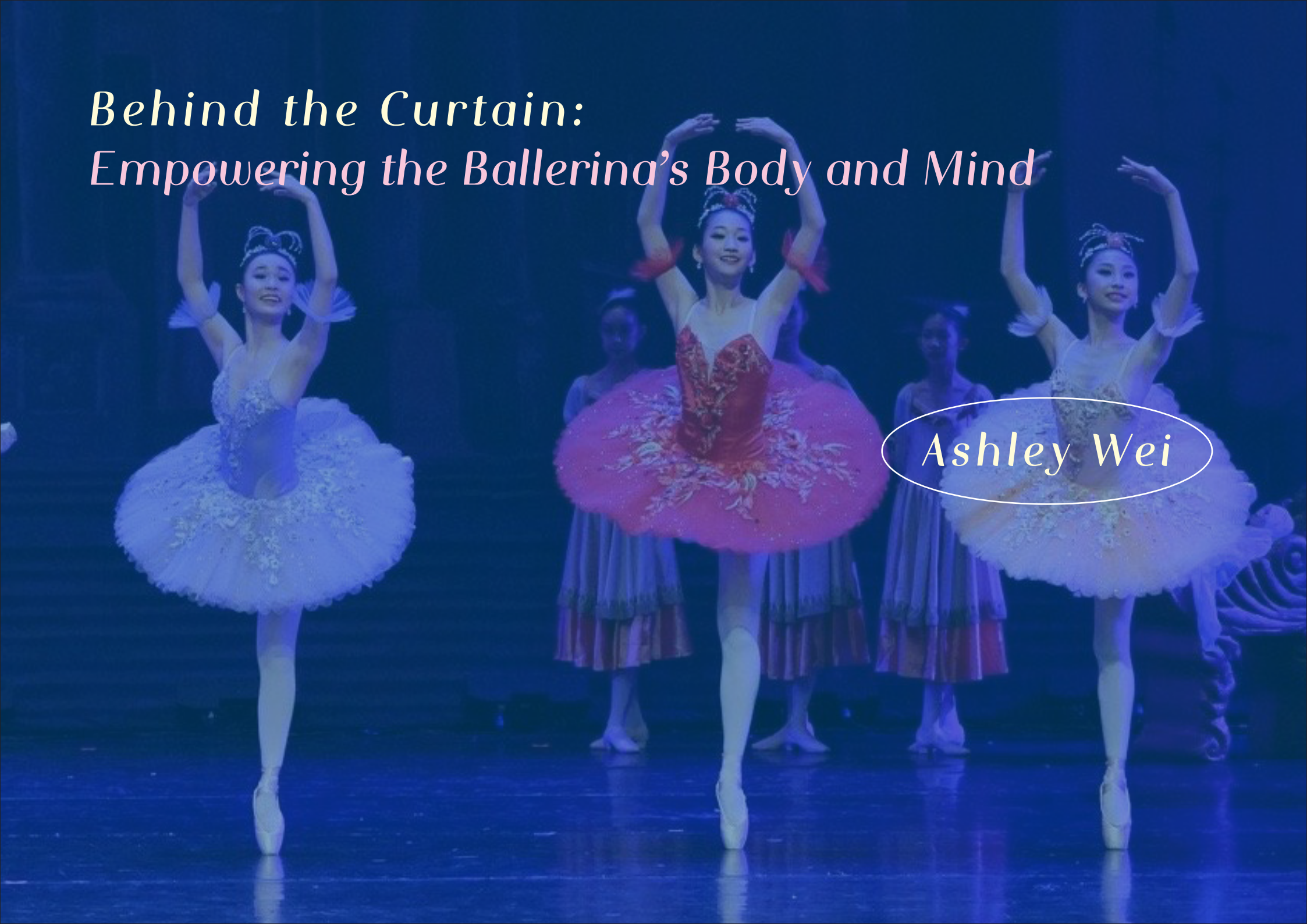


Behind the Curtain:
Empowering the Ballerina's Body and Mind

Ashley Wei

CONTENTS

I.
INTRODUCTION

A tiny waist, a thigh gap, a 1:9 head to body ratio. No bulky muscles, no extra fat, no curves. Long limbs, small head, flat chest…the list goes on. Why do ballerinas have to stick to these strict standards and unique expectations? Are these traditional aesthetic stereotypes truly helpful when it comes to a dancer's performance on stage?

