

Nursing Science III Scholarly Reflective Journal

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Nursing Science III

Scholarly Reflective Journaling

Intention of the Scholarly Reflective Journal

The intention of this journal is to allow you to read [or listen] and contemplate the meaning of the information. The nexus of transformation is allowing information to become part of you (Notarnicola et al., 2017). Reflecting on information you have read, utilizing an informed moral compass in its active retrieval (Brown, Roedinger III, & McDaniel, 2014), allows you to engage in the very human need of sensemaking (Madsbjerg, 2017). The heart of being human is sensemaking and social connection. **This is what it means to be fully human.**

Utilization of the DEAL model (Ash & Clayton, 2009) [Appendix A] of scholarly reflection is key to make the connections that provide the seeds of transformation to germinate.

Describe: Be specific in your description of the events that have stood out in your reflection. This provides the reader with the context and creates that empathy with being alongside of the author in experiencing your story. The details make a difference in not only the telling of the story but of the experience by the reader.

Examine: Here is where you make the connections with what you are reading and in nursing science, how this information would impact your current practice, or the connections that you are making in any of the other courses. This is where the right hemisphere of your brain makes the connections with the data points in the linear oriented left hemisphere. This is where you let your mind take the information on a journey of discovery. Take your thoughts out for a test drive and see where it leads you. There are no right nor wrong answers here, only connections. Image how Carper's Ways of Knowing (Carper, 1978) can provide a lens from which to view the experience. Each lens can provide a diverse viewpoint from which to view the

phenomena. This is the area where you can examine and play with the “why” of what you do and how it can influence your practice (Sinek, 2009).

Articulate Learning: Here is where you expound on where your thoughts have taken you in your exploration of the experienced you have described, and imagine what this would look like if you implemented these ideas in your practice. These thoughtful ideas applied to informed moral practice is called nursing praxis (Watson, 2017).

This template has been constructed so that each scholar can open this document, save it as their own, and not have to recreate the template. I encourage you to use the navigation pane to the left so you can zero in on the weekly heading that you wish to edit and not have to scroll down endlessly to arrive at your destination. The expectation is that you will utilize this template and not create your own.

Required Listening or Reading Texts: Perlmutter, D. (2015). **Brain Maker: The Power of Gut Microbes to Heal and Protect Your Brain-for Life.** Amazon or Audible. . Total

Length: **9 hrs. 5 min.**

Week 1 Reflections – Read/Listen: Introduction: Bug Alert

The Guided Reflection will appear at the end of every chapter or session depending on the format you have chosen. You will find that these exercises give meaning and technique to the aspects of the science. Remember to utilize the **DEAL** framework in constructing your reflections.

Writing Prompt: Reflect on the premise of this book. Think about how the information and approach to this content would apply to learning in general and nursing science in particular.

Describe: Reading the introduction to *Brain Maker* I'm excited to learn the connection our gut has with our brain. I know there is a connection between one body system and another. In fact, my wife for a while was having sore throats, wheezing, and nocturnal coughing. She knew she had something wrong with her lungs due to the wheezing and coughing. The doctor told her she had asthma and prescribed her an inhaler that helped but didn't take away the problem. It wasn't until she was referred to an ENT for the sore throat that she found out she had GERD. The ENT told my wife that her respiratory symptoms were being caused by reflux, it was her gut! She changed her diet and some other habits, and the respiratory problems went away. I'm excited to learn the connection our gut, diet, flora, and fauna have on our neurological system.

Examine: I like the idea that the microbiome that lives within us should be considered another organ in itself. I'm amazed that it can influence gene expression. "Even the expression of our genes in each and every one of our cells is influenced to some degree by these bacteria". (Perlmutter & Loberg, p.8, 2015). I'm looking forward to seeing the guidelines offered to maintain a healthy gut and wondering if I practice any of them? It's making me realize the importance of a healthy diet not only for myself but my patients too. I'm thinking about all of the patients we have on antacids, acid blocking medications, stool softeners, etc. How are these medications disrupting the fine balance between having a healthy gut and a sick one? How many gut surgeries have I seen go bad? Wouldn't it be nice to avoid them all together by just following the advice Dr. Perlmutter gives us? I'm thinking about our diverse patient population and how food is culture. Not only what they eat, but how they prepare it, when they eat, how much they eat. How hard will it be to convince our patients about changing their diets?

Articulate Learning: I learned the important role our microbiome plays in our gut and how it can affect not only neurological disorders but everything from asthma and high blood pressure to diabetes. This information is based on scholarly clinical and laboratory studies, results shared by doctors around the world. I learned that maintaining a healthy gut microbiome can help any degenerative or inflammatory condition. I learned that my mother was absolutely correct when she said you are what you eat. Food has a big impact on our health, "without a doubt, the most significant factor related to the health and diversity of the microbiome is the food we eat." (Perlmutter & Loberg, p.12, 2015). Having a healthy microbiome is having a healthy human being.

Week 2 Reflections – Read/Listen: [Brain Maker: The Power of Gut Microbes to Heal and Protect Your Brain-for Life](#). Gut Check

Writing Prompt Reflection: Take the Gut Check and write about your results. Your writing is strictly confidential for the faculty only. Does this survey offer any insight into current or past health issues? Please be descriptive with examples.

Describe: I'm not a novice when it comes to matters of the gut and digestion. My wife and I have been diagnosed with GERD and at one point I were taking acid blocking medication. It was then that I decided to change my diet and most importantly my dietary habits, namely eating late at night before going to bed. I've studied different theories on GERD and different diets on how to treat it. I have taken care of patients that have been on Omeprazole for 20 years, I never believed that was the answer. Two of my favorite doctors/authors are Dr. Jamie Kaufman and her book *Dropping Acid* and Dr. Joel Fuhrman and his book *The End of Dieting*. Their insight and advise has helped me overcome my problems with GERD. Neither one of them though discussed the relationship between our microbiome and inflammation, sickness, and our health. Taking the Gut Check helped illuminate some of the risk factors I have and how to deal with them if I can. Finding the answers to diminish those risk factors will be key for me, as I read the book and contribute to my journal.



