

# NUTRIZINE

Sport Ireland Institute's Performance Nutrition Newsletter



## Welcome Note

Performance Nutrition Team

Welcome to our latest Nutrizine edition. We hope you are all keeping safe and well and enjoying your phased return to training.

Just like our consultations, so too have our cooking session moved on-line, with some great meals being cooked 'live' on Zoom. We have included some pictures from some of these sessions, including the results from the very tasty Fake Away Spice Bag from last months recipe section.

We are continuing our popular recipe section with another new recipe from our partner Boyne Valley, some BBQ ideas and some interesting milk facts from the NDC following World Milk Day on June 1st.

As an athlete, there is no doubt that at some stage in your career you have been, or you will be asked, to record a food diary. As sports nutritionists, it is always interesting to see the variation in response to this request. So we thought we would provide you with a little more information on how valuable a tool the humble food diary can be.

We hope you enjoy this edition, and as always, please do let us know if you have any suggestions for our next edition, or would like to feature in our 'A Day in the Life' section.

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'A DAY IN THE LIFE - DIVER TANYA WATSON FEATURES THIS MONTH

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# Completing a Useful Food Diary

The Why, The What and The How



## The Why

Unlike with your training where your coach will have their eyes on you and can provide real time cues / suggestions for alterations, the majority of your daily food intake is done in your own time, away from the inquisitive eyes of your nutritionist.

In order for your nutritionist to know if you are eating

- enough food
- the right food at the right time
- a varied intake

They will need to see what a 'typical' day looks like via a food diary.

You may be asked for a 3 day, 4 day or even a weeks food diary, or maybe a training day, rest day and gym day, but you will more than likely always be asked for more than 1 day – why? Well in order to get a good idea of your normal routine, variation in your diet, types of foods regularly consumed, 1 day provides a snapshot, where as a 3-4 day diary can provide some real insight and gives a better idea of your normal routines.



## The What

A food diary, when filled out correctly can provide key information to your nutritionist such as:

1. Your total daily energy and micronutrient intake

including for example your quantity of:

- carbohydrates
- protein
- fats
- fibre
- iron
- calcium

2. The timing of your food intake in relation to your training.

3. The variation in your intake according to your different training demands

4. Your preferences, likes and dislikes, ability/time to cook or reliance on pre-prepared meals & snacks.

Even without doing all the nutritional analysis on a food diary, your nutritionist will get a very good idea of your nutritional health from simply looking through your food diary and seeing the timings of your meals, but a more indepth analysis can be carried out using nutritional software such as Nutritics, and some of you may be asked to complete your analysis on an app such as Libro / My FitnessPal.



## The How

However, just as a good food diary can provide us with so much valuable information, a poorly completed diary will tell us nothing, it would be like going to the gym just to look around, but not actually do anything at all! So, what makes a 'good' food diary versus a 'bad' one? Well the key things are timings of meals and exact, rather than estimated, quantities of foods are noted (or pictured), food types/brands are noted, and training sessions are also noted. For example look at these examples:

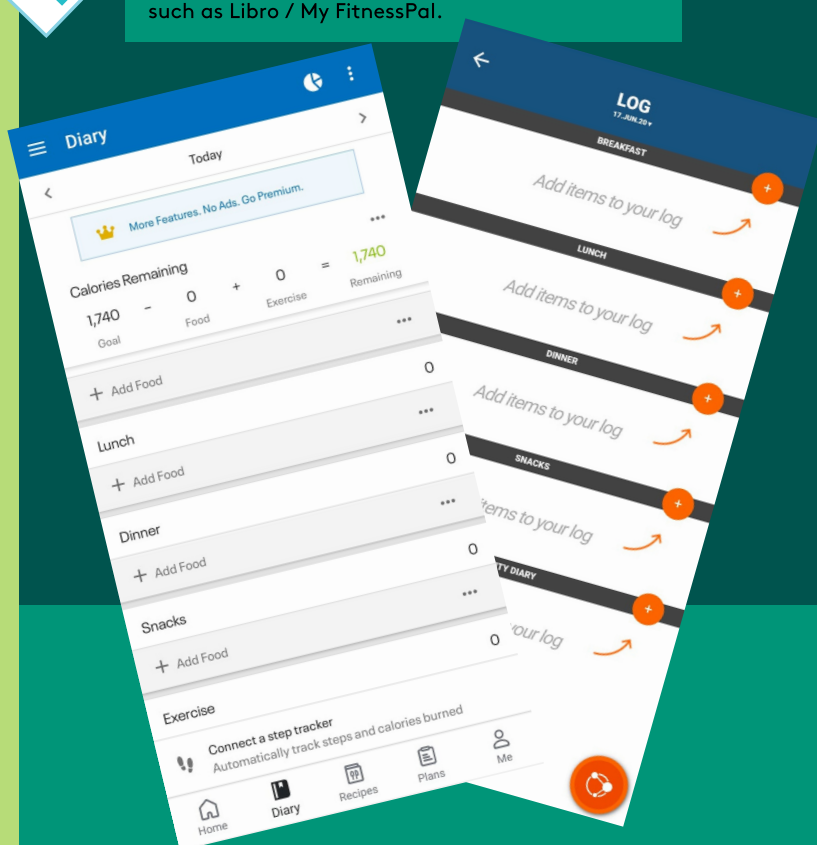
Sample 1 - post training shake

Sample 2 - 10am Gym Session, 11.30 Post training shake (200ml whole milk, 1 scoop whey, 1 banana, 1 teaspoon honey)

Sample 3: Yogurt and granola versus

Sample 4: 2 large dessertspoons low fat Greek yogurt and 3 dessertspoons of Lizi's Granola

Completing a food diary doesn't have to be an onerous task – if you don't have a food weighing scales, simply use household measures to record your food amounts, eg 1 cup of pasta uncooked, please don't guess! Or even easier, send a picture of your plate to your nutritionist and let them do the calculations – a 'snap and send' diary.



# Completing a Useful Food Diary

The Why, The What and The How

## The Good

Times provided

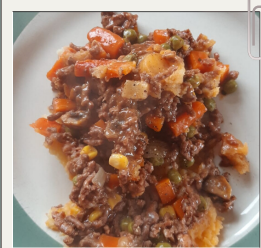
Training session  
time & type noted

Full disclosure

NOTE: This is just  
part of life, not  
something to hide

Specific weights &  
product names

All fluids included



Pictures of meals are really useful  
when weights & product names  
not available

## Top tips:

1. Use household measures if scales not available - eg 1 large dessertspoon; 1 handful of grapes
2. Take pictures of your meals / snacks
3. Include your training and meal times
4. Include all snacks and drinks - we are not judging your food intake, simply calculating your energy intake

## The Could Do Better

Poor detail  
No times, weight,  
brands or training  
information

Inaccurate or  
guessed weights







## RMR - What is it, how can we measure it and what does it tell us?

By Danielle Logue

Energy is required for all bodily functions. The total amount of energy expended in one day, total daily energy expenditure (TDEE), is the sum of resting metabolic rate/resting energy expenditure (RMR/REE), activity energy expenditure (AEE), non-exercise activity thermogenesis (NEAT), and the thermic effect of food (TEF). While RMR is a consistent contributor to TDEE, making up about 60-65% of daily energy expenditure, AEE can vary widely from day to day within a single person and between different individuals. In order to maintain energy balance, individuals must attempt to match energy intake with the amount of energy expended each day. Thus, maintaining energy balance is a primary focus of athletes and athletic professionals to ensure optimal energy is available to support training, recovery, and lean body mass.

REE includes all those 'behind the scenes' essential bodily functions, such as reproductive, heart, lung and brain function, but does not account for calories burned when sleeping. In instances when too little calories are consumed, a state of energy deficiency exists during which athletes can experience undesirable drop in RMR/REE along with a loss of fat free mass (FFM) and be at increased risk of injuries and illness.