If anyone were to buy tickets to a ballet, you would notice that all the ballerinas have one thing in common: their extremely slim bodies. Even if one has to power through a full day of intense rehearsals and performances, these ballerinas have such a slender physique with no evidence of the bulky muscles you would expect on an athlete.

As we rely more on our scientific understanding on the body and its needs instead of aesthetics, more ballerinas have started to focus on how their diet affects their athletic performance. Through the rise of sports medicine and nutrition, there has been less emphasis on the numbers on the rulers and scales but a shift to healthy eating and what food we put in our mouths.

This report will discuss how the stereotype of slim ballerinas developed from the origins of ballet and how dancers today should utilize more scientific approaches to meet their nutritional needs to support physical demands. Instead of intense dieting, ballerinas should focus on fueling their bodies with the necessary nutrients and energy to get them through their rigorous training. Choosing healthier eating habits and balanced meals over restrictive dieting ensures strength, endurance, flexibility, and injury prevention.

In ancient times, the Yi people had a strict hierarchical class system that was even more rigid than the comparatively flexible social structure of the Han people. Yi society was divided into five distinct classes: Zimo, Cuno, Novo, and the slave classes Gaja and Gaxi. During my visit to a museum on July 9th, the docents explained that Zimo represented the royal family, Cuno the noble family, and Novo the common people (Baihuasanguoshi, 2024). Different surnames reflected the positions within each family, such as the division between the black and white Yi. In those times, the older generation would greet each other by surname, and the entrenched social hierarchy instilled a sense of fear when encountering someone of a higher status.

This rigid hierarchy extended to marriage, where individuals could not marry outside their class. Yi men were forbidden from marrying women of a lower status, as doing so would result in demotion (Lishiliangzhanglian, 2024). During my fieldwork in the mountains, I interviewed a man named Wu Zuo, whose family was originally part of the Yi royal family. However, his grandfather's marriage to a woman of lower status led to the family's demotion from royalty to commoners, specifically the white Yi. Wu Zuo spoke of this family demotion with regret, seemingly unaware that societal evolution had long since rendered these hierarchical divisions obsolete. Today, laws and equal rights have replaced the rigid social structures of the past.

I.

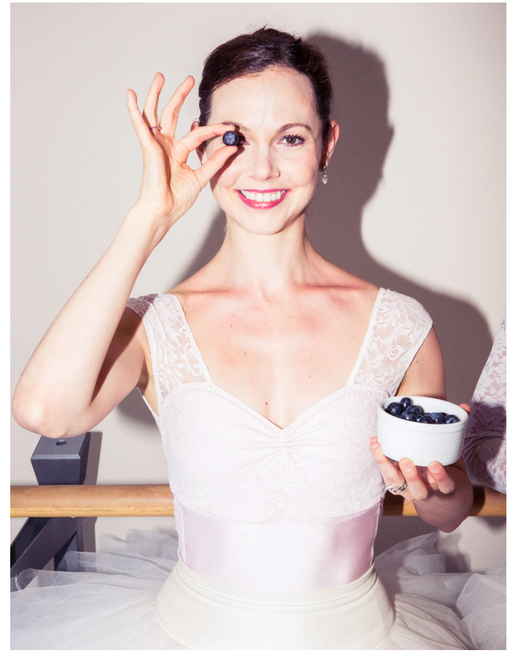
Historical Background of Ballet Nutrition: Evolution ofBallet Diets

Ballet originated in Renaissance Italy around the 15(th) century as a form of social dance for the upper class during lavish gatherings. It started out as a way to establish rules on proper etiquette in the royal court and how people should bow, walk, dance, or hold someone's hand. Soon, the practice of ballet became a crucial part of court life as those who mastered the art would be more successful as courtiers.