Examine: The pyramid above is what I try to follow, it's the Nutritarian diet by Dr. Fuhrman. A lot of what he preaches is similar to what Dr. Perlmutter is talking about in this book. Taking the Gut Check was interesting in that a lot of the questions surprised me. What does ear infections, having my tonsils removed, and being born via C-section have to do with my gut health? I can only imagine, I'm glad to report that I had a good score though. I only answered yes to 4 of the 20 questions. This I hope will indicate that I may have a healthy microbiome. I know that one test can't give me all the answers, but it's good start to my journey into the book and my understanding of my gut health. I know that keeping my gut healthy will help lower my risk of not only brain related diseases but other inflammatory illness as well. We all have risk factors; some we can't change but most we can.

Articulate Learning: I've been interested in testing my gut for things like plastic and heavy metals. I've heard various ideas on the amount of plastic each person consumes on a yearly basis. I learned that right now there isn't one particular microbial test kit that can identify

my microbiome as either healthy or not. Some of these test kits are very expensive as well, so I'm glad to know this information. "Test kits are a tricky terrain; it's still too early to know whether certain patterns being studied in the gut microbiome that are related to illness x are part of the cause of that conditions." (Perlmutter & Loberg, p. 14, 20115). I learned to have a new respect for the bacteria that inhabit my gut and the role they play in my overall health.

Week 3 Reflections – Read/Listen: [Brain Maker: The Power of Gut Microbes to Heal and Protect Your Brain-for Life. Part 1: Welcome Aboard](#)

Writing prompt reflection: What is your current understanding of the role of your microbiome in regulating your overall health? Does this new information validate or challenge your current understanding of the link between chronic conditions such as diabetes, autoimmune disorders, depression and neurological conditions and diet? Be descriptive in your examples.

Describe: About 4 years ago I started having GERD symptoms and went to the doctor. They did an endoscopy and told me I had GERD and I had to start taking acid blocking medications. They talked about dietary changes as well but nothing really profound. Not to long after that I saw a show on PBS hosted by Dr. Joel Fuhrman and his Nutritarian diet. I was fascinated and really had never seen a presentation of diet and gut information quite like it in my life. Not only was his diet healthy but it reduced heart disease, diabetes, auto immune disease, etc. His diet flipped the USDA's food pyramid and seemed simple enough to follow. I never believed in those diets that want you to eat only carbs or eat only protein. His diet was balanced with mostly vegetables, fruits, healthy nuts, mushrooms, beans, and small amounts of fish and

chicken. This was when I first heard of our microbiome and the link our gut has with our immune system. He had several stories of patients with MS, RA, and Lupus to name a few that improved their health by changing their diet and microbiome. This was when I realized the link between diet, gut microbiome, and our immune system.

Examine: I didn't realize the connection between our gut's microbiome and our mental health until reading *Brain Maker*. It makes sense when you think of the connection our brain makes with our gut via the Vagus nerve. The gut-brain's biology is fascinating, "an estimated 80-90 percent of the amount of serotonin in your body is manufactured by the nerve cells in your gut! In fact, your gut's brain makes more serotonin-the master happiness molecule-than the brain in your head does." (Perlmutter, p.27, 2015). This was a big aha moment for me as I start to see the relationship our gut has with our brain. Having studied complex adaptive systems and inflammation one can see how this relationship can show up in a host of autoimmune disease. It makes sense that if we eat something that's toxic and this triggers an immune response in our gut causing an inflammatory process; that inflammation over time can turn into MS, Alzheimer's, or some other chronic illness. I like how the author shows the difference between two fictional children one born in the U.S. and the other in Ikaria to demonstrate how diet and other factors affect our microbiome and our health. He does a good job wrapping up the chapter showing the differences between vaginally delivered babies vs cesarean, mother's milk vs formulae.

Articulate Learning: I learned the connection between our gut microbiome and our immune system. I learned that 90% of the bacteria in our colon are either Firmicutes or Bacteroidetes. We can think of these two as having a ratio that in effect can determine health and risk for illness. In fact, we've learned that, "higher levels of Firmicutes (fat-loving bacteria)

actually turn on genes that increase the risk of obesity, diabetes, and even cardiovascular disease.” (Perlmutter, p.31, 2015). This is another huge aha moment for me, knowing that by altering our microbiome we alter our very DNA. Lastly, I learned about the three forces that conspire against us in obtaining good gut health. Stress, lack of nutrients that support healthy and diverse tribes of bacteria, and exposure to substances that kill or alter the composition of our bacterial colonies.

Week 4 Reflections – Read/Listen: [Brain Maker: The Power of Gut Microbes to Heal and Protect Your Brain-for Life](#). Chapter 2: Belly & Brain on Fire

