercise classes, religious opportunities, and support groups, to name a few.

MLH supports approximately 400 nurses and other employees, 130 residents in healthcare households, 40 residents in assisted living and 200 residents in independent living. This agency is committed to enhancing the life of senior citizens by nurturing individuality, values, independence, and community.

The Parkinson's Program Leader & Memory Program Leader served as the preceptor for my field experience. She began working for MLH in 2005 and is in charge of community-based and MLH education and outreach programs.

Objectives for My Field Experience

- Integrate public health nutrition knowledge in a practice setting.
- Experience organizational structure, program administration and coordination, and community relationships.
- Complete nutrition education handouts for residents, staff of Meadowlark Hills, and the Parkinson's program.
- Demonstrate creativity and teamwork in the development of public health activities.

Scope of Work

I rotated through the following departments inside MLH: administration, home health and therapy, finance, social work, resident services (transportation), Parkinson's and memory program, and dietetics. My main project at MLH was to develop educational materials for staff and residents about hydration, constipation, bone health, and possible dietary protein-drug interactions.

Summary of Weeks

Week 1- Parkinson's Program & Dietetics

Along with the Registered Dietitian (RD) and the Parkinson's Program Leader, this week was used to define the topics and objectives for the nutrition education handouts for staff and residents. Since MLH has post-acute recovery nursing care, there was a need for educational materials that staff could use or give to residents once their stay at MLH ended. The main objective of these handouts was to provide the readers with simple information that could be applicable once they were in their homes. I also helped to update some social media for the

Parkinson's program and helped prepare educational materials for speech/swallowing consultations.

Week 2- Parkinson's Program & Dietetics

I helped distribute information for sponsorship to local businesses. The main goal of this task was to let people know about the Parkinson's program and some future events. This program is free of charge for the person affected with Parkinson's, so sponsorship is one of the main monetary resources the program has. During this week, I also worked on designing some of the handouts that were asked for by researching online tools to help make the design step easier.

With the RD, I went to a Diabetes Support Group. This group gets together every other month and for this session, they had a pharmacist as an invited speaker. The speaker explained how different types of medications should be used and how the medicines regulate metabolism.

Week 3- Social Work

The social worker invited a speaker to talk to the staff at MLH during the week I was there. The speaker was from Heritage Senior Behavioral Health, Wamego Health Center, Kansas. This organization has a process-oriented support group that helps people with early stages of dementia and older adults suffering from depression. The social worker invited him to provide the staff with tools so they can refer people to the program. Medicare pays for 80 percent and supplemental insurance covers 20 percent. Heritage's goal is to teach people how to cope and develop mindfulness as well as positive thinking; they concentrate on skill building. The speaker explained the differences between depression and grief and how sometimes these two are confused because they can overlap. It was also explained that when people are physically, mentally, and socially active they start to feel better. All of the staff left the meeting with written resources about the topic and the number to call in case they had referrals.

In this week, I was able to observe the social workers do assessments to help older adults find the appropriate long-term care services. These assessments are reviewed by the Area Agency on Aging (AAA) and also can aid in the person's eligibility for Medicaid. Another function of the social worker is to handle hospital referrals of prospective residents in order to get properly reimbursed for the services. Medicare will cover some of the services MLH provides and the screening process helps acquire Medicare reimbursements. Additionally, one of the social workers is in charge of talking to the residents and making sure they are having a pleasant time at the facility. Any reports of abuse or complaints made by family of the resident, or the resident himself/herself, are handled by the social worker in order to try to solve the problem.

This week coincided with the Parkinson's monthly meeting where an occupational therapist was the invited speaker. In this meeting, people affected by Parkinson's were able to see and learn about techniques for everyday tasks and different therapy equipment. People affected by Parkinson's sometimes have a hard time dealing with dyskinesia, stiffness, and tremors, and all of these prevent them from performing some everyday tasks. Participants of this session were very grateful for the information provided and were interested in some of the equipment the occupational therapist brought to the session. One of the benefits of being part of the Parkinson's program is that some of the equipment pieces are free of charge in case the person affected by Parkinson's is unable to pay for it.

Week 4- Financial Services

This was indeed the most informational week of my field experience. The people in charge of finances explained how the different departments of MLH work together to avoid losses. Each department has an individual financial statement that then is combined into one

MLH financial statement. Correct control of finances helps the organization to re-invest and also to allocate resources. One of the persons in the finance department works closely with residents and family members who need to apply for Medicaid in order to pay for MLH services.

Fortunately, I was able to see one of her consultations and learned some aspects that allow a senior to qualify for Medicaid services.

For older adults to be eligible for Medicaid services, they should have no more than \$2,000 combining all of their savings, checking accounts, cash bonds, or similar, plus a month of income. Medicaid will look at the last five years of all of their savings for any irregularity or illegal transferring. Some of the examples that may disqualify someone are irregularities in their savings including donations, paying for someone else's college, or giving money to sons and daughters. Medicaid is a shared program so, for example, if someone's income is \$800 monthly and they need \$8,800 monthly to pay for long-term care, Medicaid will pay only \$8,000 and the person will pay \$800. Medicaid does allow the person to have approximately \$60 monthly to pay for incidentals like haircuts or underwear purchases. If the person passes away, Medicaid will ask if some money could be paid back by looking at their savings account or any properties of the deceased. Medicaid will look at all other possible venues which would allow a person to pay for long-term care, for example, Veterans benefits, insurance, or income.

Week 5- Administration and Resident Services

The first two days of this week I was with the transportation-supply department. This department is in charge of helping residents get around town, get to medical appointments, schedule trips and provide the households with supplies (e.g., Band-Aids, toilet paper, diapers, wet wipes, shampoo, shower soap, and similar). The staff in this area are aware of the resident's needs, for example, they know which car type to use if the resident is very tall or if they are

using a walker. They also understand the care the resident needs during his/her trips outside of MLH and they may walk the resident to their doctor's office or go to a restaurant to bring the resident some iced coffee.