In the 16(th) century, after King Henry II's wife Catherine de' Medici helped bring ballet to the French courts, the art of ballet began to consist of more theatrical storytelling, with different props and backdrops on stage to portray a certain theme. Finally, in the 17(th) century, King Louis XIV, with his belief in strong technique, founded the Royal Academy of Dance, in which the many ballet steps we know today are named and formed. From the origins of ballet to the early 19(th) century, female ballet dancers mostly used court dresses as stage costumes which often included long, heavy garments and tight-fitted corsets that restricted movement. It was only until 1832, under the influence of the Romantic era, when Marie Taglioni introduced ballet costumes with tighter silhouettes which revealed more of the legs to show off the dancer's pointe work. 20(th) century ballet skirts also shortened to knee-length tutus under the influence of Russian choreographer Michel Fokine to showcase turns and higher leg lifts. This meant that ballerinas had to master harder and more technical steps while dancing gracefully on the tips of their toes. In one of the oldest ballets of the Romantic era, La Sylphide, the dancers were also expected to dance with lightness to mimic the delicate movement of the sylph.

This ultimately led to the popularization of dieting and the stereotype of ballerinas having a slim figure to make dancing on pointe and partner work easier. Ballet also often emphasized the idea of long, lean lines and weightlessness, and in order to create those illusions, a slimmer body was more preferred. In addition, maintaining a lean physique is more aesthetically pleasing to the eye on stage and on camera.

Hence, under the pressure for ballerinas to have the "ideal dancer's body", many companies began to adhere to unhealthy practices, such as rigorous training and extreme dieting. Ballet academies also began to only select dancers with naturally slim figures.



III. SURVEY

To better understand the dietary habits of youth ballet dancers, I conducted a survey accompanied by in-depth interviews.

Survey Questions

1. Age
2. Breakfast Diet
3. Snack Choices(between breakfast and lunch)
4. Lunch Diet
5. Dinner Diet
6. How much water do you drink in a day?
7. How many times do you order takeout per week? What do you usually order?
8. Do you think your current eating habits are healthy?
9. Are you a picky eater?
10. How many hours of ballet classes do you take per week?
11. How would you rate your physical stamina during regular training?
12. How would you rate your physical stamina during competitions, performances, or exams?
13. Do you feel hungry during training?
14. What do you usually eat before training?
15. What do you usually eat before competitions/exams/ performances?
16. What do you usually eat after competitions/exams/ performances?
17. If you have physical education (PE) classes, what types of activities or sports do you usually do?
18. What weight loss methods have you tried?

	I同学	D同学	R同学	A同学
1.年龄	14	14	15	16
2.早餐	不吃因为没时间	鸡蛋+牛奶	鸡蛋+牛奶/豆浆	杂粮粥+鸡蛋
3.Snack（早餐午饭之间）	Muffin	牛肉面	水果/banana bread	面包/水果
4.中午饭	学校食堂：米饭+肉+菜（中餐）	学校食堂：中餐/千层面	学校食堂：米饭+鱼香肉丝+西兰花/青菜	学校食堂：米饭+肉+菜（中餐）
5.晚饭	泡面	有的时候吃麦当劳	中餐但少吃	肉+菜+粥/米饭
6.一天喝多少水	3升	1.5升	2升	1升
7.每周点几次外卖？一般点什么？	3次，快餐	2次，麦当劳	不怎么点	0-1次，中餐
8.你觉得你现在的饮食习惯健康吗？	No，感觉没有营养搭配	No，因为会经常吃麦当劳/炸鸡	Yes，但是不喜欢吃碳水比如米饭但是面条可以接受	Yes，但可能零食吃的有点多
9.你会挑食吗？	葱姜蒜，洋葱，羊肉	牛油果，羊肉	麻烦的水果要吐籽什么的	不爱吃鱼 （也对核桃，小龙虾过敏）
10.你一周会上几个小时的芭蕾课？	大约7	大约8	大约8	大约5
11.你觉得你日常训练的体力如何？	看训练内容/强度，但几乎不累	没有感觉很累	不是很累但也不会很轻松	比较累，会出很多汗
12.你觉得你比赛/演出/考级期间的体力如何？	非常累因为没有休息时间	非常累，而且紧张	紧张+需要有表现力所以非常累	非常累，和做high intensity运动一样累
13.你训练的时候会饿吗？	没吃早饭所以会饿	会饿	不饿	不饿，但很渴想喝饮料
14.你训练前会吃些什么？	炸鸡块/牛奶	炸鸡块	香蕉/苏打饼干（不敢多吃因为芭蕾需要收肚子，吃多会有罪恶感）	水果/面包（不会多吃因为怕不消化）
15.比赛/考级/演出前会吃什么？	不吃，喝咖啡	咖啡，巧克力	苏打饼干	巧克力
16.比赛/考级/演出后会吃什么？	火锅	火锅	大餐，火锅	大餐
17.如果上体育课的话，会做一些什么运动？	羽毛球	棒球	排球	N/A
18.你试过的减肥方法？	少吃甜食，多吃沙拉，有效	没怎么尝试过	不吃晚饭，但不是很有效因为自己没法坚持。多喝水增强饱腹感	多喝益生菌（冲泡粉末）酸奶类的有一点效果