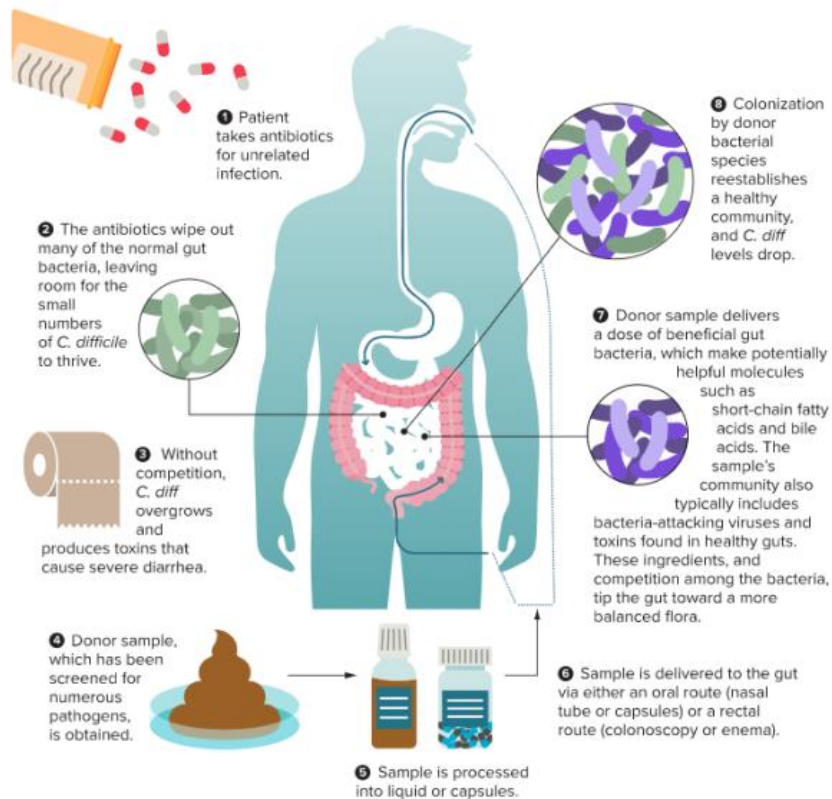
Writing prompt: How does this new information on the science of inflammation validate or challenge your understanding of chronic conditions? What role does your microbiome play in mitigating the inflammatory processes? What role does leaky gut play in the inflammatory cascade? Please give examples.

Describe: I’ll never forget the words of a family member on visiting his father in the hospital. His father had Alzheimer’s disease and was hospitalized for a horrible aspiration pneumonia. His son visited him for a short while and upon leaving he said, “I guess this is what we have to look forward to when we get older.” I wanted to reach out to him and tell him that Alzheimer’s disease was not a normal progression of aging. I don’t blame him for thinking that however as the number of cases in our country is skyrocketing with some 6 million cases. I’ve always heard that to prevent dementia one should stay sharp, read books, keep the brain active. I never heard of reducing sugar intake or adding more healthy fat to your diet could reduce your

risk for dementia. Like most chronic illness, it's better to reduce your risks instead of waiting for a pharmaceutical company to develop the magic bullet for Alzheimer's.

Examine: It's clear that inflammation plays a huge role in the manifestation of many diseases. We can measure markers of inflammation in the body and see how they are elevated in everything from asthma to arthritis. The brain is no different than the lungs if it becomes inflamed ensuing disease will manifest. One way to keep inflammation in check is maintaining a healthy blood sugar level. "The relationship between poor blood sugar control and Alzheimer's disease in particular is so strong that researchers are calling Alzheimer's disease type 3 diabetes. This was a big aha moment for me along with the relationship between herbs and supplements known to control blood sugar do it through the microbiome. A new topic for me was the leaky gut and how having increased permeability can lead to widespread inflammation in the body. Not only that but, "the inflammation brought on by a loss of gut integrity can lead to leaky brains."(Perlmutter, p.54, 2015). At the end of the chapter we meet Carlos a man suffering from MS. He is given a treatment, a probiotic enema which afterward he is able to walk more comfortably. This reminded me of a patient I had years ago that was suffering from C-Diff. That patient received an enema as well, only it was healthy stool. The patient's diarrhea diminished greatly, and he made a full recovery. How, exactly, the transplanted material helps is currently unknown. "It could be that the newly introduced bacteria outcompete the C. difficile organisms, or it could be that bacterial by-products in the stool help restore balance to the gut. Other researchers are looking at its potential role in autoimmune diseases, senile dementia, IBD and complex inflammation driven illnesses." (Ash, 2012).

How a fecal transplant can treat recurring *C. diff* infections



SOURCE: REPORTING BY K. POWELL

KNOWABLE MAGAZINE

Articulate Learning: I learned that brain healing begins in the gut. We really need to pay attention to what we feed our microbiome and ensure the integrity of our gut lining. Inflammation definitely plays a role in our neurological health and to help control that we need a diverse and healthy level of bacteria in our gut. Control of blood sugar, healthy fats, exercise, and proper sleep all play a role in helping reduce inflammation. I learned that changes in the gut's environment can undermine the brain's ability to protect itself against potentially toxic invaders. In simplest terms, "the health and variety of your belly's bugs directly depends on the foods that you eat." (Perlmutter, p.60, 2015). Foods that are high in fiber and low in refined sugars are most beneficial to reducing inflammation and leaky gut.

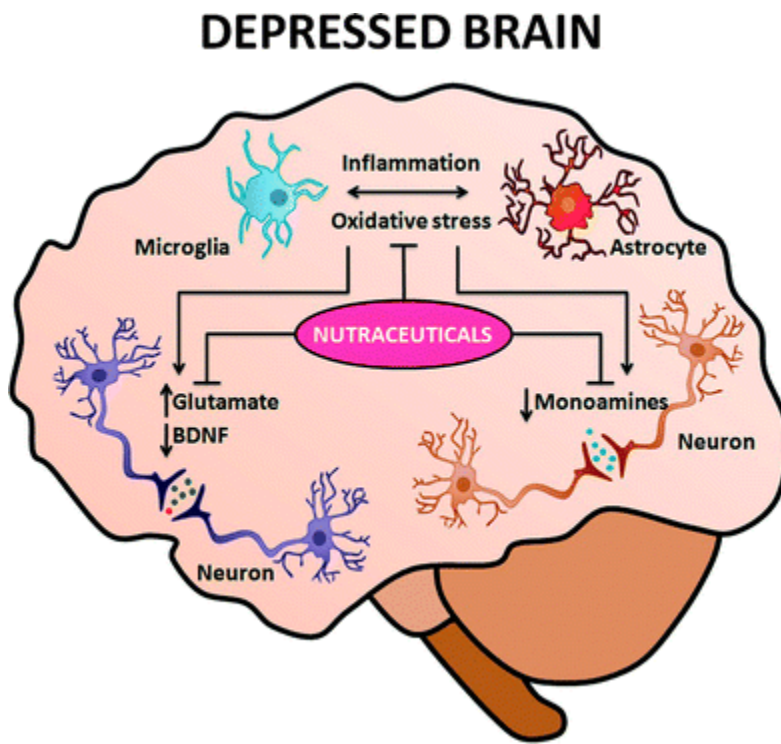
Week 5 Reflections – Listen/Read: **Brain Maker: The Power of Gut Microbes to Heal and Protect Your Brain-for Life. Chapter 3: Is Your Belly Depressed?**

Writing Prompt: What is your current understanding of the causes of depression and mood disorders? How does the concept of self-care fit with this new information regarding your microbiome? How might sleep patterns be determined by your microbiome? Be descriptive in your examples.

