

# SWIMMING

## EATING FOR YOUR SPORT

### YOUR SPORT:

Swimming demands strength, power and endurance from both the upper and lower body. It is a sport that can be enjoyed by anyone as either a hobby or at a competitive level, be it amateur or professional. Typically, swimmers specialise in one or two strokes including freestyle, breaststroke, backstroke and butterfly. Some swimmers will however, train specifically for the medley events which include all four strokes.

There are a variety of swimming events which range in distance from a 50m sprint, taking just over 20 seconds, to the 1500m event which takes over 14 minutes.

As well as these more standard events, some swimmers will participate in open water and ultra-endurance swimming.

Regular swimmers typically have muscular physiques and most competitive swimmers will undertake strength training alongside swimming training. This is important to ensure that overall body strength is balanced and lean muscle is maintained to help reduce drag in the water.

Swimming relies on both the aerobic and anaerobic energy systems. Training will aim to improve fitness on both levels. Sprint swimming relies heavily on the anaerobic phosphocreatine and glycolytic (lactic acid) energy systems, whereas races over two minutes will primarily use the aerobic energy system.

### TRAINING DIET:

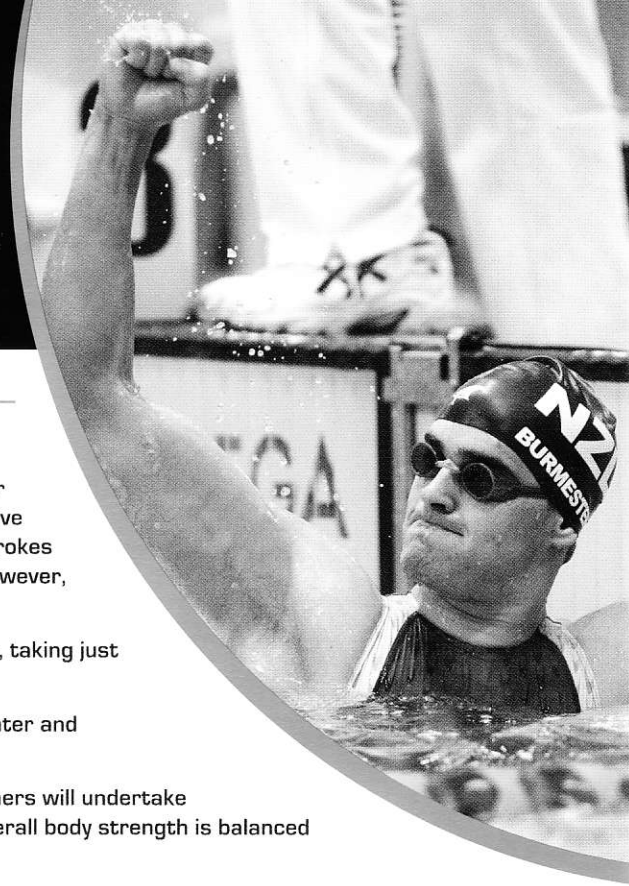
Swimmers need a balanced and varied diet including:

- Fruits and vegetables everyday; aim for a variety of colours
- Low fat dairy products, including milk, yoghurt and cheese

- Breads and cereals including pasta, rice, bread, rolled oats breakfast cereal, kumara, potatoes, noodles
- Lean meat, chicken, fish, eggs and other protein rich foods like tofu and pulses
- Healthy fats like vegetable oils, nuts, seeds and avocado

The main challenge facing swimmers is being able to get the right nutrition at the right time!

Training is often early in the morning and in the evening which commonly coincides with breakfast or dinner. Meals and snacks may therefore need to be organised in advance to ensure good nutritious meals



aren't missed. Taking snacks or meals to eat before and after training is an important routine for swimmers.

Ensure that your pantry is stocked and portable foods are kept wherever you can fit them (e.g. in the car, in your bag).

If you are training multiple times each day, a substantial recovery snack is important if the next main meal is not within thirty minutes of finishing training. This is to help replenish carbohydrate stores (glycogen) which are likely to have been depleted during your first session.

Dairy based snacks such as yoghurt, creamed rice or MILO made with low fat milk are good choices. Fruit, sandwiches, fruit buns and muesli bars may also be suitable.

### **CARBOHYDRATES**

Swimmers should aim to include carbohydrate foods and those with a lower glycemic index (GI) which provide excellent fuel for training. This includes many oat based cereals, grainy bread, basmati rice and pasta. Foods or drinks with a high GI can be helpful during and immediately after intense training (see GI sheet for more information). Low carbohydrate diets are not suitable for swimmers and can impact on performance and health.