For the second part of the week, I rotated with the administration department. At one of the meetings I attended, they were talking about the annual inspection that the state does. They were also preparing for it because it was time for them to get inspected. The meeting served as a reminder of the procedures and policies MLH has and to explain to the staff what the inspection was about and that they should not worry if they saw unknown people around. As part of my rotation, the leader of the administration department sent me to do a "mock inspection" of three different households. Some of the points in the assessment included inspection of furniture, cluttering, food safety, hand washing, repositioning of residents, cleaning guidelines, care of residents, and assistance response. I took a long time to complete the first survey, as I had to get familiar with the tool and concepts. Since I had some doubts about what was right or wrong, I had to take pictures of the situations and ask the administrator if the situation was in order or if it had to be corrected. This helped me to unify concepts and to understand the view of the administrator. Regular inspections of the facilities help improve the daily services provided to the residents and locate potential hazards that can be corrected promptly.

In this week I also spent an entire afternoon talking to some residents and helping them organize their rooms and reading to them. I consider this essential for someone who works at a senior facility because identification with the residents will help understand their needs and help provide a better quality of care for them.

Week 6- Home Health & Therapy

For the first part of the week, I was with Home Health Services that have Nurse Aides, Licensed Practical Nurses, and Registered Nurses. This group of people provides home health visits at MLH and outside of MLH, and their services can be private pay or paid by Medicare. They not only visit patients but also to manage admissions and discharges from MLH's post-acute recovery nursing care. They also screen the patients regarding their mental and medical status, as well in their abilities to do activities of daily living (ADLs). These health professionals have to be really careful coding the services they provide to avoid rejection by Medicare. The patients must meet specific qualifications to receive services.

I had the opportunity to go on a couple of visits with the nurse. The nurse checked vital signs of the patients, refilled their medication boxes, and checked if some prescriptions needed to be ordered. During this week, I helped home health services create two poster boards to be used to train the Nurse Aides in the services they should provide to patients, for example, check blood pressure, temperature, medications, ulcers, and do some housekeeping work.

On two days of this week, I was allowed to observe some therapy sessions with the patients. In one of the sessions, the patient worked on upper body strength; in another session, the person focused on the lower body; and another resident did therapy for fine motor skills. The therapy department has physical, occupational, and speech therapists who work together with the residents and patients to prolong independence, rehabilitate deficits, and prevent injuries.

Week 7- Memory Program

I helped the Memory Program Leader in some miscellaneous work, for example, making signs for their meetings and looking through educational materials about memory loss to find useful strategies that could be used in the memory meetings. The memory program hosts classes

that teach techniques, strategies, and activities related to memory and cognition. A support group is also part of the program, as well as a class of Visual Thinking Strategies facilitated by an art educator from the Beach Museum of Art.

The memory program is also collaborating with The University of Kansas Medical Center to bring to the Manhattan community the Lifestyle Enrichment for Alzheimer's Prevention (LEAP!) course. I helped the Memory Program Leader coordinate with the University for Mankind (UFM) in Manhattan to schedule the LEAP course through them in order to make people in the community aware of the opportunity to learn practical information to promote brain health.

I was also able to attend a training session for a new program that MLH is implementing called Music & Memory. This program focuses on using music to "reawaken" senior citizens with memory loss, and revitalize them in order to improve their quality of life. In this training, some household coordinators and volunteers were present, and these people are the ones who will be in charge of implementing the program in their households.

Weeks 8 & 9 - Parkinson's Program & Dietetics

During these two weeks, I attended an "open house" at MLH. I was able to talk to residents and observe how the staff from MLH explained to customers and family members who they were and how they function at MLH.

With the RD, I was able to observe her reviewing residents' files and determine if there were any significant weight loss, pressure ulcers, or edema. The RD and the Certified Dietary Manager (CDM) do rounds in the different households to check on residents who are considered at risk for weight loss, have pressure ulcers, or significant edema. They also check the kitchens at each household to ensure food safety and adequate training of the homemakers.

The RD and the CDM plan the menu and coordinate it with the main kitchen. A project they recently launched was involving the residents in menu planning. This meeting was called “culinary corner”. Residents were able to taste some of the recipes as well as choose from a list of about 10 to 15 recipes which ones they liked the most and wanted to see on the fall menu. This activity really engaged some of the residents and I think it was also beneficial in improving their sense of independence.

The Parkinson’s Program Leader is also a Speech-Language Pathologist and I was able to accompany her to some consultations and learned the importance of companionship and cueing that some seniors need when they have issues related to swallowing. Also, I could appreciate the importance of multidisciplinary work when it comes to a resident’s overall health because the Speech-Language Pathologist and the Dietitian worked together on many occasions to optimize safe swallowing. Furthermore, I attended one training that the Speech-Language Pathologist gave for a couple of Nurse Aides about speech and voice exercises. These exercises needed to be done during their regular home health visits to help residents maintain safer swallowing.

The major fundraising event of the Parkinson’s program was getting close, so I helped to organize documents for the Speedy PD race that included teams’ registrations, donations, and tracking of sponsors. I also assisted the Parkinson’s Program Leader in a chair exercise class facilitating some of the exercises and helping residents to make the exercise effortful.

Development of Nutrition Education Pieces

The topics for the nutrition education pieces were chosen by the MLH Dietitian and Speech-Language Pathologist. They both had noticed some potential points of improvement if people could have reference materials that could help their overall health. The following topics were chosen: dehydration (Appendix A), constipation (Appendices B & C), bone health

(Appendix D), nutritional shakes (Appendix E), and the amount of protein in food for people with Parkinson (Appendix F).