Describe: My Aunt who is very open recently told me that she was diagnosed with depression about 10 years ago. She was prescribed Wellbutrin and took it for 8 years, she told me she thought it helped a little. I was surprised and glad my Aunt confided in me about her depression. It made me wonder what she had to be depressed about. She had a wonderful husband and lived comfortably in San Francisco. My understanding of depression was that people lacked certain neurotransmitters like serotonin. Many of my patients, especially women take antidepressant medications. Before reading *Brain Maker* I would have never imagined the depressed brain was an inflamed brain. I also would have never guessed there was a connection between depression and the gut. My Aunt just happened to also be on omeprazole for her GERD, a drug I knew well as I too had taken it before. It made me wonder, how does shutting down acid production in the gut affect the microbiome? I was ready to start exploring this chapter and discovering the answers for myself.

Examine: What researchers are learning now and have actually been studying for many years is that depression is caused by inflammation. We can actually measure pro inflammatory markers such as CRP and LPS. “Researchers documented a significant increase in the level of

antibodies against LPS in the blood of individuals with major depression.” (Perlmutter, 2015). In the U.S. we consume a diet high in sugar and carbs which essentially can be called an inflammatory diet. Altering the gut’s bacteria can cause an alteration in the brain, that is to treat mental illness we need to look at the health of our gut’s microbiome. The link between the brain and gut is a powerful one and can’t be ignored as a significant factor in how we look at mental health conditions. Many studies have shown that people with depression have higher levels of inflammation in the gut, higher levels of systemic inflammation, higher levels of cortisol, and increased permeability of the gut. Sleep is another interesting factor that our gut bacteria can help out with. Disruption of gut bacteria can have significant negative effects on sleep and circadian rhythms. This has to do with the gut’s control of cortisol levels and cytokines that induce REM sleep. So, another benefit of a healthy gut is a good night’s sleep.



Articulate Learning: I learned that making changes in our diet, adding probiotics, regular sleep, and exercise can do wonders for our mental health conditions. That there is a link between an inflamed belly and an inflamed diseased brain. We even see this link in children who suffer from ADHD. We are starting to realize that there is a link between food allergies and ADHD. Children that were formula feed vs breastfeed. I reinforced what I learned from the previous chapter on the gut's microbiome influence on neurotransmitters. I also learned about another neurotransmitter called GABA that seems to be deficient in the brains of children that suffer from ADHD. Levels of GABA also boils down to our gut and, "the conversion demands both zinc and vitamin B6 two ingredients that must come from food and be processed in the gut." (Perlmutter, 2015).

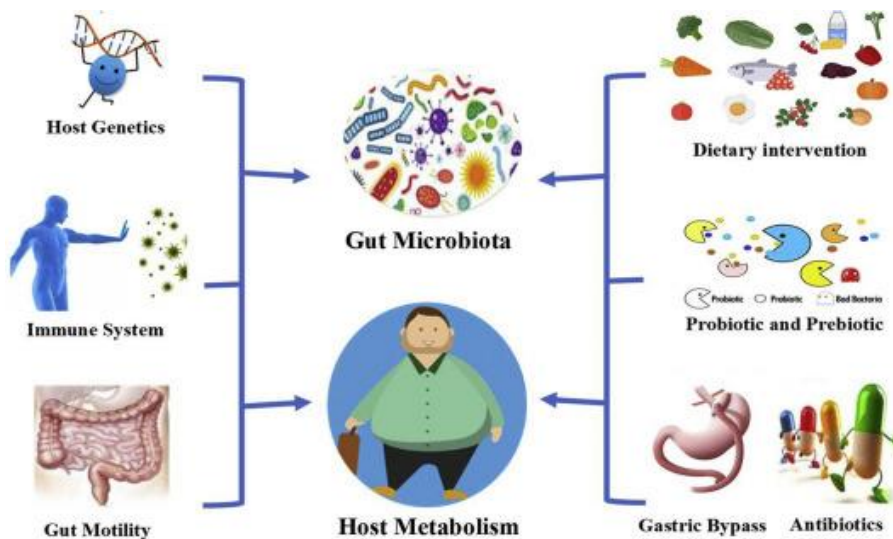
Week 6 Reflections – Read: [Brain Maker: The Power of Gut Microbes to Heal and Protect Your Brain-for Life. Chapter 4: Your Intestinal Flora & Obesity](#)

Writing Prompt: What role does inflammation play in the development of obesity and diabetes? How can appetite be influenced by your microbiome and predispose a person toward obesity? Be descriptive in your examples.

Describe: I have a friend who has battled obesity his whole life. I've known him since high school and just recently he confided in me that he is a type II diabetic now as well. He told me his doctor told him to cut back on the pasta. It made me wonder what other dietary changes his doctor recommends. Then I began to wonder, is it really about cutting things out of our diet or should we make a wholesale change? As a nurse I've seen the dangers of obesity and diabetes

have on our bodies. Heart disease, kidney disease, cancer, just to name a few of the illness linked with DM and obesity. I recall years ago a doctor telling me obesity cuts 15 to 20 years off your life. I'm curious to find out the role our microbiome has on obesity and DM. I've already seen how the bugs in our gut directly communicate with our nervous system, aide in digestion, help regulate neurotransmitters, and even work directly on our DNA.