### **PROTEIN**

Protein rich foods are important to include in all meals and most snacks. They keep muscles healthy and allow them to repair and recover after training. Protein rich foods include lean meat, skinless chicken, fish, eggs, tofu, low fat dairy products and legumes (e.g. lentils, chickpeas, kidney beans and baked beans).

Young swimmers, vegetarians and vegans are often at risk of having inadequate protein. For these groups, it is important to aim to include protein at all meals and all snacks. For more advice, contact an accredited Sports Nutritionist or Sports Dietitian.

### **FATS**

While fat intake should be moderate for swimmers who want to stay lean, some fat in the diet is important. It provides fat soluble vitamins and essential fatty acids which keep body cells healthy.

Aim to include small amounts of fat from a variety of foods such as nuts, seeds and avocado. Try to use unsaturated oils like canola, olive and rice bran in cooking rather than butter.

### **FRUIT AND VEGETABLES**

Plenty of fruits and vegetables are essential for good health as they provide important vitamins, minerals and antioxidants.

Fruit is also a good source of carbohydrate. The inclusion of fruit as part of breakfast, as snacks, and around training is important, as is including vegetables at both lunch and dinner. Try slicing a banana or kiwifruit onto your cereal, add dried fruit to salad or grated carrot and courgette into mince.



## A SAMPLE ONE DAY MEAL PLAN FOR A SWIMMER

### PRE MORNING TRAINING:

- Banana or piece of toast and jam

### DURING/AFTER TRAINING

- Water or sports drink if training more than 90 minutes

### BREAKFAST:

- Muesli or hot oats with low fat milk or yoghurt, and a piece of fruit OR
- If travelling, pack a combination of fresh fruit, milk drinks or fruit juice with yoghurt, cereal bars and sandwiches

### MORNING TEA:

- Crackers with hummus/cottage cheese OR
- Handful of dried fruit and nuts

### LUNCH:

- Filled roll or wholegrain sandwich OR
- Pasta/rice with tuna and vegetables
- Add a piece of fruit and / or yoghurt to each option

### AFTERNOON TEA:

- Low fat yoghurt and a piece of fruit

### DINNER:

- Lean meat and vegetable stir-fry with rice or noodles OR
- Spaghetti bolognese and a side salad OR
- Fish and oven baked chips with salad

### SUPPER:

- Hot MILO with low fat milk

### NUTRITIONIST'S NOTE

This meal is a general example only. It should be altered to suit individual energy requirements depending on age, gender and training load. For those who train at an elite level and/or twice or more a day additional pre training snacks and post training recovery food/drinks will be required. Contact a Sports Dietitian for guidance.

## NUTRITION PROFILE: MELISSA INGRAM

### Why do you think nutrition is important for your sport?

Swimmers train up to six hours a day so it is very important that we eat enough food to give us the energy we need, but also that we eat the right food at the right time of day. We need plenty of carbohydrates to burn during our training and we also need protein, particularly after training to assist our recovery and increase strength. As many swimmers also have to watch their weight, having a diet low in fat is also common.

### What are some healthy and tasty foods you recommend?

I make my own muesli mix with oats, dried apricots, raisins and nuts. It's healthier and cheaper than buying packaged muesli. I add mixed berries because they are high in antioxidants and low fat yoghurt to make it creamy. I also love pita pockets filled with lean meat and salad for lunch or dinner.



### KEY FOODS FOR A SWIMMER'S PANTRY

- ✓ Rice, pasta, couscous, noodles
- ✓ Wholegrain bread
- ✓ Tinned tuna/salmon
- ✓ Canned creamed rice
- ✓ Canned spaghetti/baked beans
- ✓ Dried and tinned fruit
- ✓ UNCLE TOBYS Rolled Oats
- ✓ CARNATION Light & Creamy Evaporated Milk
- ✓ Grain-based cereal/muesli
- ✓ Pretzels and rice-crackers
- ✓ Nuts/seeds
- ✓ Vegetable oil/spray oil
- ✓ MILO Energy Food Drink