When our energy intake fails to meet training demands, our bodies will adapt, and shut down bodily systems it deems less important for survival e.g. reproductive function which has a knock on effect on bone health. The body is smart; it will save energy for bodily processes necessary for survival (i.e., locomotion, cellular maintenance, and body temperature regulation) and away from those energetic processes deemed unnecessary for survival (i.e., growth and reproduction). So, this results in suppression of metabolism (RMR/REE), energy expenditure, and thyroid hormones, contributing to menstrual irregularities and increased risk of injury/illness.

In the Institute RMR can be measured via indirect calorimetry using a canopy hood. Testing will be carried out in the morning following overnight rest and in a fasted state. You will be instructed to lie on a bed for a 15-minute rest, in order to minimise errors in measuring RMR before the testing window. The measuring of RMR will last a total of 30 minutes, bringing the total resting time to 45 minutes. During the RMR test you are not allowed to move, talk or fall asleep and will be checked up on several times by SII head physiologist.

It goes without saying that RMR/REE is an important component for sports practitioners to assess as it can help the sports team identify who needs support around appropriate fuelling for training if there are signs of metabolic suppression.

Your sports nutritionist may or may not use this as part of your assessment, depending on what other information they have available to them. It is like another piece in the jigsaw puzzle to assess for energy deficiency, as is the food diary (see pages 2-3 for how to complete the perfect food diary). So, the next time you get your RMR assessed, remember that this will tell a greater story than the calories burned at rest and will help protect your health and performance.





## Recipe of the month - Beetroot & Walnut Salad

### You cant' 'beet' it - perfect for accompanying your BBQ!

by David Tobin      Prep Time: 10mins - Cook Time: 40mins (if using fresh beets) - Difficulty: Easy Serves: 4

#### Ingredients:

8 x beetroot, fresh – leave 2cm of the stem intact  
 90g ( $\frac{3}{4}$  cup) walnut halves  
 $\frac{1}{2}$  x tsp salt  
 2 bunches rocket leaves  
 100g goat's cheese or feta, crumbled  
 60ml ( $\frac{1}{4}$  cup) extra virgin olive oil  
 1 x tbsp red wine vinegar (or Balsamic)  
 Salt and Pepper, to taste  
 120g Protein of choice, to serve - chicken, chickpeas  
 or tuna works well

#### Method:

If using fresh beetroot: Preheat oven to 200°C. Use a fork to prick beetroot, then wrap each one in foil. Place on a baking tray and bake for 45 minutes or until a skewer easily goes through. Peel while beetroot is still warm and wear gloves to avoid staining your hands. Quarter each beetroot.

2. Combine the rocket and beetroot in a serving bowl.
3. Top with cheese and walnuts.
4. Combine oil and vinegar in a jar and drizzle over the salad.
5. Season with salt and pepper.
6. Add required amounts of protein to support your recovery.

## • BELIEVE • PERFORM • ACHIEVE •

- Laura Delany (Cricket) and Rachael Mulligan (IABA) trying last months recipe: Spice Bag Fake Away
- Remember to tag us via our Instagram BelievePerformAchieve account if you do try any of our recipes!



## Beetroot Hummus

### Ingredients:

- 1 Vacuum pack Beetroot
- 1 Cloves
- of garlic chopped small
- 4 Dessertspoons of Natural yoghurt
- Salt & pepper to taste
- Cumin (optional)

### Method:

Roughly chop the beetroot and the garlic.  
Place in the nurbullet and blitz until smooth but with still a little texture. You may need to add a spoon of the yogurt to achieve this.  
Stir in the remaining yogurt to give it a thick creamy consistency.  
Season to your liking with salt, pepper & cumin.  
Serve with crackers / porridge bread



## Salmon Fish Cakes

### Ingredients:

- 500g salmon fillets (finely chopped) OR tinned salmon, drained and flaked.
- 200g Sweet Potato; 200g Potato
- 1 x Tbsp dill; 1 x Tbsp parsley
- 3 spring onions, thinly sliced
- ½ cup Breadcrumbs (or oats) + extra for coating
- 1 egg, lightly whisked
- Salt & Pepper to taste
- Oil for cooking
- Side of Steamed Green Veg or Salad, to serve
- 4tbsp Greek Plain Yoghurt and 1tbsp of Wholegrain Mustard



## Salmon Fish Cakes

Prep time 20 mins; Cook time 10 mins; EASY; Makes 10 patties

### Method:

Chop the potatoes into quarters and place into a microwave safe dish with a little water added. Cook on high for 6 mins or until the potato is cooked through and soft.