Examine: Our microbiome, “influence the way we store fat, balance levels of glucose in the blood, express genes that relate to metabolism, and respond to hormones that make us feel hungry or full, gut bacteria are the masters of ceremony.” (Perlmutter, 2015). They even assist in metabolism which has a direct impact on calories burned and our weight. So yes, having to many of the “wrong” bacteria can make you obese. I found it fascinating that the weight loss of gastric bypass has more to do with the gut’s bugs than the surgery itself. Patients have to change their diet after surgery which promotes a healthier and more diverse microbiome which in turn leads to weight loss and even better control of blood sugar. This is the goal after all, weight loss, increased metabolic rate, and control of our blood sugar.



Articulate Learning: I learned that there is a connection between our gut microbiome and obesity. The western diet high in fat and sugar and low in fiber alter our microbiome. This in turn can lead to lower metabolism and even a leaky gut which promotes inflammation. Fructose is another villain in the battle of obesity and DM. It feeds the pathogenic gut bacteria which leads to an unhealthy metabolism. I was shocked to see that exercise also alters the colonies in our gut to one that promotes weight loss. So not only does exercise promote weight loss, the loss is sustained even when we're not exercising due to a healthier microbiome. The chief lesson of this chapter is that by nourishing our microbiome we can resist DM, obesity, and other inflammatory disease.

Week 7 Reflections-Read/Listen: [Brain Maker: The Power of Gut Microbes to Heal and Protect Your Brain-for Life. Part 2: Punched in the Gut. Chapter 6](#)

Writing prompt: What role does fructose and gluten play in the inflammatory cascade? What role does gliadin play in the formation of leaky gut? Be descriptive in your examples.

Describe: I was born vaginally but was only breast fed for a few weeks and after that bottle fed. I've had problems with my gut namely constipation and GERD. By changing my diet I've for the most part taken care of those problems. I'm encouraged by *Brain Maker* because it states that, "diet has the prominent role in shaping gut microbiota, dietary choices are by far and away the most crucial factor in maintaining a healthy microbiome." (Perlmutter, 2015). I know fructose is bad for us and one of the ingredients blamed for the rise of DM.

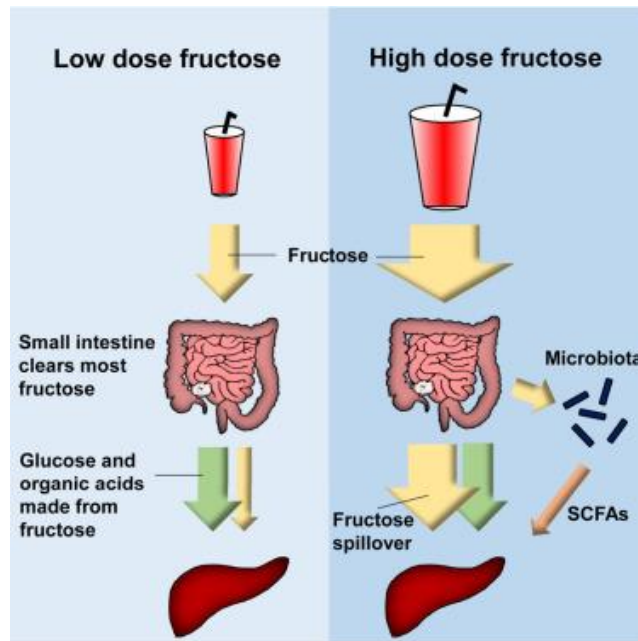
Gluten I've heard causes lots of allergic reactions and can lead to leaky gut. I'm curious to see how they both affect the inflammatory cascade and leaky gut.

Examine: Fructose has nothing to do with fruit, it's actually developed from corn syrup. The effects on the human body are numerous. Impaired glucose tolerance and insulin resistance to name a few. It can lead to, "increased uric acid a consequence linked to high blood pressure, gout, and kidney stones." (Perlmutter, 2015). It results in other inflammatory disease such as DM and obesity. Fructose also ends up being fermented by our gut's bugs and this in turn leads to the formation of gases such as methane which build up and cause bloating and abdominal discomfort. Fructose also promotes bacteria in the gut to leave and enter our bloodstream and damage our liver.

Gluten has been linked to ADHD, depression, memory loss, and ALS. By eliminating gluten from our diets, we see a decrease in the inflammatory process. Gliadin is a component of gluten which the body develops antibodies against in sensitive people. This in turn leads to inflammatory chemicals being released by our own immune system that end up assaulting our mind leading to neurological disorders.

Articulate Learning: I learned the link between gluten and fructose and the inflammatory cycle they promote in our body. "Gluten increases inflammation and gut permeability and also leads to a breakdown of the blood brain barrier itself, paving the way for the production of yet more brain crushing inflammatory chemicals." (Perlmutter, 2015). I learned of the link between gluten and type I DM. I was also surprised to know that changes to our gut microbiome brought on by gluten and fructose plays a very active role in the pathogenesis of celiac disease and DM. The key takes away though from this chapter is to limit our intake of both gluten and fructose to

preserve the health and function of our microbiome. In turn, we will have less pathogenesis and inflammation in our organs and especially our brain.



Week 8 Reflections – Listen: [Brain Maker: The Power of Gut Microbes to Heal and Protect Your Brain-for Life. Chapter 7: Bust a Gut](#)

Writing Prompt: What common environmental elements can exacerbate the inflammatory process? What is antibiotic stewardship and what role do nurse’s play in this critical issue? What role do antibiotics play in the food supply? What are some of the issues with genetically modified foods? Be descriptive in your examples?