The results revealed several key patterns:

1. Reliance on Convenience Foods

Beyond school lunches, the majority of respondents reported frequently consuming fast food or ordering takeout—such as McDonald's, instant noodles, or KFC—instead of eating homemade meals. While these options are more convenient when schedules are tight, they tend to be less nutritious and higher in additives.

2. Inadequate Energy Intake

Many dancers admitted to feeling hungry during rehearsals, often due to skipping breakfast or not consuming enough calories earlier in the day.

3. Lack of Nutritional Knowledge

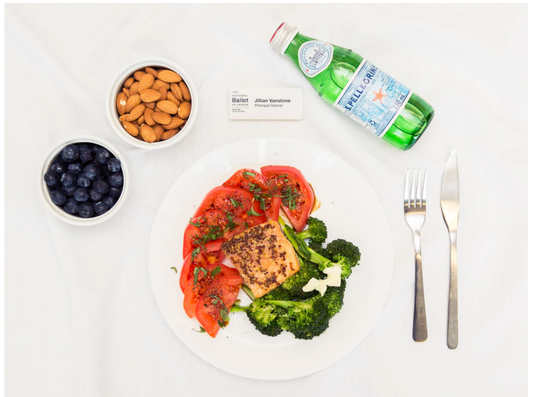
Most respondents acknowledged that their diets are not balanced. They cited a lack of education on nutrition and limited time to prepare proper meals as key barriers to healthy eating.

4. Unhealthy Post-Performance Habits

After major performances or competitions, many dancers said they tend to "reward" themselves with indulgent foods such as hot pot or fried snacks, without considering their body's need for recovery-focused nutrition.

5. Misguided Weight Loss Practices

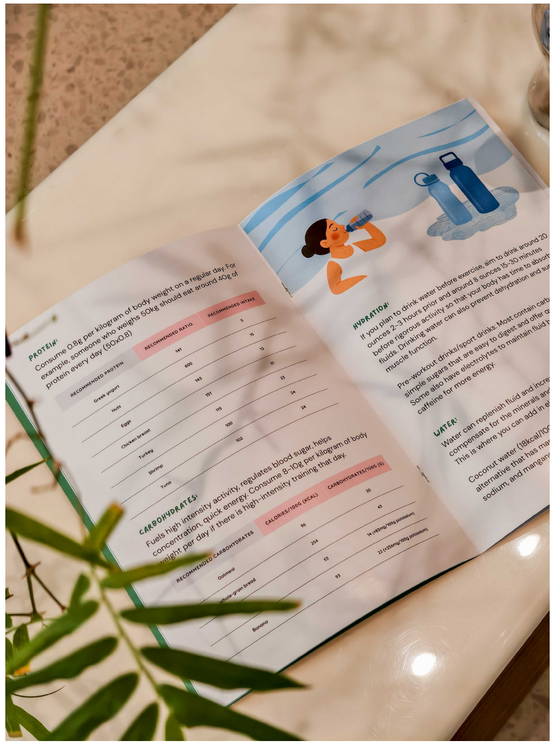
Several dancers reported unhealthy methods of weight loss, such as relying solely on salads or even skipping meals altogether. Many expressed uncertainty about how to lose weight safely and sustainably, often unaware of the importance of maintaining a balanced diet during weight management.