According to the Academy of Nutrition and Dietetics (Bernstein & Munoz, 2012), dehydration, constipation, and poor bone health are important medical conditions for older adults since many seem to struggle to obtain adequate intakes of fluids, fiber, vitamin D, and calcium. Also, there is a concern with polypharmacy in the older adult and adverse drug-drug and food-drug interactions.

In Parkinson's Disease (PD), some researchers have pointed out possible interactions of PD medications (specifically, levodopa) and protein in food. It is suggested that levodopa and high protein in the diet compete for transport across the blood-brain barrier, making the PD medication less effective (Fernandez et al., 2010; Virmani, Tazan, Mazzoni, Ford, & Greene, 2016). To help prevent the levodopa-protein interaction, some researchers propose protein intake redistribution or taking levodopa at least one hour before or after meals (Barichella et al., 2016).

For the information in the educational handouts, websites of the following organizations were used: PubMed, National Parkinson Foundation, The Academy of Nutrition and Dietetics, Michael J. Fox Foundation, and the Center for Movement Disorders and Neurorestoration. Furthermore, the guidelines from the National Kidney Disease Education Program were used to determine what types of food were low or high in protein content, and the USDA food database was used to determine the protein content in food. Additionally, for the constipation recipes handout, the following websites were used: www.healwithfood.org, www.foodnetwork.com, and the University of Michigan Health System.

For the layout of the information, the guidelines from the National Institute on Aging (2007) were followed. They advise that for written materials to be friendly to older adults they must have the following:

- Clear, specific, and direct information, omitting unnecessary words.
- Limited number of key points per section, since only a few could help the reader to take action.
- Positive statements, not negative ones.
- Use of active voice.
- Examples relatable to their lives.
- Information broken into sections.
- No tables or complex diagrams that may be hard to understand.
- No long scientific words that not everybody would understand.
- Easy to read font type and size, with the letter size at least 12 point, 14 point is better, and no use of all capital letters because it can be difficult to read.
- White space for the readers to rest their sight.
- No blue, green, and yellow in close proximity because it could be challenging to tell them apart.
- Contrast between background and letters, with light background and dark letters.

To create the educational materials, I used “Word” and “PowerPoint” for the handouts on hydration and constipation. For the bone health and nutritional shakes handouts, I used the website www.canva.com to improve aesthetics. This website comes with many no-cost graphic design templates that can be modified to personal needs. Furthermore, since the educational piece on protein in foods needed to be a booklet, a search for free websites like canva.com was

performed. After trying many different resources, the website www.cliptomize.com was chosen as the best option to create the booklet on protein in foods. This website also offers free booklet templates, pictures, and figures that can be modified and then downloaded in a pdf format to print.

Explanation of the Nutrition Education Materials

The team (Speech-Language Pathologist, RD, and I) recognized that background information about dehydration and constipation and some symptoms was necessary. It was decided to include in the handouts a motivational phrase or sentences that prompted the reader to take action, for example, “you can do something about it” or “be proactive, take action now!” After these phrases, some bullet points followed. The bullet points were to give the readers ideas on how to take action and also to give them different choices.

For the hydration handout, a list of sources of liquids that MLH provides was included to remind the readers they can buy these products at MLH facilities.

I developed two handouts on the constipation topic. In the first one, a list of foods that may cause constipation was provided to alert the reader of foods to eat in moderation. Also, people with Parkinson’s disease have a higher prevalence of chronic constipation, and this was why a disclosure about Parkinson’s was embedded at the end of the handout. The second one featured different recipes the reader could try to fight constipation. For this second handout, I read articles about constipation and, according to the food items the authors discovered that could help prevent constipation, I next looked for recipes that included those food items. Pictures of the food items beside the recipes were embedded to help the reader associate the food with the information. The names of the foods were bolded to help the reader spot where the ingredient was in the recipe.

For the bone health handout, a similar approach was used. The handout contained some background information, but this handout was specifically designed for people with Parkinson's since, according to research, they seem to struggle with this as the disease progresses. Some common symptoms of people with Parkinson's were included, for example, "people with PD are at an increased risk of osteoporosis due to low levels of vitamin D, hormonal changes, age, and intake of antidepressants." The population with PD that MLH has is always very curious about their disease and like to know as much as they can about PD symptoms and challenges. Tips to increase bone health were included and some keywords were bolded to help the reader focus on that information. Pictures were embedded next to the information to help the reader make visual associations.

A need arose when doing my rotation with the dietetics department. The RD wanted to improve the flavor of the nutritional shakes that some of the residents were taking and needed a handout to give to the homemakers in order for them to make the shakes. Thus, I created a handout that included small recipes, as well as the name of the shake.

In the booklet for the content of protein in foods, it was decided to call it "My low-high protein food book for Parkinson's Disease". This handout also contained some background information about the timing of medications and protein in meals. Since the research that I found did not contain a cut-off point for what is low or high protein foods for people with PD, the cut-off points from the National Kidney Disease Education Program were explained in the booklet. A space for notes was included in case users wanted to record their food intakes and symptoms before and after meals. The different food items were divided into three categories: "foods low in protein", "foods high in protein", and "plant foods high in protein". Each page of the booklet had the title of the food group to avoid any confusions for the reader. Plenty of white space and

illustrative pictures were included in the booklet as well, to help the reader rest their sight, make associations, and take notes if needed.

After I completed all of the educational materials, they were submitted for approval to the Dietitian and Speech-Language Pathologist. They gave suggestions and comments and after three to four reviews, the handouts were ready for the Community Relations Director to give final approval. A survey for the residents and staff (Appendix G) was also designed to inquire about the helpfulness of the handouts. The information obtained from this survey will not be disclosed in this report due to confidentiality agreements at MLH.

Conclusions

During this field experience, I was able to integrate public health knowledge into a practice setting by creating educational materials for residents and staff of MLH. Also, by rotating in the different departments, I was able to understand the structure of an innovative retirement community and support the organization with different miscellaneous and educational tasks.