Describe: I started hearing about and seeing “antibiotic free” and “hormone free” banners on food several years ago. I think like most consumers I didn’t really pay much attention to it. *Brain Maker* made me realize the impact antibiotics are having on our food chain and the effects consuming such food has on our microbiome. I was shocked to learn that, “in

2011, U.S. drug makers sold nearly 30 million pounds of antibiotics for livestock the largest amount yet recorded, representing 80 percent of all antibiotics sales that year.” (Perlmutter, 2015). Antibiotics have been known to decrease the diversity of the gut’s microbiome, promoting weight gain, even increasing the risk of certain cancers. I think as a nurse who gives antibiotics frequently to patients it is our job to educate our patients on taking them correctly, side effects, and when they are not needed. Also recommending they take prebiotics and probiotics and continue to eat a healthy diet. Lastly educate them on the fact that exposure to antibiotics even at low doses found in their food can increase the risks of asthma, obesity, DM, and ADHD. If they can, purchase organic foods that are antibiotic free and hormone free.

Examine: Environmental chemicals are another problem we face as it seems they have proliferated in recent years with very little oversight by our government’s health department. BPA is a common chemical that can generate hormonal imbalances and potentially upset the diversity of our gut’s microbiome. I often see this in drinking water containers, so I avoid such containers, or I purchase BPA free containers. Chlorine and pesticides are other chemicals found in our food environment that should be avoided at all costs. Chlorine is great for keeping our drinking water germ free, but some municipals put too much of it in the drinking water. This tends to get to our gut’s microbiome and adversely affect it. GMO foods are another thing we should try to avoid. My wife taught me the importance of this years ago and when I shop, I strive to buy GMO free foods. One thing to do is cut down on processed foods as that is where GMO foods are often found. GMO foods are engineered to withstand herbicides, more of the toxic substances are sprayed on the plants, which ultimately increases the trace amounts of herbicides found in foods. As more people discover they are allergic to gluten there seems to be a

correlation between celiac disease and the use of the chemical RoundUp found in our food supply.

Articulate Learning: I learned that not only do I need to avoid sugars, saturated fats, and excess carbs. I need observe the environment in which my food and water has gone through before I put it into my body. Growing up this was less of a concern but now with the relative recent introduction of GMO foods and chemicals such as BPA, now more than ever I need to be cognizant of the sources of my food. I look forward to the next section of the book on how to rehab my diet and clean up my environment. I learned the effect these chemicals have on our gut's microbiome and how they promote inflammation and sickness in the human body. Finally, I learned the importance of labels and seals that tout being Non-GMO or certified organic. The two most reliable seals are the Non-GMO project verified seal and the Department of Agriculture organic seal.



Week 9 Reflections – Brain Maker: The Power of Gut Microbes to Heal and Protect Your Brain-for Life. Part 3: Brain Maker Rehab: Chapter 8: Feeding Your Microbiome

Writing prompt: What new information have you acquired about how the care and feeding of your microbiome? What three things might you change immediately and what might take some time to change and why? Be descriptive in your examples.

Describe: I'm so happy to reach this part of the book, I get to see what dietary changes I can make towards having a healthy gut and boosting my brain's health and lowering inflammation in my body. The importance of probiotics in our diet to aide and diversify our gut's microbiome. Many can be found in so called fermented foods. I seldom eat fermented foods, in fact many of the examples given in the book I've never heard of. Having a friend who is Korean I was able to try Kimchi for the first time and really enjoyed it. I want to consume probiotics naturally; I don't want to take them in pill form. Their benefits of course are, "maintain the health of the gut's lining; balance the body's PH; serve as natural antibiotics, antivirals, and regulate immunity." (Perlmutter, 2015). I'm excited to see how I can implement these new dietary strategies into my life and my families as well.

Examine: The easiest changes to make will be the ones I already have made or can convert to with relative ease. First recommendation number 3 consume coffee, wine, chocolate. I already consume coffee every day. I love chocolate and eat it in moderation. I try not to consume alcohol so 2 out of 3 isn't bad. Next, recommendation number 2 low carb and high-quality fats. I follow this diet already and try to avoid most carbs eating a mostly plant-based diet. I enjoy healthy fats such as nuts, avocado, and almond milk. Another easy to follow recommendation would be drinking filtered water. We have this at home and replace the filters when needed as that is important. It is also important to make sure they filter out chlorine as we don't want to disrupt our gut's microbiome. The recommendations that will take a while to implement are fasting as I'm not accustomed to this. My wife does do intermittent fasting and I plan on jumping on board with this to try it out. Another one difficult to implement will be the foods rich in prebiotics. Most of them are raw and I don't have the palette for raw foods,

especially onions and garlic. I will give them a try though as I know they are important for our gut's microbiome.

Articulate Learning: I learned the importance of adding fermented foods to my diet and important prebiotics as well. I think I already follow a healthy diet and maintain a healthy weight, but these are two things I need to incorporate more into my diet. Otherwise, I already follow much of the advice given in the book and agree with it even more after reading the first 8 chapters. This book has reinforced the importance of those ideas and introduced new ones that will enable me to reduce inflammation in my body, improve my immune system, and lower risks for all types of illness related to inflammation. Dr. Perlmutter has really opened my eyes on the important role our microbiome plays in our health and the ways we can promote its diversity and health, so we stay healthy as well.



Week 10 Reflections – Read/Listen: [Brain Maker: The Power of Gut Microbes to Heal and Protect Your Brain-for Life. Chapter 9: Go Pro](#)

Writing Prompt: What supplements do you take currently? What might you add in the near future based upon this new information? What might be some challenges to adopting this new regimen? Be descriptive in your examples.

Describe: As I open this chapter on supplements, I know I'm going to feed my curiosity about what to take and what supplements can do for my health. I currently only take two supplements, a multivitamin and vitamin C. I'm curious to see what is recommended as I have not historically taken supplements. I tend to believe that they are a waste of money, if I follow a healthy diet, I can probably get most of what I need from that. One thing I don't take is probiotics, I don't even eat yogurt. I'm curious about probiotics because I believe in them and give them to most of my patients. I do have a friend that takes them, but she once told me the type of probiotic is very important. I'm excited to improve my education on this topic and see how I can improve my intake of supplements and probiotics.

