Advanced Nutrition System For Gaelic Games

Player Resource WorkBook

www.gaelicperformance.com
After natural talent and appropriate training, an adequate diet is known to be the next most important element for enhancing the training and performance of sports people.

An Introduction
The aim of this workbook is to examine sports nutrition and the GAA player in realistic and practical terms. The reality is that many GAA players don’t understand what food to eat to improve performance, recover from intense training sessions and to prepare for match day demands. The benefits of a sound diet are most obvious with regard to GAA matches, where nutrition strategies help players perform at their best by reducing or delaying the onset of factors that would otherwise cause fatigue. The daily diet plays a major role as it supply’s athletes with the fuel and nutrients needed to optimise adaptations achieved during training and to recover quickly between workouts.

What is Sports Nutrition?
Sports nutrition is the nutritional guidelines involving primarily carbohydrate, protein, fats and fluid intake that are used to improve athletic performance. Optimal nutrition improves training, match performance and recovery from exercise.

Good sports nutrition programmes should:
• Improve body composition
• Improve overall health
• NB – Improve sporting performance

Reasons to follow correct nutritional strategies
• Delay onset of fatigue
• Maximise recovery
• Accelerate recovery
• Combat delayed onset muscle soreness
• May prevent injury
• Improves immune function

“The right diet can improve your performance and help you recover quickly for the next workout.” – Tiger Woods
The Basics

- A calorie is the unit of energy used in terms of energy intake and expenditure.
- 1 kilocalorie = kcal = calorie
- The energy content of most foods can be found on its food label
- Every item of food that is consumed provides energy and every movement of the body uses up energy.
- Achieving an energy balance is one of the most fundamental requirements for an athlete's diet.

Food Types

Carbohydrate—needed for energy
- 4 kcal per gram
- e.g., Bread, potato, pasta, grains, breakfast cereal, sweets, fruits, soft drinks
- Broken down into a sugar called glucose which is used directly as a “fuel” by the muscles

Protein—needed for building, maintenance and repair of cells
- 4 kcal per gram
- e.g., Meats, fish, eggs, dairy, beans, nuts

Fat—Needed in only small amounts but needed for many bodily processes
- 9 kcal per gram
- e.g., Red meat, Some dairy products, dessert foods, mayonnaise, cooking oils

“**My nutrition is very important.**” – Michael Jordan
The Food Pyramid
Energy Balance

The recommended average daily intake for a typical adult is 2000-3000 kcal.

Every training session or match increases the amount of energy you expend. Therefore, in these instances you must increase your food intake proportionately.

**Intense exercise, training and GAA performance results in**

- Greater daily energy expenditure
- Increased carbohydrate usage
- Increased fluid loss primarily through sweating
- Increased requirements for certain vitamins and minerals

Therefore it is imperative that a player consumes sufficient energy and nutrients from food to ensure the body’s ability to function optimally is not impaired.
### So what counts as a portion?

Many players don’t understand what the recommended portion size is. Below is a simple chart of the foods and simple guidelines to the correct portion size.

<table>
<thead>
<tr>
<th>Category</th>
<th>Portions</th>
<th>Portion Size &amp; Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vegetables</td>
<td>3-5</td>
<td>80g (about amount you can hold in palm of your hand)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Broccoli, Cauliflower, carrots, Tomatoes, other vegetables</td>
</tr>
<tr>
<td>Fruit</td>
<td>2-4</td>
<td>80g (about the size a tennis ball)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Apple, pear, banana, Peach, strawberries (8-10), grapes</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(12-16)</td>
</tr>
<tr>
<td>Potatoes/Grains</td>
<td>4-6</td>
<td>about the size of a clenched fist</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Bread (2 slices 60g), roll/ bagel/ wrap (1 item 60g),</td>
</tr>
<tr>
<td></td>
<td></td>
<td>pasta/rice (5 tablespoons 180g), breakfast cereal (1 bowl</td>
</tr>
<tr>
<td></td>
<td></td>
<td>40-50g), potatoes (1 fist sized)</td>
</tr>
<tr>
<td>Calcium rich foods</td>
<td>2-4</td>
<td>200ml milk, milk, Yoghurt, cheese, tofu</td>
</tr>
<tr>
<td>Protein-rich foods</td>
<td>2-4</td>
<td>size of deck of cards (70g), lean meat, poultry,</td>
</tr>
<tr>
<td></td>
<td></td>
<td>fish, eggs (2), lentils, beans (5 tablespoons)</td>
</tr>
<tr>
<td>Healthy fats and oils</td>
<td>1-2</td>
<td>1 tablespoon nuts and seeds, seed oils, Nut oils, avocado</td>
</tr>
</tbody>
</table>
Variety is important
It is important that a diet is varied to ensure that a balance is met for all vitamins and minerals. If not a situation may arise where certain energy-dense foods are not always nutrient-dense

The most common reasons for a lack of variety include:

• Eating convenience foods
• Not eating enough fruit or vegetables
• Eating the same foods at the same time each day
• Inability to prepare different dishes/recipes

Tips for increasing variety
• Include wholesome cereals such as wholemeal, multi-grain or seeded breads, fibre rich cereals, brown rice and wholemeal pasta
• Select a wide variety of fruit and vegetables
  • Add range of colourful vegetables to stir fry and meals – the more colour the better
  • Include salad/vegetable choices in sandwiches
• Very important is to PLAN. Plan ahead so that you don’t have to rely on take-always when you are busy with work, study and training.