A great lesson learned was how important it is to work with a multidisciplinary team. I worked in multidisciplinary teams in order to promote well-being and independence of the residents. Losing independence is a situation that most older adults experience when they become injured or sick. MLH is focused on prolonging the person's independence to improve quality of life. This was reflected in their "culinary corner", therapy, memory and Parkinson's programs, Home Health Services, and transportation services.

I experienced the importance of training the trainer because sometimes one or two health professionals cannot reach every patient. It is in these moments when they need to rely on other health professionals who can teach the patient how to maintain their health both inside and

outside of the facility. If the staff does not have knowledge of helpful programs or the correct health information, they may never advise residents on these topics in order to improve their quality of life.

In addition, allocation of resources is crucial in public health as well as in a not-for-profit organization. For example, having qualified people assessing referrals and residents helps the agency acquire proper reimbursement and allocate resources where they are needed most.

Learning how Medicaid and financial services work was very eye-opening. Although the Master of Public Health program has a Health Care Administration class as a required course, being able to see how much paperwork is required to apply for Medicaid resources alone was extremely informative and helped me put into perspective the information learned in class.

Working with business donors helped me realize the crucial role that they have in providing free services to residents, as is the case for the Parkinson's program. Also, sharing the program's information is crucial to make people aware of its accomplishments and the future directions of the program. This dissemination of information helps bring new contributors as well as new users of the program.

It is important that everyone in the organization is in sync to provide high quality service to the senior population. This includes understanding their needs, likes, and dislikes to support the resident with an atmosphere of family and true care.

Public health is more than just ensuring the population's safety. There is a need for constant innovation as challenges appear and needs change. The older population is increasing as "baby boomers" retire, and this encourages public health advocates to be innovative and support good programs that can help older adults to prolong independence and overall health in all areas of their lives. This may help ease the health care burden.

In addition, the creation of nutrition education materials for older adults requires detail and care. Knowledge of the target population is crucial to developing effective education pieces, since by knowing their interests and challenges, the written materials can be tailored accordingly. Furthermore, the use of technology when designing educational pieces can enhance appearance and creativity that might help the reader be more engaged.

Alignment with Core Competencies and Emphasis Area Competencies

This field experience was valuable to my public health training. The core courses and the emphasis courses I took prepared me for some of the challenges I faced at MLH. Courses such as environmental health and health care administration helped me to understand the risk of possible contaminants in the households' kitchens, how health care and Medicaid benefits work, and the importance of ethical and legal procedures inside a not-for-profit organization. In addition, when doing research and developing the educational handouts, knowledge of biostatistics and epidemiology helped me to comprehend and identify how disease or health issues affect older adults.

During my rotations, especially my social work rotation, I was able to observe how social and behavioral bases are crucial when one is in a consultation or handling economic or environmental challenges with residents and their family members.

My nutrition emphasis courses were fundamental for the development of the nutrition education pieces. These courses helped me to understand how aging affects nutritional needs, how nutrition may help decrease the symptoms of chronic diseases, and the importance of helping people make positive behavior changes.

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Appendix A - Handout on Dehydration

Dehydration




As we age, the sensation of thirst may be decreased. When we do not drink enough water, we begin to dehydrate. During the day, we are constantly losing water by sweating, urinating, defecating, and breathing and this too can contribute to dehydration.

Some of the symptoms of dehydration are low blood pressure, weakness, blurred vision, headache, poor attention, concentration and memory, dizziness, palpitations, dry mouth, and constipation. When you feel some of these symptoms, ask yourself "Have I drank enough water today?"

If your desire to drink is diminished, be proactive! Start voluntarily drinking at least 8 to 10 glasses (64 to 80 ounces) of liquid a day like water or fruit juices. Sipping water from your mug or water bottle throughout the day, adds up to staying hydrated.

Why is water so important? Your blood needs water to carry all the vitamins and minerals through your body. It also helps lubricate the joints and the eyes. If you are doing therapy, your muscles need to be well hydrated to regain strength. Also, exercise makes you sweat so you need to hydrate before, during and after physical exercise. Urinary infections can be a consequence of not drinking enough water. When dehydration occurs, some bacteria in the bladder and urinary tract starts to grow, causing infection. A large glass of cranberry juice daily with preferably eight glasses (64 ounces) of water can help prevent against this infection.



So don't forget!
Stay Hydrated!

Difficulties swallowing are a common symptom in Parkinson's disease. This can increase the risk of dehydration because individuals may not drink as much for fear of choking or embarrassment. When you are dehydrated, slowness, stiffness and gait instability may increase.

Juices are a good source of liquid. Here are some juice options that Meadowlark offers to you:

- Apple juice
- Grape juice
- Cranberry juice
- Prune juice
- Orange juice

If eating/drinking is difficult, talk to your doctor for a referral for a Swallowing Therapist. If you need a complete nutrition assessment, ask for a Dietitian referral. Updated July 2016.

Updated July 2016

Appendix B - Handout 1 on Constipation

Constipation



How do I know if I have constipation? You may have constipation if you have: less than three bowel movements per week, hard and difficult to pass stool, painful bowel movements or you feel that you had an incomplete emptying after defecation. There are a variety of reasons people become constipated: medications, gastrointestinal tract movements are slow due to disease, and not drinking enough fluids.

Constipation may lead you to develop hemorrhoids, fecal impaction, and increase your risk of bowel cancer. It can make you feel bloated, uncomfortable, and may even be painful. If stool is blocking your bowel it may interfere with the effectiveness of your medication due to decreased absorption. Also if you are constipated your appetite may decrease.