Mash potato in a bowl and then add the salmon, herbs, onion, breadcrumbs and egg. Add salt and pepper to taste. Gently mix to combine.

Roll mix into 10 balls and coat with extra breadcrumbs.

If there is time, place balls on a plate and refrigerate for 30mins.

Heat the oil in a large frying pan over medium heat. Add half the salmon cakes and cook for 2-3 minutes each side or until golden brown and heated through. Transfer to a plate lined with paper towel. Repeat with remaining salmon cakes.

Meanwhile, make the side sauce by combining the yoghurt and mustard.

Divide salmon cakes among serving plates with sides and sauce.





## 10 Nutritional Facts on Milk

From the NDC, Picture credit: Conor McCabe

World Milk Day recently celebrated its 20th anniversary. To mark the occasion we have listed some of the nutritional properties of milk that you might not have known about!

1. Milk is naturally one of the most nutrient dense foods available; just 100ml is a source of 8 essential nutrients – protein, riboflavin, vitamin B12, calcium, iodine, potassium, phosphorus and pantothenic acid.
2. Three servings from the 'milk, yogurt and cheese' food group provides 100% of the recommended daily intake of vitamin B12. This vitamin is only found in foods of animal origin and contributes to normal energy metabolism, functioning of the nervous system and immune systems, cell division and the reduction of tiredness and fatigue.
3. Yogurt is produced by adding a special bacterial starter culture to fresh milk. It causes the milk to ferment, converting the naturally occurring milk sugar, lactose, into lactic acid. This gives natural yogurt its thick, smooth consistency and slightly tangy flavour.

4. The protein in milk is considered a 'complete' protein as it contains all of the essential amino acids. These are the building blocks that the body uses for growth and repair. Three servings from the 'milk, yogurt and cheese' food group across the day, provides 21g of protein.

5. Dairy foods are the main provider of iodine in the Irish diet, with three servings from the 'milk, yogurt and cheese' food group providing 100% of the recommended daily intake. Iodine contributes to normal cognitive function, energy metabolism, functioning of the nervous system, normal skin and normal thyroid function.

6. The lactose in milk is not classified in the same category as 'free' or 'added' sugars as it is a naturally occurring sugar. Therefore, it is not included in the sugar reduction guidelines. The calcium and phosphorus in milk contribute to the maintenance of normal teeth.

7. Milk is well known as an excellent source of calcium with a 200ml glass providing 31% of the recommended daily intake! Calcium is needed for the growth and maintenance of normal bones and teeth; and contributes to normal blood clotting, energy metabolism, muscle and nerve function.

8. Irish butter has a natural golden-yellow colour, due to its carotene content. The rich carotene pigment comes from grass, which forms the basis of an Irish cow's diet. The human body can convert carotene to vitamin A.

9. Cheese is made from the solid component of milk, known as the 'curd'. The maturation process, where cheese is 'ripened' for different lengths of time in different environments is what gives rise to the range of flavour depths and textures in cheese.

10. Milk is a source of nutrients which address the '3 R's' of post-exercise recovery: lactose which helps Refuel carbohydrate stores; protein which contributes to muscle Repair; and is a fluid with electrolytes to assist Rehydration.





We were delighted to see so many of you attempt last months Spice Bag Fakeaway Takeaway. This month we bring the 2nd in our recipe series from our partners at Boyne Valley. We hope to see lots more of you attempting this easy, but tasty noodle dish. Remember if you do make it please share your pictures with us and use the hashtags #BelievePerformAchieve and #fuellingirishsport



#### LEVEL OF DIFFICULTY



Simple

#### PREP TIME



15 mins

#### IDEAL FOR



Quick in-between sessions lunch or to make a more substantial recovery meal simply add an extra nest of noodles per portion.

#### INGREDIENTS

Here's a list of ingredients that you'll need to get in and prep before getting started!

