Grace Larson

Nutritional Status in Dancers

Nutrition is an idea we are familiarized with as we grow and develop in life. We hear through the media, family members, teachers, and others about what foods to eat and how to be healthy. As athletes, dancers should be conscious of their nutritional status. However, we want to promote healthy habits and thinking regarding nutrition. Dancers should also be aware of common cases of malnutrition in their field and the effects it can have on their bodies. An awareness of malnutrition can support dancers in their practice and help them avoid hinderances such as injury. For this project, I researched studies conducted on dancers that measured aspects of their nutritional status. The information I found supports the claim that dancers are at risk for malnutrition due to their intense practice and performance regimens.

The major themes that encompassed my research include nutrition, malnutrition, body composition, body mass index, percent body fat, energy intake (calories, nutrients, and fluids), and energy expenditure. Throughout my research process, I found that articles that used these terms were most relevant for my topic and align similarly in terms of outcomes. A theme that surfaced amongst a few of my articles is how malnutrition can affect performance for dancers. These articles serve to emphasize the importance of properly fueling the body to healthily execute performance.

Body Mass Index (BMI) and Percent Body Fat (%BF) were used in the procedures of some of the articles I summarized. They used these two tools as a way of calculation to determine nutritional status. Procedures varied amongst the different studies, however most outcomes reflected by BMI and %BF showed similar results. In one study called, “Assessment of

Body Composition and Nutritional Risks in Young Ballet Dancers – the Bioelectrical Impedance Analysis," the %BF reflected amongst the group of ballet dancers was outside of the normal range for typical young females. The percentage was also lower than optimal body composition proportion for female dancers (Gammone and D'Orazio 2020). In another article, "Changes in Body Composition, Energy Metabolism, and Appetite-Regulating Hormones in Korean Professional Female Ballet Dancers Before and After Ballet Performance," the findings of this study show that BMI, LBM (Lean Body Mass), and TBW (Total Body Water) increased after performance (Kim, et al. 2019). In an article about Irish Dancers, "Dietary Intake, Body Composition, and Nutrition Knowledge of Irish Dancers," the BMI varied widely amongst the female dancers while for males, BMI was consistent and in normal range (Challis, Cahalan, et al. 2020). These articles depict the tendency of fluctuating BMI in dancers and low %BF resulting from their practice. However, one of my articles argues that BMI is not always an accurate depiction for body composition but agrees that BMI in dancers tends to be lower than general population (Challis and Stevens 2016). This article also claims that body composition is primarily genetic (Challis and Stevens 2016).

Intake of nutrients, calories, and water was measured in a few studies. In the Irish Dancer article, the dancers reported low energy intakes and failed to reach reference nutrient intake (RNI) levels (Challis, Cahalan, et al. 2020). In the Korean ballet dancers, energy intake increased, and energy expenditure decreased after performance which was expected. However, intake before the performance was below estimated energy needs (Kim, et al. 2019). In the "Nutrition and Nutritional Issues for Dancers" article, intake of micronutrients, specifically iron, calcium, and vitamin D along with water intake were presumably low in the dancers (Sousa, et al. 2013). Overall, malnutrition stems from dietary intake, malabsorption, and energy

expenditure (Saunders and Smith 2010). These ideas are supported through the studies I analyzed. Dancers experience malnutrition by ill volume intake of energy and expending more energy than they possess.

With malnutrition comes risks, consequences, and possible injuries. For regular patients suffering from malnutrition, the areas affected included muscle function, cardiorespiratory function, gastrointestinal function, immunity and healing of wounds, and even psychological effects (Saunders and Smith 2010). Dancers, depending on the severity of their situation, can be susceptible to any of the above disorders. Overtime, malnutrition hinders tissue function of the body which creates brittle qualities and improper muscle function (Saunders and Smith 2010). Dancers rely on the function of their muscles because their body is their instrument. The body becomes vulnerable to injury and illness when not taken care of properly.

Blending the information from the articles, I discovered that by being under pressure of intense training and needing extra nutrients for performance, dancers are susceptible to poor nutritional status. Because of the low intakes of calories, nutrients, and water with combination of an intense training regimen, dancers' long term-health can be affected. Onstage performances can also be affected by nutritional status issues. If a dancer lacks the energy to fulfill their movement, performance becomes harder for them to execute, and the quality of their movement is affected. Low energy intakes increase risk of injury and health complications. It is important, as a dance practitioner, to fuel their body properly and adequately to safely meet the demands that performance and rehearsal asks of them.

When I chose to research nutrition in dancers, I was expecting to find studies that demonstrated analysis of body composition. I was ready to see information on BMI in relation to nutritional status. I also was expecting to see the "ballerina body" aesthetic and "the Triad,"

which I did witness during my research. However, I failed to think about energy intake levels before performances and rehearsals. Once I read more into energy intake in relation to dancers, it is logical how this can lead to malnutrition. Malnutrition is not only caused by eating disorders and lack of eating. It can be caused by neglecting certain nutrients along with not consuming enough of a nutrient before performance or rehearsal. As one is performing and rehearsing, nutrients are being used to function the body and sustain it through the duration of the practice. I believe some dancers are not conscious of their energy intake, which is why they may be experiencing difficulties in their dancing.

This information is relevant to dancer wellness. Dancers' bodies are their instruments and to create art with our bodies, we need nutrients. To obtain nutrients, dancers must engage in energy intake which can be done by eating foods and drinking fluids. Dancers will always need to eat and drink to keep themselves going. By guiding their choices and being mindful, they can be the best versions of themselves and decrease risks of injury and health concerns.

Limitations to future research of this topic are the nature of bodies. As discussed before, BMI is not always a clear indication of someone's nutritional status. One's DNA and genetics can play a role in their body composition. Since everyone's body is different and requires different needs, it can be hard to create a generalized conclusion or solution to malnutrition. There is also the idea that just because something works for one body, doesn't mean it will work for another. Nutrition is hard to generalize since it is unique to the individual.

I learned about what commonly makes dancers malnourished which is inadequate energy intake. I can incorporate this information into my dance career by holding myself accountable on my own nutritional status. I can also use this information for my future when I start teaching students. I hope I can express the importance of energy intake in my students as they begin to

have a relationship with food. I'm hoping to have them have a healthy relationship with nutrition. I believe nutrition is important for dancers.

Works Cited

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