Concerned about all this? No worries. The best part is that you can do something about it! Here are some tips:

- Exercise helps you to remain more active. When you exercise not only are your muscles benefiting from it, but also your internal organs (i.e. gastrointestinal system).
- Drinking warm liquids at breakfast and consuming prunes or prune juice can help stimulate the bowel.
- Drink enough liquids in the day. Don't rely on thirst to drink! Try to increase water consumption by 1 glass/day. If your fiber intake is adequate (at least 30g a day) but you don't drink enough fluids, you will still be constipated.
- Eat five servings of raw vegetables and fruits. Some examples are a cup of cucumber, or tomato, a medium ripe banana or a medium apple.
- Eat fruits every day. Most of the fiber in fruits is in the skin, so if you are eating fruits like apples or pears, eat the skins.
- Choose raw or frozen veggies over canned options.
- Eat bran cereal or add bran to your regular foods.

Eating a lot of certain foods may cause constipation. Here are some examples of foods to eat in moderation:

- Dairy products (milk, cream cheese, sour cream, butter)
- Highly process food like bread, crackers, white rice, pastries, and white flour.
- Fast food
- Fried foods
- Foods high in sugar (desserts, pastries, donuts, ice cream)

gastrointestinal
Exercise
sweets
food vegetables
bran fruits stimulates
fast lifestyle
fluids Parkinson'sDisease
water bowel
sugar movements
constipation

Here is a natural recipe to help with constipation.

Mix together: ½ cup of applesauce, ½ cup of prune juice and 2 tablespoons of wheat bran (Miller's bran). Keep the mix in the refrigerator and take 1-2 tablespoons a day.

If you have Parkinson's disease, constipation may appeared even before motor symptoms start (tremor and stiffness). People with PD typically crave sweet foods, and these foods are usually low in fiber. Try the tips above to beat you constipation.

If eating/drinking is difficult, talk to your doctor for a referral for a Swallowing Therapist. If you need a complete dietetic assessment, ask for a Dietitian referral.

Sources: The American Dietetic Association, American Parkinson Disease Association, National Parkinson Foundation, Center for Movement Disorders and Neurorestoration, NCBI/PMC. Updated July 2016

Appendix C - Handout 2 on Constipation

Got constipation?

You may have Constipation if you have: less than three bowel movements per week, hard and difficult to pass stool, painful bowel movements or you feel that you had an incomplete emptying after defecation.


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This handout contains recipes that may help with your constipation

Recipes you can make:

Option 1. ½ cup of applesauce + ½ cup of **prune** juice + 2 tablespoons of wheat bran (Miller's bran). Mix

Option 2. 1 cup apple sauce + 1 cup oat bran + ¾ cup **prune** juice. Mix

Keep refrigerated and start taking 1-2 tablespoons a day followed by 6-8 ounces of water or juice. If after two weeks you do not see any changes in your bowel movements, increase to 3-4 tablespoons a day.



It is believed that **prunes** have a laxative effect in mild constipation. **Prunes** also are full of antioxidants that might be beneficial for chronic diseases. Their high content of potassium might be beneficial for cardiovascular disease and its boron content may help in the prevention of osteoporosis.

Pears are high in fiber. A medium size pear contains approximately 5.5 grams of fiber. Scientific studies suggest that pears may have an important role in gut health. This fruit contains fructose and sorbitol which has been associated with laxative effects.



Juices you can make:

Option 1. 3 cups unpeeled **pears** + 1 cup ice cubes + 3 tsp of minced fresh peppermint. Blend everything and enjoy. Makes one serving.

Option 2. 2 cups peeled cube **pears** + 1 cup apple juice + 1 tsp grated ginger root + 1 cup crushed ice. Blend everything and enjoy. Makes one serving.



Updated July 2016

Don't let constipation "beet" you!



Try this soup:

3 medium **beets**, peeled and diced + 1 tbsp canola oil + 1 cup chopped onions + 1 pound diced carrots + 1 tbsp fresh minced ginger + 1 minced garlic clove + 6 cups vegetable stock
Directions: Heat oil in a large saucepan over medium heat. Sauté onion until golden brown. Add ginger and garlic and cook for 2 minutes, stirring frequently. Add **beets**, carrots, and stock. Cover & reduce heat to low and simmer covered until beets and carrots are tender, about 25 minutes. In a food processor, purée soup in batches. Taste soup and adjust seasonings.

One tablespoon of ground **flaxseed** contains around 2 grams of fiber and is easy to add to your recipes. For example you can add it to your smoothies, breakfast cereals (i.e. oats) or to your baking (i.e. muffins and breads). Also **flaxseeds** taste good when you mix them with your pancakes/waffles recipes.



A **kiwi** a day can help you soften your stool. You can add a kiwi everyday to your regular eating habits or use it in your recipes (i.e. juices, jell-o, salads). Here is an example:

1 cup of your nectar of choice + 4 skinned and chopped **kiwis** + 6 ounces of vanilla yogurt + 1 cup of ice. Blend everything together until smooth and enjoy!

Add **chia seeds** to your yogurt!!!

Chia seeds are a great source of fiber, but not only that, these seeds contain omega-3 fatty acids and have some anti-carcinogenic effects. You can add these delicious seeds to your yogurt or try it in "overnight oatmeal". Here is the recipe:

Combine in a ½ pint jar ¼ cup rolled oats, ¼ cup greek yogurt, 2 teaspoons **chia seeds**, 2 teaspoons of honey, 1 teaspoon ground cinnamon and ¼ cup of fresh blueberries. Mix everything well and put on the lid. Let it sit in your refrigerator overnight.



Updated July 2016

Appendix D - Handout on Bone Health

BONE HEALTH AND PARKINSON'S DISEASE

Increased age, low body weight, excessive alcohol consumption, smoking, limited sunlight exposure and low intake of calcium and vitamin D, can weaken our bones. When bones weaken they become porous, this condition is called **osteoporosis**. If our bones are weak, they might break from a minor fall or just from bumping into furniture.



People with PD...