Daily Meal Timing
In order to achieve high intakes of energy and carbohydrate you must eat at regular intervals throughout the day.

The order and size of the each meal is not particularly important. Judge when and what is required depending on your training schedule.

There should be at least 5 and anything up to 9 eating occasions on a day. As a rule of thumb this will typically involve 3 major meals with rest incorporating snacks.
Fuelling before, during and after exercise

• Loss of fluid and reduction in body’s carbohydrate stores are the two major causes of fatigue in Gaelic football

• Carbohydrate is the most important fuel for Gaelic Football but the supply is limited

Pre-match Meal
As a rule of thumb, try to eat a high carbohydrate meal on the day prior to competition

In 6 hrs before, eat 2-4g/kg body weight

Therefore a 12st player must eat 150-300g carbohydrate

This can be easily achieved in two light meals

Your last meal before playing should be between 2 an 4 hour prior

If you must eat close to throw in, you should eat easily digestible foods like bread, Jaffa cakes, sugary sweets

If you eat further away it is ok to eat a larger meal of pasta/rice, vegetables and meat.

Recommendation – if the game is at 2pm try to fit in two meals that day prior to the game. This further increases your chances of delaying onset of fatigue

A rough guideline for carbohydrate intake is between 150-250g on the morning of a match, with increasing quantities depending on how late throw-in is.

Tip - Experiment in training what works best for you
Pre-training meals
2-4 hours before exercise

- Sandwich/roll/bagel/wrap filled with chicken, fish, cheese, egg and salad
- Baked potato with beans, cheese, tuna, coleslaw or chicken
- Pasta with tomato pasta sauce, cheese and vegetables
- Chicken with rice and salad
- Vegetable stir fry with noodles/rice
- Chicken and vegetable casserole with potato
- Porridge made with milk
- Wholegrain cereal

Pre-training snacks
1-2 hours before exercise

- Fresh fruit
- Dried dates/raisins
- Smoothie (home made or ready bought)
- Yoghurt
- Shake (homemade or meal replacement shake)
- Energy or nutrition bar
- Cereal bar/breakfast bar
- Fruit juice

After exercise
Player should eat as soon as possible after training

- High carbohydrate meal within the first 30mins. Avail of the window of opportunity where recovery can be accelerated and optimised
- Make sure to consume a combination of fluids and solid foods in the initial recovery period

- Tip – A recovery drink (combination of carbohydrate, protein and electrolytes) is the best option. See section on PAS Recovery Drink later

- Recovery is vital within this period and will be crucial in influencing performance in next training session/match.
- Be aware that the recovery process begins after training and may last anything between 24-72 hrs depending on duration, intensity and time of season of training.
The **window of opportunity** is the first 30-60 minutes post training/matches when the body’s muscles can enhance nutrient absorption and accelerate recovery. This window of opportunity is seen as a chance for the player to supply the muscles with nutrients so they can adapt to and recompensate to a higher fitness level. Inability to take advantage of this window can lead to staleness, inability to increase training intensity, fatigue and in some cases injury.

**Alcohol and the GAA Player**

It’s understandable that in a certain social situations GAA players are going to consume alcohol. There is no reason why you cannot enjoy alcohol in moderation when the time is appropriate without it having detrimental effects on performance.

Below is some information and advice on alcohol consumption for the GAA player.

- Alcohol has an energy value of 7kcal/g.
- However, players must understand that the energy got from alcohol cannot be used to provide fuel (glycogen).
- Alcohol is “fattening”- Alcohol is a high energy (and nutrient poor) fluid and should be restricted or kept to a minimum when a player is attempting to reduce body weight.
- Many alcoholic drinks contain sugars and other carbohydrates, which increase the calorie content further.
- Alcohol in the post-exercise recovery period has detrimental effects on rehydration, glycogen (fuel) restoration and repair of muscle damage.

**Tips**

- Before consuming any alcohol post training or matches ensure to eat a high carbohydrate meal to aid recovery.
- Intersperse alcohol drinks with water to delay intoxication
- Mix your alcohol drinks (e.g., Wine, spirits) with water or low calorie mixers
- Set yourself a safe limit for the night - keep a count of your alcohol intake when you go out.
- Drink at least 500ml water before going to bed
- Do not drink on an empty stomach as this speeds up alcohol absorption
Hydration and the GAA player

- Dehydration and loss of body fluids will have an adverse affect on your physical performance. Training will be much harder and you will suffer fatigue sooner.

- Sweating is a major route of fluid loss through the skin.

- Normal daily intake is approx. 2 litres

- More is needed for a sportsperson approx. 4 litres depending on amount of training and sweating done during training.