IV.

Youth Ballet Nutrition Advocacy

To address the nutritional challenges faced by youth ballet dancers, I came up with the idea of writing a practical nutrition guidebook made just for them—one that fits their lifestyle and supports both health and performance.



A Nutrition Guide for Youth Ballet Dancers

FUELING GRACE

NOURISH TO MOVE: UNDERSTANDING WHAT FUELS A DANCER'S BODY

To dance with strength, grace, and stamina, your body needs more than just practice—it needs the right fuel. Every leap, spin, and stretch is powered by the nutrients you eat every day. As a young ballet dancer, understanding what you eat and why it matters is the first step to performing at your best and staying healthy through growth and training.

Let's explore these two essential categories:

Macronutrients:

the major building blocks that provide energy and structure to your body, including carbohydrates, proteins, fats, and fiber.

Vitamins & Minerals:

the micronutrients that support everything from bone strength to brain function and immunity.
Let's take a closer look at each nutrient and how it helps you move with power, recover with care, and glow from within.

MACRONUTRIENTS

CARBOHYDRATES

Carbohydrates are the body's main source of fuel. It provides the body with energy by storing itself as glycogen in the liver and muscles. Carbohydrates also help fuel high-intensity activity as it regulates blood sugar. Hence, having a low-carb diet can make the body break down ketones for energy, causing symptoms of bad breath, headache, dizziness, and fatigue.

PROTEIN

Protein is made up of chains of amino acids. It can help the body feel long-term satiety, build and repair muscles, and help to produce enzymes and hormones. Protein can also boost immune function by aiding antibody production and supporting immune cells. It is important for dancers to consume protein during recovery as it helps repair muscles and increase strength.

FAT

The body needs fat to produce more cells as the cell membrane is made up of lipids. Fats are also important for the development of organs and the reproductive system. It absorbs fat-soluble nutrients such as vitamins A, D, and E. Research has also found that fat is an essential part of the structure of skin cells, hence having fat in your diet can help your skin maintain its moisture.

FIBER

Fiber is beneficial to gut health, helps digestion, and promotes regular bowel movements. Eating fiber lowers the risk of type 2 diabetes, heart disease, stroke, and bowel cancer. Increasing fiber intake can lower blood pressure and serum cholesterol levels.

VITAMINS AND MINERALS:

Vitamin C is an antioxidant that fights toxins to help maintain healthy skin, blood vessels, bones, and cartillage.
Vitamin B1 is responsible for changing carbohydrates to energy to maintain a healthy nervous system.

Vitamin B2 helps to metabolize carbohydrates, fats, protein to glucose for energy. It also has antioxidative purposes, which helps maintain healthy hair and skin.

Vitamin B6 can help make antibodies which fight off pathogens. It promotes brain health, improves mood, and protect the heart. Vitamin E supports the immune system and reduces inflammation. It also helps form red blood cells.

Vitamin A helps form and maintain healthy teeth, skeletal tissue, soft tissue, mucus membranes, and skin. It also promotes good eyesight in low light.

Potassium helps with nerve function, maintaining the heartbeat, and the contraction of muscles. Consuming potassium can prevent muscle cramping and muscle weakness.

To determine how much calories you should consume in a day to maintain or lose weight, use this calorie calculator: https://www.calculator.net/calorie-calculator.html

DANCER'S DAILY FUEL GUIDE

Recommended nutrient intake and macronutrient ratios:
(Based on a 50kg ballet dancer's daily needs)

MACRONUTRIENTS	RECOMMENDED RATIO	RECOMMENDED INTAKE
Total Energy	100%	2200-2400 kcal
Carbohydrates	50-60%	240-300g (1000-1400 kcal)
Protein	15-20%	60-90g (240-360 kcal)
Fats	20-30%	50-80g (450 - 720 kcal)

HOW TO CALCULATE YOUR DAILY ENERGY NEEDS?