80g of **MCDONNELLS ORIGINAL CURRY SAUCE** or **MCDONNELLS CHINESE CURRY SAUCE** powder

380ml of WATER

2 NEST OF EGG NOODLES (Thin or medium)

2 LARGE CHICKEN BREAST FILLETS, cut into strips

160g FROZEN PEAS

Bunch of SPRING ONIONS finely chopped

2 tbsp. SUNFLOWER OIL for frying



#### Nutritional Profile (per portion - serves 2)

Calories	529kcal
Carbohydrate	49g
Protein	42g
Fats	17g



**McDonnell's**

**MAKES FOOD  
TASTE GREAT**

# CHICKEN NOODLES

## HOW TO MAKE IT

4 simple steps to create these super tasty noodles!

- 1.** Bring medium size pan of salted water to the boil. Add noodles and cook on a medium heat for 3-4 minutes (depending on thickness of noodles), or until barely tender. Drain and stir in 1 tablespoon of vegetable oil.
- 2.** In large wok heat vegetable oil over a high heat add chicken strips and cook until golden all over for 5 minutes.
- 3.** Remove and set aside.
- 4.** Add half of the spring onion, peas, noodles, chicken and curry sauce and stir over medium heat for 2 minutes and serve with the other half of the spring onions sprinkled over the noodle dish.



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## TOP TIP

Remember you can add different / extra veg to help ensure you are getting your 7 Fruit & veg / day. With this one, I like to add sliced peppers. Don't be afraid to play around with recipes to suit your own preferences.



# THIS MONTH'S 'A DAY-IN-THE-LIFE': DIVER TANYA WATSON

Tanya is 18 years old and currently lives in Southampton. She is a 10m Platform diver and her proudest sporting achievement to date is finishing 5th at the World Youth Olympic Games in 2018. During lockdown Tanya has enjoyed learning how to cook. Prior to this, in between training 20 hours a week,

15 hours of college and everything else Tanya struggled to find the time to enjoy cooking. Her favourite meals are vegetable lasagne and a sausage bake (recipe below).



Many thanks to Tanya for taking the time to fill us in on what a typical day during lock-down has looked like from a nutrition perspective.

For breakfast Tanya had her usual Weetabix and a banana. Post training, she had a smoothie and lunch was a bagel with chicken followed by some fruit. Dinner was tacos.. with a piece of homemade millionaire shortbread for pudding.



## Tanya's Strawberry Ice Lollies

**Ingredients: (makes 6-8 ice lollies):**

- 1 small banana (approx 100g / 3.5 oz) very ripe, peeled and roughly chopped
- 200 g strawberries washed, hulled and roughly chopped
- 1.5 Tbsp honey or agave nectar
- 75 ml natural yogurt (can use plain protein yogurt)

**Method:**

1. Put all ingredients in blender and blitz until smooth
2. Pour into ice lolly moulds (or can use small cups and lolly sticks or anything that works as an alternative)
3. Freeze overnight, or until solid

## Favourite Meal:

**Sausage and Egg bake recipe: serves 2**

**Ingredients:**

- 6 herby, spicy or vegetarian sausages
- 1 onion, chopped finely
- 1 pepper, chopped
- 1 large carrot, chopped
- 1 clove of garlic, chopped finely
- 400g tin of chopped tomatoes
- 1 teaspoon of tomato puree
- 400g tin of cannellini beans/mixed beans/butter beans
- 1 teaspoon of dried basil
- 2 eggs
- mixed herbs to taste

**Method:**

1. Preheat oven to 180 °C /Gas 6. Grease a casserole dish.
2. Fry the sausages until browned. Remove from pan.
3. Fry the onion and garlic for 2-3 minutes, stirring frequently.
4. Add the tin of tomatoes, tomato puree, pepper and boiled carrots and stir and bring to boil. Simmer for 3 minutes.
5. Add the beans and continue to cook
6. Cut the sausages into bite size
7. pieces and add to the pan, stirring well. Then take off heat. Add basil and season well.
8. Pour mixture into casserole dish.
9. Break the eggs over the top of the mixture. Then bake in oven for 15-20 minutes until the eggs are cooked
10. Serve with potatoes or bread.