- Any form of physical work or activity will increase this again such as warm offices, air conditioned labs, building sites etc

- Tip: The easiest way to ensure adequate of fluid consumption is to fill a 2 litre bottle of water at the start of each day and try fill it up half way through the day again.

- Pee Test – simply check your colour of urine with the chart displayed below to check your hydration status.
A sensation of thirst indicates that you are already more than 1% dehydrated. This subsequently leads to decreases in performance.

Common signs of dehydration include nausea, dizziness, irritability, cramps, unusual fatigue, dry mouth, muscle soreness, decrements in performance.

Don’t forget – All fluids count towards your daily intake: water, milk, juice soft drinks, sports drinks however, remember that some are better than others.
**Hydration - Before training/matches**

Your main priority is to insure that you are well hydrated before exercise. Training or playing matches in a dehydrated state will affect your performance and leave you at a competitive advantage.

Ensure urine colour is clear

Try to avoid tea/coffee if possible 4 hours prior to throw-in

A good guide is try to drink 1 litre of water with breakfast and a half litre every 2 hrs prior to throw in

It is recommended that you drink between 450-600ml 20 mins before training

**Hydration - During exercise**

As soon as you start exercising you will lose fluid so aim to offset fluid losses but drinking at regular intervals.

Try to drink approximately 800ml per hour. This is approx 150-200ml every 15mins.

It is recommended that you drink cool drinks (15-22°C) as they are more palatable
After exercise - Rehydration

Dehydration leads to mental and physical fatigue and increases the chances of certain injuries and an increase in body temperature which negatively affects performance. Therefore it is vital that an athlete takes rehydration seriously.

Guidelines to follow:

• For every kg of weight lost through training, 150% must be replaced. Therefore, if a player loses 2 kg of body weight you must replace it by 3 litres before full hydration status is achieved.

• This volume should be consumed 4-6 hours post training or as much as you feel comfortable with.

Method to assess your water loss from training:

• Get weighing scales
• Weight yourself in minimal clothing before training
• Weight yourself in similar clothing post training
• The difference in kg equates to the amount of litres lost

Sports Drinks

Some players prefer fluid intake in the form of isotonic sports drink: Lucozade Sport, Club Energiser

Sports drinks can benefit your performance during any training session or match situation lasting longer than 1 hour.

Sports drinks come as 6% carbohydrate solutions. Some players find these too sweet - solution to this problem is mixing a 500ml bottle of sports drink with 500ml of water to give a 3% solution.

How to make your own sports drink

Mix
250ml of regular fruit squash/cordial
750 ml of water
a pinch of salt

With Mi-Wadi, this gives 50g of CHO per litre (5%)
Summary

➢ It’s critical that a player replaces sweat losses and provides added carbohydrate.

➢ Fluid is the most important, then carbohydrate.

➢ Remember from beginning of the warm-up until the end of the game usually lasts around 2 hours.

➢ Try to begin the match in a hydrated state.

➢ Try to drink 450ml of water 20 mins before throw-in/training.

➢ Try to consume approximately 150ml of water every 15 mins if possible.

➢ Remember to replace 150% of the fluid you have lost. 1kg = 1.5 lites.
Influence of training *time* and *training type*

What and when you eat can often be determined by your training schedule. If you are serious about preparation for training and competition then meal times must be carefully selected to allow for optimal performance.

- Field based training – 1-2 hours prior to
- Gym training – can be between 15-60 mins

To ensure accelerated recovery (window of opportunity) and subsequent optimal performance

- Field based – immediately after, high carbohydrate and protein (Pro Athlete Supplementation Recovery Drink)
- Gym training – immediately post workout – high energy with high protein content

**Gym sessions**

Widespread of protein supplementation has considerable scientific backing post workout. Has been proven that protein supplementation can reduce protein breakdown in muscles and facilitate skeletal muscle growth.

**Pre workout meal**

Typical recommendations are to eat 30-50g carbohydrate, 5-10g protein immediately before a gym session. This can be easily achieved by 2 slices of beans on toast.

**Post workout meal**

Typical recommendations are to eat 80-120g carbohydrate and 20-40g protein post workout.

This can be easily achieved by any nutritious lunch/dinner and some recovery drinks.
Decreasing or reducing body fat can be advantageous to performance in many sports and GAA is no different. Excess body fat can affect strength, speed and endurance. In essence what you want to do is reduce your body fat while maintaining lean muscle which should lead to improvements in performance.

Calculating my body mass index
The body mass index can be used to classify different grades of weights. It can be calculated by dividing the person’s weight in kg by the square of his or her height in metres:

\[ \frac{\text{kg}}{\text{m}^2} \]

BMI Categories

<table>
<thead>
<tr>
<th>Category</th>
<th>BMI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Underweight</td>
<td>&lt; 18.5</td>
</tr>
<tr>
<td>Ideal</td>
<td>18.5 – 24.9</td>
</tr>
<tr>
<td>Overweight</td>
<td>25 – 29.9</td>
</tr>
<tr>
<td>Obese</td>
<td>30 – 39.9</td>
</tr>
</tbody>
</table>

However, it’s important to remember that BMI doesn’t give information about body composition therefore in many cases it is not applicable to sportspeople.