To determine how much energy a young ballet dancer requires each day, follow these two steps:

STEP 1: Calculate Your Basal Metabolic Rate (BMR)

Use the Harris-Benedict Equation for young females:

BMR = 655 + (9.6 × weight in kg) + (1.8 × height in cm) − (4.7 × age in years)

This gives you the number of calories your body burns at rest to maintain basic functions like breathing and circulation.

Step 2: Estimate Your Total Daily Energy Expenditure (TDEE)

Multiply your BMR by your Physical Activity Level (PAL):

TDEE = BMR × PAL

The PAL factor reflects your activity level. For ballet dancers, use the following as a general guide:
• Light activity (school + light dance): 1.5–1.6
• Moderate activity (daily training): 1.6–1.8
• High activity (intensive rehearsals or multiple daily sessions): 1.8–2.0

FUELING FOR EVERY STAGE

TRAINING, PERFORMANCE & RECOVERY

Just like every movement in ballet has its timing and rhythm, your nutrition should also follow the rhythm of your training, performance, and recovery. Each stage places different demands on your body—and giving your body the right support at the right time helps you dance stronger, recover faster, and stay healthier in the long run.

In this section, we'll guide you through what to eat before, during, and after high-intensity activity, with practical examples and easy-to-understand tables. From energy-boosting carbohydrates and muscle-repairing proteins to hydration and vitamins that support your immune system, every bite plays a role in your performance.

Let your meals become part of your training—fuel with intention, recover with care, and dance with confidence.

AFTER PERFORMANCE

The main goal after rigorous activity is to let the body rest, recover, and repair. About 30-60 minutes after exercise, the muscles can store carbohydrates and protein to use for recovery.

Hydration: If you lost 1 kg after exercising you should drink 1500 milliliters of water to replace the fluids you lose when you sweat. This helps to maintain flexibility of joints, speed, muscle function (avoid cramps), and body temperature.

PROTEIN

Consume 0.8g per kilogram of body weight on a regular day. If you are trying to build muscle, consume about 1.2-2.0g per kilogram of body weight per day.

HIGH PROTEIN FOODS	CALORIES/100G (KCAL)	PROTEIN/100G (G)
Salmon	139	17
Chicken breast	151	31
Beans	401	36
Whole milk	65	4
Eggs	144	12
Shrimp	100	24

BEFORE PERFORMANCE

It is important to fuel ourselves with the right foods as it plays an important role in how we feel and perform.

• Avoid high-fat, high-fiber, and gas-producing foods (fried foods, beans, broccoli) which can cause discomfort when the body is active as they are harder to digest.

• Opt for high carbohydrate and protein foods before high intensity activity

• It is recommended to eat a big meal 2-3 hours before activity so that the food has time to digest. If it's a light snack, make sure to still let your body rest for 30 minutes to 1 hour.

PROTEIN:

Consume 0.8g per kilogram of body weight on a regular day. For example, someone who weighs 50kg should eat around 40g of protein every day (50×0.8)

RECOMMENDED PROTEIN	RECOMMENDED RATIO	RECOMMENDED INTAKE
Greek yogurt	140	5
Nuts	600	15
Eggs	140	12
Chicken breast	151	31
Turkey	115	23
Shrimp	100	24
Tuna	102	24

CARBOHYDRATES:

Fuels high-intensity activity, regulates blood sugar, helps concentration, quick energy. Consume 8-10g per kilogram of body weight per day if there is high-intensity training that day.

RECOMMENDED CARBOHYDRATES	CALORIES/100G (KCAL)	CARBOHYDRATES/100G (G)
Oatmeal	16	20
Whole grain bread	254	43
Apple	53	14 (455mg/100g potassium)
Banana	93	22 (422mg/100g potassium)

DURING PERFORMANCE

In the middle of a performance or rehearsal, we may not have time to digest a full meal. Hence, we will need foods that absorb fast, are energy boosters, prevent hunger, and stabilize blood sugar so that we can carry on with our performance.