- Face an increased risk of falls due to poor balance.
- Are at an increased risk of osteoporosis due to low levels of vitamin D, hormonal changes, age, and intake of antidepressants.
- Have symptoms like dry mouth (maybe due to medication), depression, apathy and swallowing difficulties which can decrease your appetite and the types and quantities of food and drink intake.
- May have fatigue that decreases your activity level and willingness to exercise.
- May have tremors that decrease the ability to self-feed or may make you feel embarrassed to eat in public.



Ways to increase Bone Health

Diet



Get enough **Calcium!** If you are 50 years old or older you need 1200mg of calcium a day, this can be found in 4 glasses of fortified milk or 6 ounces of cheese.

Some sources of **calcium** are calcium-fortified cereals, calcium-fortified orange juice, calcium-fortified milk substitutes (i.e. Almond or soy milk).



Vitamin D is also important for bone health and we need 0.01 mg a day. Some sources of vitamin D that you can include in your diet are: fortified food, fish liver oils, liver, and eggs. We need 10 micrograms of vitamin D a day.

Magnesium helps to strengthen your bones, relax your muscles, and in the activation of vitamin D. The recommended intake of magnesium is 350 mg a day. We can find this mineral in dark green vegetables (kale, collards, spinach, chard, Brussel sprouts, cabbage, and lettuce), dried beans, peas, broccoli, and whole grains.

BONE HEALTH AND PARKINSON'S DISEASE



Be attentive...

If you are taking Levodopa be attentive to dairy, fish, and meat, they are high in protein and can interfere with your medication. Try to take your medication at least one hour before or two hours after meals to optimize absorption.



Exercise

Exercising regularly helps your bones to be strong. Weight bearing activities are ideal! The goal is at least 150 minutes per week of moderate exercise.



Supplements

If you think you might need a supplement of Calcium, Vitamin D, or Magnesium ask your doctor or registered dietitian. They will assess if you need it, guide you in the amount, and how to take the supplement.



Sunlight

Sunlight helps activate Vitamin D, be sure to get a few minutes of sunlight every day on your face, hands and arms. If it's cloudy you might need more time and some windows may block the "good" sunlight. The ideal is that you can take a "sun bath" outdoors for 10 to 15 minutes a day making it a total of one hour per week.

I have Parkinson's and I'm beating it!


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For more information please contact the Parkinson's Program at 785-323-3899

Sources: National Osteoporosis Foundation, Parkinson's Disease Foundation, Age and Ageing, American Parkinson's Disease Association, National Library of Medicine.
Updated July 2016

Appendix E - Handout on Nutritional Shakes



Nutritious shakes

SHAKES MENU

ADDING FLAVOR TO YOUR CURRENT SHAKE

TO SPICE THINGS UP HERE ARE SOME THINGS
YOU CAN ADD TO IT. THE AMOUNT ADDED
WILL DEPEND ON LIKING.

NUTS BUTTER (PEANUT OR ALMOND)

NUTELLA

EGGNOG

FLAVORED YOGURT

FROZEN SOFT FRUITS (BANANA, BERRIES,
CANNED PEACHES)

FRUIT JUICE

TROPICAL BANANA SHAKE

2 RIPE BANANAS

1/2 CUP CANNED PEACHES

1 CUP MANGO OR GUAVA

NECTAR

1/2 CUP PASTEURIZED MILK

3 ICE CUBES

BLEND ALL TOGETHER



BANANA FLIP

2 BANANAS

1 PACKAGE CARNATION
INSTANT BREAKFAST, VANILLA

FLAVOR

1 CUP MILK

2 TABLESPOONS ORANGE

JUICE CONCENTRATE

BLEND ALL TOGETHER



TUTTI-FRUITY SHAKE

1/2 CUP VANILLA ICE CREAM

1 PACKAGE INSTANT BREAKFAST,
VANILLA FLAVOR

1/2 CUP CANNED FRUIT

1/2 CUP HALF AND HALF CREAM

BLEND ALL TOGETHER

LEMON LIFT

1 CUP LEMON YOGURT
1 CUP MILK
1 BANANA
1 TEASPOON VANILLA EXTRACT
BLEND ALL TOGETHER

PEACHY CINNAMON SHAKE

1 CUP CANNED PEACHES
1/2 CUP PLAIN YOGURT
1/2 CUP MILK
1 TABLESPOON HONEY
PINCH OF CINNAMON
3 ICE CUBES
BLEND ALL TOGETHER

BURSTING BERRY SMOOTHIE

1/2 CUP UNCOOKED OATS
1 BANANA
8 STRAWBERRIES, FRESH OR
FROZEN
1/2 CUP FROZEN BLUEBERRIES
1/2 CUP FROZEN RASPBERRIES
1 CUP MILK
BLEND ALL TOGETHER