Can I train as hard when I’m trying to lose weight?
Some weight loss diets don’t provide enough calories to support intense training. The current recommendation is to reduce your calorie intake by 10-20% (ACSM Guidelines). This should produce a weight loss in the region of 0.5kg per week without the player feeling deprived, tired or over hungry.

How much carbohydrate, protein and fat should I consume for weight loss

Carbohydrate
Ideally 4-7 g/kg body weight daily if you want to maintain your usual training volume and intensity.

Protein
Ideally 1.6 g/kg body weight is recommended on a fat loss programme which can offset lean muscle loss. For example a 75 kg player should consume 120 g protein per day. In other words you should maintain or slightly increase your protein intake and cut calories from carbohydrate and fat sources.

Speeding up fat loss
For the GAA player wanting to speed up fat loss extra aerobic exercise should be completed on top of regular training. Aerobic exercise at 55-75% of VO2 max is optimal for fat burning.
Weight loss and the GAA Player

Tips for Weight loss

1 – Set realistic goals
Before embarking on weight loss strategies try to write down your goals. It has been proven that writing down your intentions, you are more likely to turn them into actions.

2 - Aim to lose no more than 0.5kg/week
Remember that faster weight loss usually suggests a loss of lean muscle tissue. This would involve an energy deficit of 3500 kcals per week. This involves eating 500ml fewer calories per day for a week to lose 0.5 kg. This can be easily achieved by eating a well-balanced and nutritious diet.

3 - Keep a food diary
Keeping a record of your daily food and drink intake is a good way to evaluate your present eating habits. Your food diary should highlight the need for important nutrients and indicate if it is well balanced.

4 - Trim fat off food (especially saturated fat)
Cut down on foods high in saturated fats – butter, margarine, fried foods, fatty meats, burgers, pastry dishes, biscuits, chocolate.

5 - Include healthy fats
Don’t cut fat out of your diet completely. Nuts seeds and oily fish are recommended.

6 – Eat more fibre
Fibre slows down the emptying of food form your stomach and helps to keep you feeling full.

7 – Eat regularly and frequently
Plan to eat at least 5 times a day and at regular intervals. This does not mean increasing the amount eating but eating moderately sized meals or snacks more frequently.

8 – Make gradual lifestyle changes
Long-term weight management can be achieved with healthy eating and regular exercise.
Lean weight gain can be achieved by combining a consistent well-planned resistance-training programme with a well balanced diet.

What type of training is best for muscle growth?
Resistance training (weight training) is the best way to stimulate muscle growth. Fastest gains in size and strength can be achieved by lifting heavy weights that can be lifted strictly 3-5 reps per set.

What type of exercises are best for weight gain?
Compound exercises such as squat, bench press, shoulder press and lateral pull down as these work the largest muscle groups in the body. These exercises stimulate the largest numbers of muscles in one movement and therefore are the most effective way to gain muscle mass.

How much should I eat?

Calories - Increase your calorie intake by 20%. In practice most players need to add roughly 500kcal to their diet.

Carbohydrate – on non-training days aim to eat 5-7 g/kg of body weight. On training days 7-10 g/kg of body weight is recommended. In theory aim to eat 50-100g extra of carbohydrate per day.

Protein - Recommendation for strength training is 1.4-1.7 g/kg body weight per day. Studies have shown that increasing this intake above 2.0 g/kg body weight produces no further benefit.

Optimal post-workout meal should comprise of at least 30g protein and 60g carbohydrate. This can be achieved my a large meal or a recovery drink.

Weight gain tips
• Increase you meal frequency – eat at least 3 meals per day and 3 snacks
• Eat regularly – every 2-3 hours
• Plan nutritious high caloric low bulk snacks e.g. Shakes, smoothies, yoghurt, nuts
• Eat larger meals
• If you are finding it hard to eat enough food, have meal replacement drinks to increase your carbohydrate and protein intake
• Creatine supplementation may be an option – see section on sport supplements
Simple scientific knowledge of the physiological process of recovery
Gaelic Football, although it still holds an amateur status, the sport is increasingly becoming more professional with coaches and players alike constantly searching for new techniques and sports science advice in order to gain an edge over competitors. An area that is constantly evolving is the area of recovery. Players spend more time in recovery than they do in training. Therefore, it is important that correct procedures are in place to allow sufficient recovery from high-intensity exercise and optimal subsequent performance. It is believed that 12% of training done is wasted by what athletes eat when they go home from training.

Scientific Background and Insight
Muscle glycogen is the primary fuel source used during GAA matches and training. After intense strenuous exercise such as training or games, glycogen stores become depleted, and players become fatigued. Therefore, it is believed that optimal performance relies on high pre-exercise muscle glycogen levels. Think of glycogen as your “fuel” for the car. If you have no “fuel,” the car won’t move. The same applies with glycogen stores and the athlete. The athlete will not have “fuel” to perform at a high level if correct nutritional strategies are not in place. At the moment within the sporting arena, recovery drinks such as Pro Athlete Supplementation Recovery Drink are the first line of recovery.
Sneaking calories out of a players diet

Often players following strict diet regimes still find it hard to shift that extra bit of weight. A common misconception is that players must starve themselves in order to loose that extra bit of fat. Often there is a simple substitute that will allow the player to eat the same amount but take in less calories. Here are a few foods that we can substitute to help sneak calories out of your diet.