HYDRATION:

If you plan to drink water before exercise, aim to drink around 20 ounces 2-3 hours prior and around 8 ounces 15-30 minutes before rigorous activity so that your body has time to absorb the fluids. Drinking water can also prevent dehydration and support muscle function.

Pre-workout drinks/sport drinks: Most contain carbohydrates and simple sugars that are easy to digest and offer quick energy. Some also have electrolytes to maintain fluid balance and caffeine for more energy.

WATER:

Water can replenish fluid and increase metabolism, but it cannot compensate for the minerals and electrolytes lost through sweat. This is where you can add in electrolyte powder to your water.

Coconut water (18kcal/100g): Coconut water is a natural, healthy alternative that has many of electrolytes such as potassium, sodium, and manganese.

SNACKS!

It is recommended to choose snacks with natural sugar (fruits and dried fruits) or low sugar (70% or above dark chocolate)

RECOMMENDED SNACKS	CALORIES/100G (KCAL)
Raisins	344
Dates	282
Dark chocolate	516
Rice cake	386
Banana	93
Apple	53
Energy bar/granola bar	350-550

HYDRATION!

The general rule is that if you are sweating, you need to drink fluids to replace the fluids you are losing. However, you shouldn't drink too much water as it dilutes the electrolytes in your body and affects the balance of fluids, leading to bloating, nausea, or even vomiting. Your body also does not have the time to digest fluids in the very little time you have during breaks.

CARBOHYDRATES

Our body uses the glycogen stored in our body as fuel when we exercise. Especially with ballet that requires a lot of endurance, our body uses up the glycogen more quickly. Hence, we need to consume carbohydrates after exercise to replenish them.

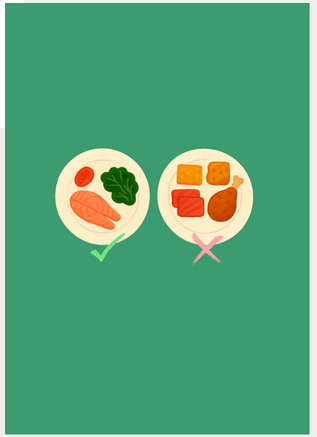
HIGH CARB FOODS	CALORIES/100G (KCAL)	CARBOHYDRATES/ 100G (G)	FIBERS/100G (G)
Sweet potato	86	20	3
Purple potato	123	32	3
Quinoa	357	58	7
Pumpkin	23	5	1
Whole-grain bread	254	43	6
Brown rice	348	75	3
Corn	107	18	5

VITAMINS, MINERALS, ANTIOXIDANTS

These nutrients are essential in the recovery process while those with high water content (watermelon, orange, pineapple) also help with hydration.

HEALTHY FATS

It is a myth that fat is our enemy. Healthy unsaturated fats actually support brain function and heart health by lowering cholesterol. It also helps you stay energized and satisfied with your meal for a longer period of time. Consume 0.5–1.0g per kilogram of body weight per day.



TIPS FOR THOSE WHO WANT TO LOSE WEIGHT!

- **Avoid processed foods as its production process makes the food lose its original nutrient content.**

For example, processed meat with high salt content such as sausages, processed carbohydrates with high levels of saturated fat such as pastries, processed drinks with high sugar, and fried foods.

- **Consume meat with less fat content.**

1) Chicken breast, turkey breast, white fish, and shrimp is lower in fat and calories.
2) We often don't realize that a lot of meat (mainly red meat) have high fat content and add extra calories to your diet.

- **It is recommended to lose around 1 kilogram per week depending on your body type.** Losing weight too fast may result in your body bouncing back when you stop the diet.

- **If you plan to start a weight loss journey, it is recommended for you to eat less than 1500 calories per day.** Even during weight loss, we still need to replenish ourselves with nutrients so that we won't have an energy deficiency. Severe cases may result in decreased muscle strength, endurance, glycogen storage, reaction time, coordination, increased risk of injury, and even depression.

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