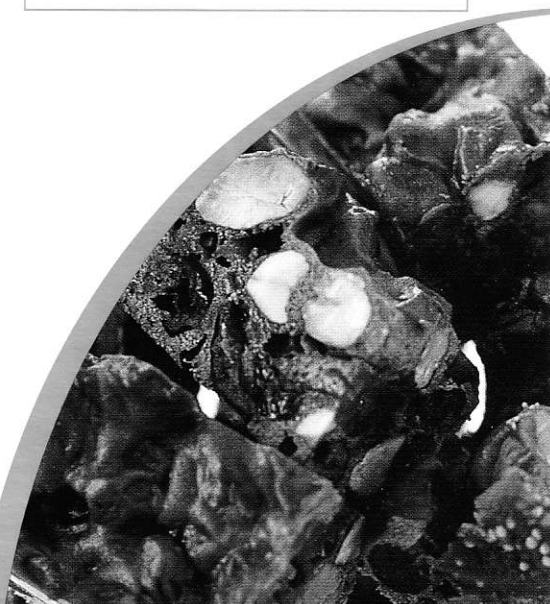
### KEY FOODS FOR A SWIMMER'S FRIDGE

- ✓ Low fat milk (green/yellow top)
- ✓ Low fat yoghurt
- ✓ Low fat cheese (cottage/Edam)
- ✓ Frozen vegetables
- ✓ Lean meat/sandwich meat
- ✓ Fresh fruit
- ✓ Fresh vegetables
- ✓ Hummus

### COACHES NUTRITION TIP

#### Scott Talbot Cameron – Elite coach & former NZ swimmer

I find that lots of small meals and snacks throughout the day helps fuel a swimmer while making sure they don't have too much bulk in their stomach when they are trying to train or sleep.



## COMPETITION DAY EATING

Swimming tournaments are generally a range of events that take place over several days. Meals and snacks should be regular over these days so that you have sufficient fuel in your body for each race and to ensure you recover between races. It is a good idea to trial different types of meals and snacks around training and find out what will work best for you on the day of competition. Trying new foods on a race day is not recommended.

Preparing for an event is often a team effort for the coach, athlete and their family/friends. For events that are held away from home, pre-planning is required to ensure food and fluid is organised for travel, before, during and after the event as well as at any accommodation that is away from home.

Taking food and drinks with you to competitions is the easiest way to be able to have what works for you. Although some event centres will have food available, you cannot be sure that the choices will be appropriate.

Fluid should be consumed regularly throughout the day. Keep a water bottle handy and take regular sips. The time between races will often dictate the size of the meal and snack that you eat. If you have three to four hours in-between races then larger meals such as filled rolls or pasta will be tolerated. In short breaks aim for small snacks that are easy to digest like yoghurt, muesli bars and fruit.

### SPECIAL ISSUES AND REQUIREMENTS FOR SWIMMING:

- Swimmers can be at risk of low iron stores and anaemia, particularly young females. The best source of iron is red meat. Other sources include seafood, fortified breakfast cereals, dried fruit, wholegrain breads, legumes,

green leafy vegetables and MILO. Supplements should only be taken if a blood test reveals low iron stores, and under medical supervision.

- Being in the water, swimmers aren't aware that they are sweating and as a result, they often don't drink as much as they need to. Maintaining a good level of hydration is essential for good performance in training and competition. Keep a water bottle at the end of the pool and take regular sips during training. Also, make sure you keep a water bottle with you throughout the day and drink regularly.
- Recovery is very important for swimmers, particularly with multiple training sessions each day. Using sports drinks during intense training, plus recovery snacks or drinks along with plenty of fluid can help with this.
- If fat loss is a goal, be sure to monitor portion sizes and keep excess fat, alcohol and sugar to a minimum.

## CHICKEN LAKSA

Serves 4

olive or canola oil spray  
 250g thinly sliced skinless chicken breast fillet  
 1 onion, chopped  
 1 tsp crushed red chilli  
 1 tbsp chopped lemon grass  
 2 tsp grated fresh root ginger  
 4 cups water  
 1 tbsp MAGGI Chicken Stock  
 125g rice stick noodles  
 ½ red pepper, sliced  
 375mL can CARNATION Coconut Evaporated Milk  
 1 cup mung bean sprouts  
 2 tbsp fish sauce  
 fresh coriander leaves to garnish

- Spray a large saucepan with oil and heat. Add chicken, onion, chilli, lemon grass and ginger, stir fry for 2 minutes.
- Add water and stock powder. Bring to boil, stirring.
- Add noodles and red pepper. Simmer for 5 minutes, stirring occasionally.
- Stir in evaporated milk and heat through.
- Stir in bean sprouts and fish sauce. Serve garnished with fresh coriander.

ANALYSIS	per serve
Energy (kJ)	1348
Carbohydrate (g)	47
Protein (g)	23
Fat (g)	6



This recipe is from the *Fit Food for Winners* cookbook. To order your copy, visit [www.nestle.co.nz](http://www.nestle.co.nz).

For more information and to obtain further copies of any of the *Eating for Your Sport* Nutrition Advice sheets, visit [www.nutrition.nestle.co.nz](http://www.nutrition.nestle.co.nz) or [www.mish.org.nz](http://www.mish.org.nz)

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