**Dairy** – Whole fat (more calories) vs. low fat (fewer calories)

**Cooking oils** – A few tablespoons of cooking oil or butter (more calories) vs. cooking spray (fewer calories)

**Snack foods** – Beware of the snack foods. Its very easy to snack yourself to an extra few hundred calories with crisps, nuts with even noticing it.

**Dressings and sauces** – these can easily increase the calorie content of your meal by 50% or more if your not careful. Good if you want to gain wait but bad if you want to lose it.

**Eggs** – Whole eggs and yokes (more calories) vs. whites only (fewer calories)

**Meats** – Extra lean (95% lean) vs. regular fat (70% lean) can triple your calorie intake in a given meal. 100g of extra lean beef is only 110 calories vs. 330 calories for regular fat beef. And you probably would feel any fuller after the 70% lean vs. the 95% lean.

Some additional guidance to rid fat from the diet

• Grill, bake, boil, steam, poach foods instead of frying
• Use minimal amount of cooking oils to lubricate cooking pans
• Roast potatoes + veg using spray oil
• Avoid adding butter, margarine or mayo to veg, potatoes, pasta
• Remove all visible fat from meat
• Drain fat from mince
• Used reduced fat/low fat spread (one low in saturates)
• Use semi-skimmed milk instead of full fat
• Keep hidden sources of fat to a minimum. Particular foods to watch are pastry, pies, biscuits, cakes and meat products such as sausages and burgers.
• Choose low fat oven chips or make bake your own (see recipe sections)
Tips for the Diet

Tips for reducing salt from diet

• Avoid adding salt directly to food

• Choose breakfast cereals with care. Compare labels and choose product with the lowest sodium content.

• Reduce or avoid salt in cooking. Substitute with herbs, spices, garlic etc.

• Use fewer processed foods from jars, cans, packets and cartons.

• Avoid high salted foods e.g. cheese, crisps, savoury snacks, salted foods (salted peanuts) smoke fish, preserved sausage (salami)

Tips for increasing fibre intake

• Eat more wholegrain bread of high fibre white bread

• Eat wholegrain breakfast cereals or those that contain bran or oats

• Eat more brown rice and whole-wheat pasta

• Eat more fresh fruit and vegetables
It's understandable that some people don't know how much carbohydrate is contained in each item of food. Here is a list of some of the carbohydrate foods that you may eat to help you as a guide.

50g of carbohydrate is provided by the following foods

- 1-2 cups breakfast cereal + skimmed milk
- 2 cups of cooked porridge with milk
- 4-5 weetabix biscuits
- 2 English muffins
- 3-4 slices of bread
- 2-3 slices of thick sliced bread
- 250-300ml of fruit smoothie
- 200g of yoghurt + cereal/breakfast bar
- 60g sports bar + 250ml sports drink
- 2 potatoes
- 2 cups of pasta
- 1 cup of rice
- 1 mid-sized tin of baked beans
- 2 cups of fruit salad
- 2 slices of toast with jam
- 2 Mexican wraps
- 2 handfuls of raisins
- 1 ½ pack of wine gums
- 1 ½ Turkish delight
- 5-6 Jaffa cakes
- 2 bananas
Shopping List – One week shopping list

For those players that are at college or living away from home Monday to Friday here is a guideline of some of the foods that should be in your shopping trolley

• 750g of whole-wheat cereal
• 2-3 litres of milk (low fat or semi-skimmed)
• 1-2 loaves of wholegrain brown bread
• 10 items of fruit (apples, bananas, oranges)
• punnet of mushrooms
• 2 onions
• head of lettuce
• 1-2 tomatoes
• broccoli
• 3 carrots
• 1 can sweetcorn
• low fat cheese
• ½ dozen eggs
• 1 can of tuna
• 1 pound of mince
• 2 packet off baked beans
• chicken breasts
• Jars of sauce for bolognaise, chilli
• 500g of pasta
• 500g of brown rice
• low fat yoghurt
• Jaffa cakes
• Low fat butter
• Low fat mayonnaise
• Packet of ham, chicken or turkey
Sports Supplements

Supplements is widespread and accepted practice among GAA players with a high prevalence of use.

**Reasons why GAA players take supplements**
They are convenient and practical means of meeting nutrient requirements that are necessary for optimising training and recovery.

They include nutrients in large quantities which aid recovery and preparation for training/matches.

They contain ingredients that directly enhance performance and maintain or restore immune function.

**Supplements for recovery**
Meal replacement products that contain protein, carbohydrate, vitamins and minerals are considered optimal for recovery from high intensity training and preparation for matches. Supplements with a 2:1 ratio of carbohydrate (60g):protein (30g) is considered the best combination recovery supplement for GAA players. This benefits subsequent performance by aiding muscular growth and accelerating recovery.