Examine: Probiotics are important because they, "reduce gut permeability, reduce LPS a dangerous inflammatory molecule, increase BDNF, the brain's growth hormone, sustain a healthy balance in the gut's microbiome." (Perlmutter, 2015). I'm open to the probiotic enema, as I mentioned above in week four, I've used both enema and nasogastric tube to administer a fecal transplant in patients with C-Diff. I know it's not the same thing, but the concept is very similar. Fermented foods like Kimchi and pickles are loaded with the probiotic *Lactobacillus plantarum*. It helps regulate our immune system and decrease inflammation. As far as the supplements go, Turmeric is one I'm really interested in. I have seen it being sold at Costco and I know it comes in a creamer for your coffee. So, I plan on purchasing it the next time I'm there

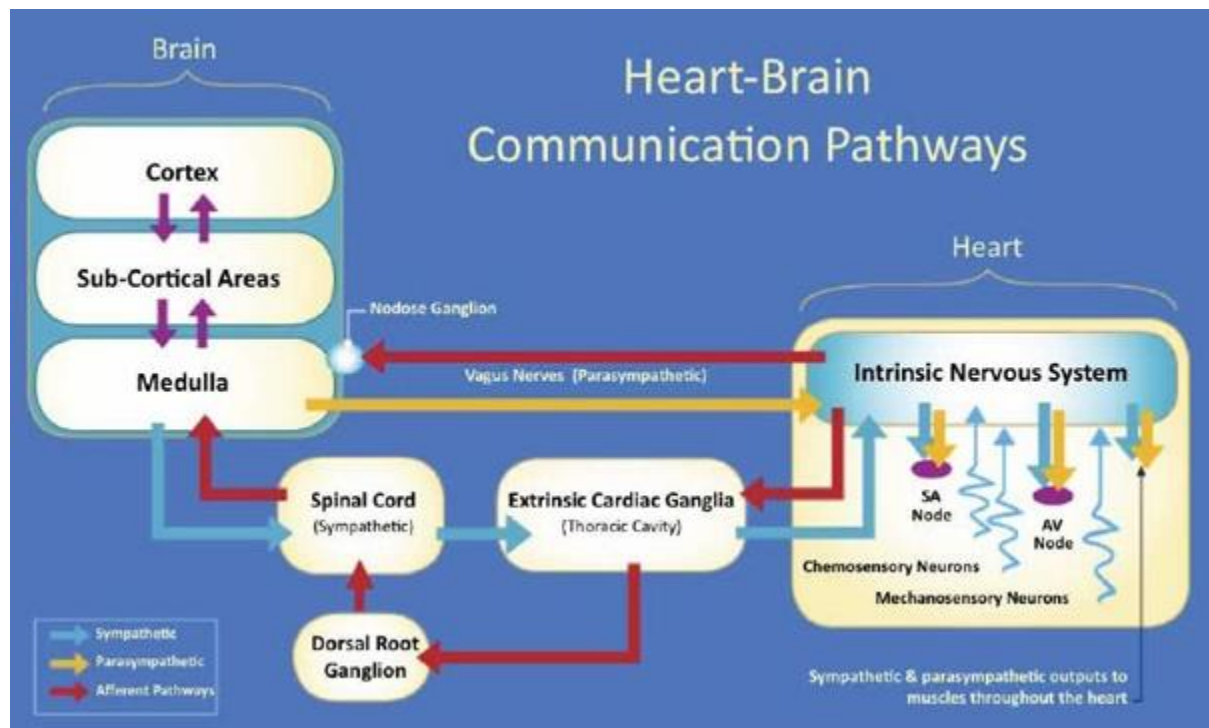
and start using it in my coffee. I like the idea of using coconut oil and cooking with it instead of canola oil.

Articulate Learning: I learned that the most important probiotics can be found in the foods we eat. Kimchi, pickles, and sauerkraut are great sources of the different forms of Lactobacillus which help our immune system, counter inflammation, and maintain the right balance of gut bacteria. Showing the value of fermented foods and I would say for me this is the biggest aha moment I've had reading this book. Now I'm seeing the importance of fermented foods in my diet, because honestly, I don't eat any at this very moment. I learned about their great role in keeping our gut's microbiome healthy and I'm very motivated to start introducing them into my diet. Finally, I learned that I could introduce much needed supplements into my diet and have fun doing it. Whether it's adding Turmeric creamer to my morning coffee or eating more fish to get DHA into my diet. I need to be creative and include these important supplements into my diet to reap their health benefits.



Week 11 No reflection

Week 12 No reflection



Week 13 Reflective **Analysis** –

The final weekly entry is all about the analysis of the entries within the semester.

Articulating the learning for these entries provides the space to weave the threads together into a tapestry of your nursing praxis (Watson, 2017). What tapestry will the weaver show the world? Each will be different based upon their experiences, interpretations, understandings, and dispositions. Full articulation of this work establishes the boundaries of identity that the scholar creates. These boundaries help inform and guide the information and energy flow (Siegel, 2017) that comprises who you are and how you interact with the world and what grounds your nursing praxis (Lee, Palmerii, & Watson, 2017; Watson, 2002, 2005a).

Writing prompt: Reflect on the information presented in this journal's readings. How might you utilize this information in the near future for yourself, family, and your nursing praxis? How has this new information validated or challenged your current understanding of chronic conditions and what it means to be healthy. This section is 250-500 words in length. This section should be a distillation of all the entries in this journal.