PB&B SHAKE

1/2 CUP PLAIN YOGURT
1 BANANA
2 TABLESPOONS PEANUT
BUTTER
1/2 CUP MILK
BLEND ALL TOGETHER

SHERBET SHAKE

1 CUP ANY FLAVOR SHERBET
1/2 CUP MILK
BLEND ALL TOGETHER



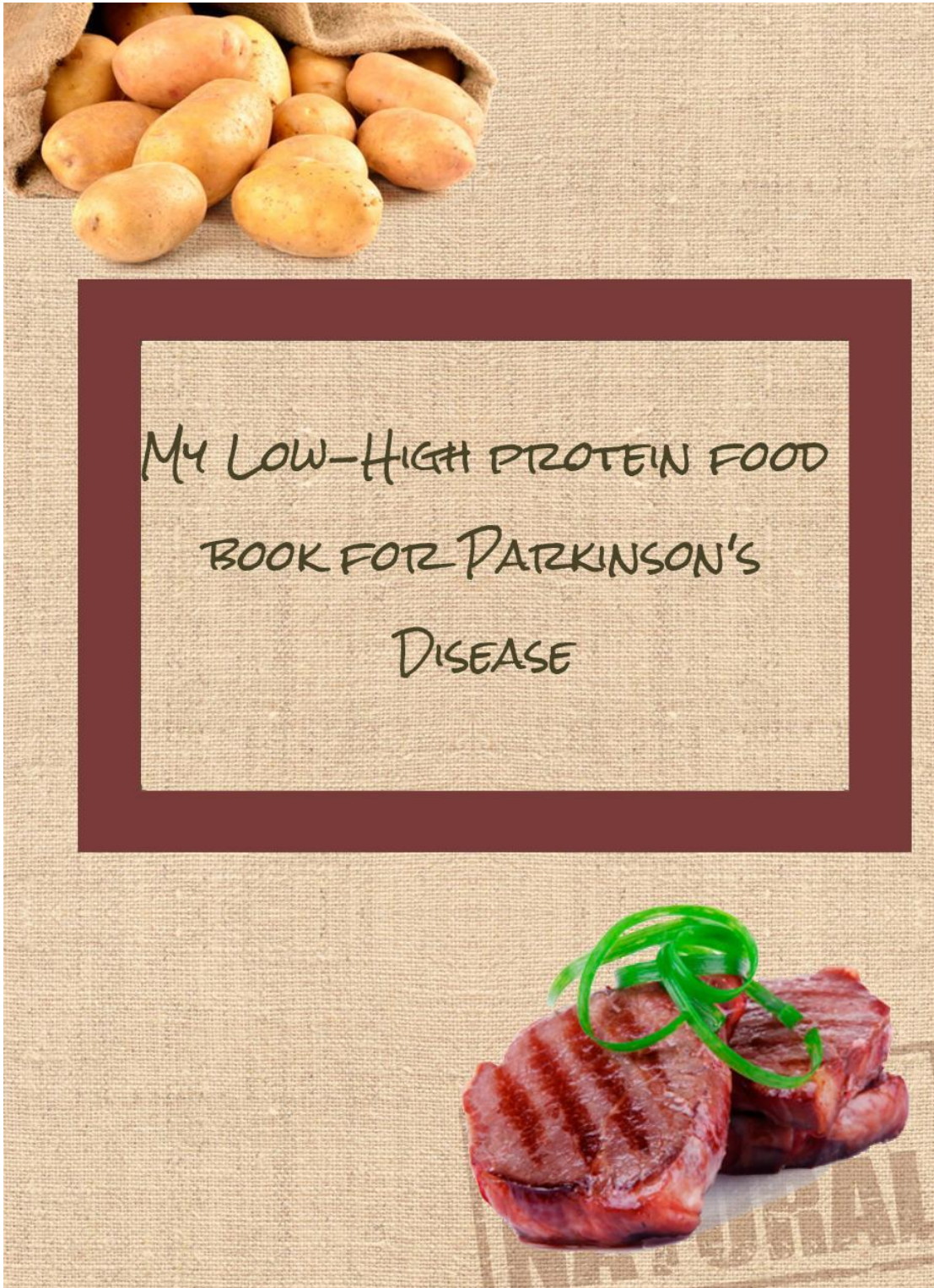
CARROT SHAKE

CARROT SHAKE
1 CUP CARROT JUICE
3/4 CUP PLAIN YOGURT
1 BANANA
1 TEASPOON VANILLA EXTRACT
3 ICE CUBES
BLEND ALL TOGETHER


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SOURCE: [HTTPS://WWW.UCSFHEALTH.ORG/EDUCATION/ILD_NUTRITION_MANUAL/HIGH-CALORIE_SHAKES_AND_SMOOTHIES/](https://www.ucsfhealth.org/education/ild_nutrition_manual/high-calorie_shakes_and_smoothies/)

Appendix F - Booklet on Protein in Food





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Parkinson's Program

Timing of medications is very important. Sometimes medications can be taken with food and other times you have to be more careful.



VEGETABLES



BEEF

The amount of protein in foods may interfere with the absorption of your medications, decreasing its effectiveness. For example in Parkinson's disease, protein may interfere with the absorption of your Levodopa and Carbidopa and also decrease the transport of your medication to your brain.

With this handout you can learn which foods are low and high in protein. That way you can mix them better with your medications.

Proteins help our bodies in tissue maintenance and repair. They are the building blocks for muscles, bone matrix, and connective tissue. Proteins help in the transport of nutrients inside our cells and also help our immune cells. You can find protein in animal products as well as plant foods.

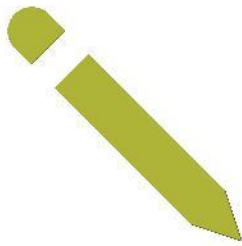
Taking your Parkinson's medications with high protein foods could decrease your "on-time" because the protein may interfere with the absorption of your medication making it work slower, or lessened. It is recommended that you take your medication one hour before or after your high protein meals.

Animal products like beef, pork, chicken, turkey, duck, eggs, milk, yogurt, cheese and fish are high in protein.

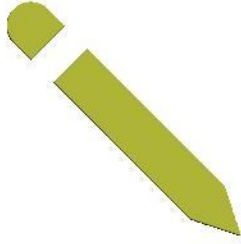
Some plant-based food like beans, peas, lentils, soy and soy products, nuts, almond butter, peanut butter and sunflower seeds are also high in protein.

However, there are some plant-based foods that are low in protein for example bread, tortillas, oatmeal, grits, cereals, pasta, noodles, rice, and rice milk.

There is no conclusive evidence that high/low protein intake with Carbidopa and Levadopa will affect your medication. However, it is important for you to keep track of your "on/off time" when you take your medication and what you eat.



You can use this space to take notes of what you eat and how it affects your "on and off time".