**Potential Benefits**
- Allows the player to recover quicker and more efficiently ensuring optimal performance in next training session
- Fully comprehensive nutrient formula removes the need for any additional products post-training
- Restores glycogen stores (“fuel”) rapidly which is strongly linked to exercise performance
- Has a “placebo effect” – may offer a psychological boost
Creatine
Creatine is a product that many players turn to in an effort to “bulk up”, become more powerful and hence improve performance.

But what is creatine?
It’s an energy rich compound that fuels your muscles during high intensity exercise such as lifting weights or sprinting.

Potential benefits

Enables you sustain all out effort longer and recover faster between sets
May be beneficial for training that involves repeated high-intensity sets.
May increase time to fatigue

Creatine supplementation is usually associated with weight gains. Depending on your physical conditioning and your own body weight objectives, creatine may be advantageous or harmful. Weight gain is due to retention of water in the muscle cells and increased muscle tissue.

Potential side effects
There are anecdotal reports of nausea, gastrointestinal upset, headaches, and muscle cramping strains linked to creatine supplementation.

Creatine supplementation should be limited to well-developed players. Young players are able to make substantial gains in performance through maturation in age, training and a well balanced diet.
Meal Plans

Club Sandwich

2 slices of wholemeal bread, toasted
1 tablespoon of low fat mayo
Some lettuce and tomato
150g of chicken/turkey-white meat only
1 slice of reduced fat cheese
50g shaved ham

Analysis per serving

| Energy | 496 kcal |
| CHO (g) | 56 g |
| Protein (g) | 33 g |
| Fat (g) | 15 g |

Chilli Chicken and Rice

1 onion, fine sliced
300g chicken mince
2 teaspoons minced garlic
1 red pepper, fine chopped
1-2 tablespoons sweet chilli sauce
1 cup of long grain white/brown rice
Some iceberg lettuce

Add oil to a frying pan and heat. Add the onion and cook for 2 mins. Then add the chicken mince and garlic until browned. Add the pepper and cook for 3 mins more, stirring frequently. Add the sweet chilli sauce and allow to simmer for 5 mins.

Analysis per serving

| Energy (kcal) | 385 kcal |
| Carbohydrate (g) | 67 g |
| Protein (g) | 21 g |
| Fat (g) | 4 g |
Oven baked chips (the healthy way to enjoy chips)

Olive oil
2 potatoes, 250g each, scrubbed and clean

Pre-heat oven to 230°C. Lightly add some oil to baking trays. Cut potatoes into thin slices (about 3mm thick). Place on tray in a single layer. Spray very lightly with oil. Bake for 25-30 mins until crisp and golden brown. Depending on the oven, be careful that the chips don’t stick to the baking tray. If they do peel off with a butter knife.

Analysis per serving

<table>
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<tr>
<th>Nutrient</th>
<th>Amount</th>
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<tr>
<td>Energy (kcal)</td>
<td>428</td>
</tr>
<tr>
<td>Carbohydrate (g)</td>
<td>66</td>
</tr>
<tr>
<td>Protein (g)</td>
<td>12</td>
</tr>
<tr>
<td>Fat (g)</td>
<td>12</td>
</tr>
</tbody>
</table>

Spaghetti bolognaise

1 onion and some garlic chopped
200g of lean beef mince
200g mushrooms, sliced
1 pepper sliced
825g of can crushed tomatoes
2 tablespoons of tomato paste
250ml of beef stock
500g of spaghetti

Add oil to the pan and heat. Add onion and heat over medium heat for 3 mins. Add garlic, then the beef mince and cook for approx. 5 mins. Then add the mushrooms, crushed tomatoes, tomato paste and beef stock. Bring to the boil and allow to simmer for a few minutes stirring regularly. Add pasta to the contents of the pan after about 10 mins and serve.

Analysis per serving

<table>
<thead>
<tr>
<th>Nutrient</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Energy (kcal)</td>
<td>625</td>
</tr>
<tr>
<td>Carbohydrate (g)</td>
<td>95</td>
</tr>
<tr>
<td>Protein (g)</td>
<td>37</td>
</tr>
<tr>
<td>Fat (g)</td>
<td>10</td>
</tr>
</tbody>
</table>
Chicken and vegetable stir-fry

250g of thin egg noodles
1 chicken breast chopped
Some garlic and 1 small onion
1/2 red and 1/2 green pepper
60ml of plum sauce (1/4 cup)
2 tablespoons of sweet chilli sauce
80ml of chicken stock (1/3)

Cook the noodles in boiling water for 5 mins until tender. Drain well then toss with a little oil to prevent sticking. Set aside. Add oil to a frying pan/wok and then heat. Add the chicken and cook until browned and then set aside. Reheat the wok, and add the garlic and the onion until soft. Add the peppers and stir-fry for about 3 mins or until soft. Add the sauces and the stock and bring to the boil.

Analysis per serving
Energy (kcal) 584
Carbohydrate (g) 86
Protein (g) 44
Fat (g) 6

Fruit Smoothie

250ml milk (1 cup of skimmed milk)
200g of low fat yoghurt
Any two of the following fruit:
1 large ripe banana
½ cup of strawberries/blueberries/raspberries
Put all ingredients into a blender.