Describe: *Brain Maker* really opened my eyes about the role our human microbiome plays in our health. I realized that controlling inflammation is the key to most chronic conditions, autoimmune disorders, and most acute illnesses as well. I'll never forget a patient I had that was only 19 years old infected with H1N1 and went into multisystemic failure. Respiratory, cardiac, and kidney failure which landed him in the ICU on a ventilator. It was as if his whole body was inflamed and his immune system was out of control. I remember giving him so much solumedrol and the doctor talking about how everything was inflamed, he ended up surviving but had permanent organ damage. This sudden catastrophic inflammation is easy to see, what's not easy to see or understand is the subtle, low key, inflammation that takes place every day in our bodies. That too is just as dangerous as one day it will manifest itself in DM, dementia, or maybe MS. That is the key take away from *Brain Maker*, inflammation and the role our microbiome plays in maintaining a healthy immune system and regulating that inflammation.

Examine: As I write this final entry, I just found out my 85-year-old mother was prescribed antibiotics for a yeast infection. I wish my mother would have told me what was going on before the prescription was made. I think antibiotics are overused for many things and just a simple way for doctors to appease their patients. Surprisingly my 84-year-old father knew that they had the potential to in his words, "kill all the good bacteria in her stomach". I was very pleased to hear this and started telling my dad about *Brain Maker* and why mom shouldn't be on

the antibiotics for a yeast infection and the importance of a good diet. We can't really call ourselves healthy unless our gut's microbiome is healthy. I believe in using food, prebiotics, probiotics, and supplements as medicine. I now know their importance in affecting our microbiome and the regulation of our immune system, inflammation, and so much more.

Articulate Learning: I learned a great deal and will use most of this in my personal life by making changes in my diet. The two biggest changes I would like to make is eat more fermented foods and start taking select supplements to augment my health. I will also try intermittent fasting, as fasting is another health benefit pointed out in the book. I will never take my microbiome for granted now that I learned the important role it plays in my health and will strive to live in a clean environment and stay away from harmful chemicals both around me and in my food and water. Finally, I learned that most people don't have a clue about the human microbiome, so I plan on educating my patients on that matter and incorporating that into my nursing praxis. I will stay updated on this subject as a lot is still being discovered about it and look forward to seeing new information in the coming years.

References

References are to be formatted per APA guidelines. Utilizing citations and references in your reflections demonstrate the critical thinking aspect of transformation that this program is designed to engender

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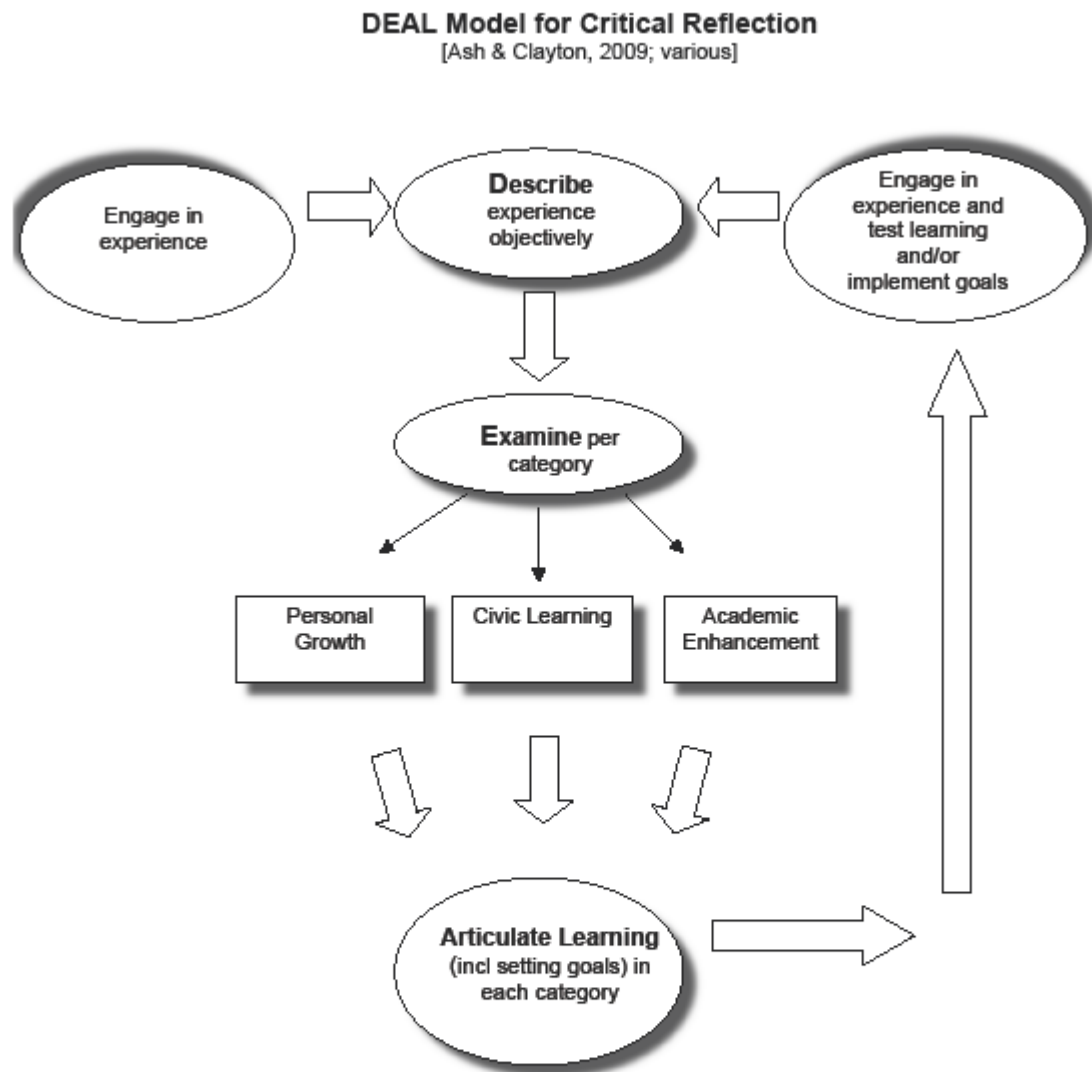


Figure 1 Appendix A