You can use this space to take notes of what you eat and how it affects your "on and off time"



Foods Low in Protein

Unsweetened rice milk (8 fl oz),
0.7 gm protein

Corn tortillas, 1 unit (24gm),
1.4 gm protein

Bread sticks, 1 stick 7-5/8" (10gm),
1.2 gm protein

Corn Pasta, gluten-free, 1 cup (140 gm),
3.7 gm protein

Foods Low in Protein

Bread, white, 1 slice (1oz), 2.6 gm protein

Corn tortilla chips (1 oz), 2 gm protein

Quaker Instant Oatmeal (apples and cinnamon, dry),
1 packet (43g), 3.7 gm protein

Quaker, corn grits (instant, dry), 1 packet (29g),
2.1 gm protein

Cheerios, 1 cup (28g), 3.4 gm protein

Whole-wheat pasta, 1 cup (151 g), 9 gm protein

Egg Noodles, 1 cup (160 g), 7.3 gm protein

White rice, 1 cup (158 g),
4.3 gm protein



Foods Low in Protein

Potatoes, 1 cup diced (150 g),
3.1 gm protein

Rice cakes, brown rice, 2 cakes (18 g),
1.5 gm protein

Tomatoes, 1 cup chopped (180 g),
1.6 gm protein

Hash brown, 1 patty oval (29 g),
3.4 gm protein



Foods High in Protein

*Ground beef 70% lean meat (3 oz),
20.3 gm protein*

*Ground beef 93% lean meat (3 oz),
23 gm protein*

*Beef steak , 1 steak (6 oz),
62.1 gm protein*

*T-bone steak, 1 steak (8 oz),
57 gm protein*

*Top sirloin steak, 1 steak (8 oz),
65,1 gm protein*



Foods High in Protein



Egg, 1 large, 6.3 gm protein

Chicken tenders, 1 strip, 5.8 gm protein

Chicken patty, 1 patty, 8.9 gm protein

*Chicken meat and skin, 1/2 cup sliced,
19.1 gm protein*

*Duck meat and skin 1/2 cup slice,
13.3 gm protein*

Fish sticks, 1 piece, 6.3 gm protein

*Fish, Mackerel, Mahi-Mahi, Tilapia, Salmon, 1 fillet
(3 oz), 22.5 gm protein*

Canned tuna, 1 can (165 g), 32.1 gm protein



Foods High in Protein

*Pork Ham (honey, smoked) (2 oz),
9.9 gm protein*

*Pork chops (bone-in), 1 chop (8 oz),
54.7 gm protein*

*Turkey breast prepackaged, 1 slice,
2.4 gm protein*

Ground turkey, 1 patty, 22.4 gm protein





Foods High in Protein

Turkey sausage, 1 serving, 10.7 gm protein

Turkey ham, 1 oz, 4.6 gm protein

*Turkey, pork, and beef sausage (3 oz),
6.8 gm protein*

Turkey meat and skin (3 oz), 24.3 gm protein

Cheddar cheese (1 oz), 6.5 gm protein

Colby cheese (1 oz), 6.7 gm protein

Cheese queso fresco, 1/2 cup, 11 gm protein

Foods High in Protein

Mozzarella cheese (1 oz), 6.3 gm protein

Provolone cheese, 1 slice, 7.2 gm protein

Ricotta cheese, 1/2 cup, 14 gm protein

Macaroni and cheese, box mix, 1/2 cup,
6.3 gm protein

Fat-free or skim milk, 1 cup,
8.8 gm protein

2% Milk, 1 cup, 9.7 gm protein

Yogurt, per container, 5 to 11 gm protein



Be careful, not all plant foods are low in protein!

Plant Foods High in Protein

*Soy-based chocolate milk (8 fl oz,)
10 gm protein*

Baked beans, 1/2 cup, 7 gm protein

Peas, 1/2 cup, 4.3 gm protein

Lentils, 1/2 cup, 8.8 gm protein

Soybeans, 1/2 cup, 20.1 gm protein

Fried tofu (1 oz), 5.3 gm protein



Plant Foods High in Protein

Almond butter, 1 tbsp, 3.4 gm protein



Peanut Butter, 1 tbsp, 3.5 gm protein

Almonds (1 oz), 6 gm protein

Peanuts (1 oz), 7.3 gm protein



Walnuts (1 oz), 4.3 gm protein


Pecans (1 oz), 2.6 gm protein

Sunflower seed (1 oz), 5.8 gm protein

Chia seeds (1 oz), 4.7 gm protein

Flaxseed, 1 tbsp, 1.3gm protein





Meadowlark Hills
Parkinson's Program

For more information please contact the Parkinson's Program
at 785-323-3899

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Created July 2016 by Priscilla Brenes MPH

Appendix G - Survey of Educational Materials at MLH

Survey Nutrition Education Materials Meadowlark Hills

Would you please help us evaluate the nutrition education handouts? It will take you 10 to 15 minutes to answer the questions. Your participation is completely confidential and voluntary, and you may skip answering questions if you wish. You will have no penalty if you decide not to participate. We greatly value your opinions, and appreciate your responses – thank you!

Please tell us which handout you have received

- Dehydration
- Constipation
- Constipation recipes
- Bone Health
- Nutritional shakes (only staff members)
- My low-high protein food booklet for PD

How important is the information in the handouts you received?

- Not important
- Neutral
- Important

What is your opinion about information in the nutrition handouts?

	Yes, very much	Somewhat	No
It is visually appealing	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The information is easy to understand	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The color scheme was adequate	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The information was easy to read	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please tell us about yourself

My age is _____

I am

- Female
- Male

Please choose your reaction to the next statements regarding the nutrition handouts

	Strongly disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree	I don't know
The content is appropriate for my daily living	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The themes in the handouts are useful to me	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The recipes about constipation are useful to me	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
They provided me with new information	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The information is practical	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The information focuses on behaviors to include rather than those to exclude	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I can relate to the examples and information provided	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The information motivates me to make changes	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The information gave me new ideas on how to improve my health	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Do you have suggestions to make the nutrition handouts more meaningful?

Do you have other topics that would like to see in nutrition handouts? If so, please describe

Again, we greatly value your opinions, and appreciate your responses - Thank you!