Analysis per serving
Energy (kcal) 217
CHO (g) 36
Protein (g) 16
Menu 1

*Here is an example of a daily meal plan that provides approx 2500kcal per day*

<table>
<thead>
<tr>
<th>Time</th>
<th>Meal Description</th>
<th>Kcal</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Breakfast</strong></td>
<td>2 slices of wholegrain toast</td>
<td>174</td>
</tr>
<tr>
<td></td>
<td>1 carton low fat yoghurt</td>
<td>135</td>
</tr>
<tr>
<td><strong>Mid-morning snack</strong></td>
<td>2 apples</td>
<td>94</td>
</tr>
<tr>
<td></td>
<td>1 cereal bar</td>
<td>154</td>
</tr>
<tr>
<td><strong>Lunch</strong></td>
<td>1 large baked potato (225g)</td>
<td>306</td>
</tr>
<tr>
<td></td>
<td>Chopped cooked chicken (70g)</td>
<td>103</td>
</tr>
<tr>
<td></td>
<td>Sweetcorn (125g)</td>
<td>153</td>
</tr>
<tr>
<td></td>
<td>Bowl of salad (125g)</td>
<td>15</td>
</tr>
<tr>
<td><strong>Mid-afternoon</strong></td>
<td>1 cereal bar 33g</td>
<td>98</td>
</tr>
<tr>
<td><strong>Workout</strong></td>
<td>500ml juice and 500ml water</td>
<td>180</td>
</tr>
<tr>
<td><strong>Post-workout meal/shake</strong></td>
<td>1 protein/recovery shake</td>
<td>300</td>
</tr>
<tr>
<td><strong>Dinner</strong></td>
<td>1 portion grilled salmon (175g)</td>
<td>308</td>
</tr>
<tr>
<td></td>
<td>1/3 plate of brown rice</td>
<td>300</td>
</tr>
<tr>
<td></td>
<td>1 portion of vegetables</td>
<td></td>
</tr>
<tr>
<td><strong>Evening snack</strong></td>
<td>2 weetabix and skimmed milk</td>
<td>191</td>
</tr>
</tbody>
</table>

**Total** 2511 kcals
<table>
<thead>
<tr>
<th>Time</th>
<th>Meal</th>
<th>Kcals</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Breakfast</strong></td>
<td>1 bowl of muesli (60g)</td>
<td>220</td>
</tr>
<tr>
<td></td>
<td>200ml skimmed milk</td>
<td>66</td>
</tr>
<tr>
<td></td>
<td>1 glass orange juice (150ml)</td>
<td>54</td>
</tr>
<tr>
<td><strong>Mid-morning</strong></td>
<td>1 banana</td>
<td>95</td>
</tr>
<tr>
<td></td>
<td>1 cereal bar</td>
<td>98</td>
</tr>
<tr>
<td><strong>Lunch</strong></td>
<td>1 bagel (90g)</td>
<td>241</td>
</tr>
<tr>
<td></td>
<td>Low fat cheese</td>
<td>98</td>
</tr>
<tr>
<td></td>
<td>Diced chicken</td>
<td>120</td>
</tr>
<tr>
<td></td>
<td>Mixed salad</td>
<td>15</td>
</tr>
<tr>
<td></td>
<td>Oil/vinegar dressing</td>
<td>99</td>
</tr>
<tr>
<td><strong>Mid-afternoon</strong></td>
<td>1 orange</td>
<td>59</td>
</tr>
<tr>
<td></td>
<td>1 low fat yoghurt</td>
<td>135</td>
</tr>
<tr>
<td><strong>Workout</strong></td>
<td>500ml juice 500ml water</td>
<td>180</td>
</tr>
<tr>
<td><strong>Post-workout</strong></td>
<td>1 protein/recovery shake</td>
<td>300</td>
</tr>
<tr>
<td><strong>Dinner</strong></td>
<td>1 portion grilled chicken (120g)</td>
<td>176</td>
</tr>
<tr>
<td></td>
<td>1/3 plate pasta</td>
<td>296</td>
</tr>
<tr>
<td></td>
<td>1 large portion broccoli (125g)</td>
<td>30</td>
</tr>
<tr>
<td></td>
<td>1 large portion carrots (125g)</td>
<td>30</td>
</tr>
<tr>
<td></td>
<td>pasta sauce (30g)</td>
<td>84</td>
</tr>
<tr>
<td><strong>Evening snack</strong></td>
<td>1 slice wholegrain toast</td>
<td>87</td>
</tr>
<tr>
<td></td>
<td>1 banana</td>
<td>95</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td>2578 kcals</td>
</tr>
</tbody>
</table>
### Menu 3

<table>
<thead>
<tr>
<th>Time</th>
<th>Meal</th>
<th>Kcal</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Breakfast</strong></td>
<td>1 glass orange juice</td>
<td>54</td>
</tr>
<tr>
<td></td>
<td>2 slices wholegrain toast</td>
<td>174</td>
</tr>
<tr>
<td></td>
<td>2 scrambled eggs/poached eggs</td>
<td>160</td>
</tr>
<tr>
<td><strong>Mid-morning</strong></td>
<td>1 banana</td>
<td>95</td>
</tr>
<tr>
<td></td>
<td>1 portion (85g) red grapes</td>
<td>48</td>
</tr>
<tr>
<td><strong>Lunch</strong></td>
<td>1 whole-wheat pitta bread</td>
<td>174</td>
</tr>
<tr>
<td></td>
<td>2 slices turkey/chicken</td>
<td>74</td>
</tr>
<tr>
<td></td>
<td>Light mayonnaise</td>
<td>80</td>
</tr>
<tr>
<td></td>
<td>1 bowl of salad</td>
<td>15</td>
</tr>
<tr>
<td></td>
<td>Cereal bar</td>
<td>99</td>
</tr>
<tr>
<td></td>
<td>Glass of milk</td>
<td>91</td>
</tr>
<tr>
<td><strong>Mid-afternoon</strong></td>
<td>1 orange</td>
<td>59</td>
</tr>
<tr>
<td></td>
<td>1 carton low-fat yoghurt</td>
<td>135</td>
</tr>
<tr>
<td></td>
<td>3 Jaffa cakes</td>
<td>138</td>
</tr>
<tr>
<td><strong>Workout</strong></td>
<td>500ml juice 500ml water</td>
<td>180</td>
</tr>
<tr>
<td><strong>Post-workout</strong></td>
<td>Recovery drink</td>
<td>300</td>
</tr>
<tr>
<td><strong>Dinner</strong></td>
<td>Spaghetti bolognaise</td>
<td>625</td>
</tr>
<tr>
<td></td>
<td>(see meal plan section)</td>
<td></td>
</tr>
<tr>
<td><strong>Evening Snack</strong></td>
<td>1 banana</td>
<td>95</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td>2596</td>
</tr>
</tbody>
</table>
The Food Exchange Test

Aim: Simply write down the meals and snacks that you have eaten over the last two days. For each meal try and write down a healthy alternative to this meal. Now the next day try and follow your own instructions.

<table>
<thead>
<tr>
<th>MEAL</th>
<th>YOUR MEALS</th>
<th>ALTERNATIVE HEALTHY MEAL</th>
</tr>
</thead>
</table>

Breakfast

______________________________________________________________________

Snack

______________________________________________________________________

Lunch

______________________________________________________________________

Snack

______________________________________________________________________

Dinner

______________________________________________________________________

Snack

______________________________________________________________________

Other

______________________________________________________________________
Diet Building

1 Eat every 2-4 hours

2 Eat complete, lean protein with every meal
To ensure optimal health and performance men should eat at least 40-60 g protein per meal. That’s the equivalent of about 2 palm sized portions

3 Eat vegetables with each meal
The macronutrients that are present in vegetables are essential for physiological functioning

4 If fat loss is your goal, eat veggies and fruits with any meal, other carbohydrates only after exercise.
When it comes to body composition change, carbohydrate timing is the single most effective strategy ever used to kick start fat loss in people. It also minimises fat gain in people gaining muscle. Eat and enjoy your carbohydrates only after exercise.

5 Eat Healthy fats daily
About 30% of calories in the diet should come from fat. In practice can range between 20-40%. Fat type is more important than total fat amount or fat percentage. Ensuring that fat intake is balanced aiming for 1/3 saturated, 1/3 monounsaturated and 1/3 polyunsaturated. This will optimise performance

Food Type – Saturated fat e.g. animal fats (fat in eggs, dairy, meats, butter, cheese),

          Monounsaturated fat e.g.. Olive oil, nuts

          Polyunsaturated fats e.g.. Fish oil, nuts, vegetable oils

6 Don’t drink beverages with more than 0 calories

Eliminate fruit juice, soda, coffees/teas full of cream and sugar and most other sugary beverages from your diet. While many believe that fruit juice is a healthy alternative to soda, fruit juices have little nutritional value. However, remember that carbohydrate containing drinks are extremely important during or after exercise.
Diet Building

7 Eat whole foods instead of supplements whenever possible
Food intake should come from high quality, largely unprocessed whole foods. No pill can come close to matching the nutrients and vitamins that fruit and vegetables contain.

8 Plan ahead and prepare food in advance
Very important as often busy training schedules and other commitments determine what food we eat. Its crucial to have a plan and if necessary prepare the food in bulk or the day before.

9 Eat a wide variety of food as possible
Most of us eat in very habitual manner, eating similar breakfasts lunch and dinners. Try to be invention and substitute your normal food for similar healthy alternatives.

10 Plan to break the rules 10% of the time
Rather than trying to be perfect, allow yourself to break the rules 10% of the time. Allow yourself little rewards for adhering to strict nutritional guidelines. E.g. a bar of chocolate after a match etc...

“To eat is a necessity, but to eat intelligently is an art”
Meal Plans

This Information was compiled and edited by Mark Mc Adam

Gaelic Performance provide a range of Nutrition Supplements designed specifically for Gaelic Games.

For More information or to purchase GaelicPerformance Products:

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Tel: 042 9749856