



Senior Hurlers Nutrition Guidelines

1. Carbohydrate – Fuel for Optimal Performance

- The type of carbohydrate you eat before training determines whether you get a quick burst of energy following by a dip or a sustained constant release of energy.
- Carbohydrate foods which get converted to sugar quickly are the ones to avoid. Carbohydrate foods that cause a steady release of sugar into the bloodstream are recommended prior to training.
- These types of carbohydrates are termed Low Glycaemic Index and High Glycemic Index.
- The glycaemic index is a measure of how quickly the food gets converted into simple sugars.
- Eating high GI foods before you train is not recommended and can **NEGATIVELY** affect your performance.

Table 1: Carbohydrate Foods (See end for entire list)

Low GI – good !	High GI – bad !
Brown Basmati Rice	White Rice
Wholewheat Pasta	White Pasta
Sweet potatoes	Potatoes
White long grain rice	Pizza
Rye Bread	White bread, Baguettes, rolls etc
Oatcakes	Crackers, biscuits
Apple	banana
Pear	Sweets, sugary drinks, chocolate
Porridge	Cornflakes, frosties, coco pops etc

2. Protein – Recovery

- Protein provides amino acids which are the building blocks for various body parts such as muscle, immune system, enzymes and hormones.
- While you can store carbohydrate and fat in the body, there is no storage facility for protein.
- Therefore, constant supplies are needed.
- High intensity exercise and resistance training causes muscle tissue breakdown.
- One way of limiting this is to ensure that you have a fresh supply of amino acids in your system. This has also been shown to delay fatigue and improve focus.
- Certain amino acids are precursors for certain neurotransmitters in the brain which control alertness and concentration.
- Therefore consume protein before training to prevent muscle damage, delay fatigue and be switched on. Good protein foods examples shown below in table 2.

Table 2: Protein Foods

Main meal proteins	Snack proteins
Fillet Chicken/Turkey	1-2 eggs
Free range eggs	Cottage cheese
Any fish	Peanut butter
Lean steak/mince	Natural yoghurt
Tofu, tempeh, beans, beans,	Powders- Whey Protein/Pea Protein/Hemp Protein/Brown Rice Protein

3. Fat

3 types of fat – mono and polyunsaturated and saturated fat.

- Only saturated can be considered “unhealthy” while the other two have been shown to have numerous health benefits.
- For the athlete, they can improve energy levels, reduce muscle soreness, reduce body fat and improve blood flow.
- The main type of fat responsible for this is Omega 3.
- These fats can be found in oily fish, nuts and seeds and supplementation.

See table 3 below

Table 3: Healthy Fats

Monounsaturated fats	Polyunsaturated Fats (containing omega 3)
Avocado	Salmon, mackerel, sardines, herring
Olives, Olive oil	Walnuts, Flaxseed,
Peanut Butter, hummus	Flaxseed Oil, Walnut Oil

Food Requirements

The amount of foods to eat depends on age, gender, weight, goals, sport and type of training.

Table 4: Food Requirements for a standard 90Kg male player per main meal

Food	Requirements	Amount
Carbohydrate	1.5g/Kg BW = 135g	100g brown rice + 2 slices wholegrain bread
Protein	.4/Kg BW = 40g	Average Chicken Fillet or 4 eggs
Fat	25% of total meal = 10-15g	Tin Mackerel or 30g Walnuts or 1 tbsp of flaxseed oil

Timing

- Meats and wholegrains eaten together take approximately 3-4hrs before they are digested. Therefore, **you should not eat your main meal any sooner than 3hrs before training.**
- In order to exercise you need available carbohydrate stored in the muscle, known as glycogen. It takes several hours for the foods you eat to be converted to glycogen and stored in the muscle.
- Therefore eating **bread or cereal 1hr before training is pointless**, as it would not have enough time to get into the muscle. Hence, you need to eat your main dose of carbohydrate foods 3-4hrs before you train to ensure you have glycogen in the muscle ready for training.
- Protein and fats also take several hours to digest and become assimilated. Thus, any **meats or oils should be consumed with your main meal 3-4hrs before training.**
- There are some foods that have quicker digestion times which are suitable snacks 1.5-2hrs before training. These foods should be predominantly only carbohydrate and proteins as fat delays absorption. Remember, one of the most important things that **you want to prevent is a spike in blood sugar levels.** Therefore, your last snack before training should contain low GI slow release carbohydrate foods. A summary of when and what you should eat before training is given below in table 4

Table 4: Pre training food timing

Time	Food
3-4 hrs before training	<u>Carbohydrate:</u> Low GI – brown rice <u>Protein:</u> Chicken/Turkey <u>Good Fats:</u> 1 tbsp flaxseed oil or handful walnuts <u>Protein+Good Fats:</u> mackerel or sardines or salmon
1.5hrs before training	<u>Carbohydrate:</u> apple/pear/oatcakes/porridge <u>Protein:</u> 1-2eggs, cottage cheese, protein shake, peanut butter
Immediately post training	<u>Carbohydrate:</u> High GI: White rice/banana etc <u>Protein:</u> Protein shake/Chocolate Milk

Sample daily meal plan

Breakfast

- 1 large bowl of porridge with skimmed or semi-skimmed milk
- 1 Smoothie with protein powder
- 2 slices of wholegrain toast
- 2 scrambled or poached eggs

Mid-morning Snack

- 1-2 portions of fruit, mixed nuts (almonds)

Lunch

- A chicken breast or tuna
- 125g (uncooked weight) of whole wheat pasta or whole grain rice
- Mixed leaf salad with olive oil dressing
- Portion of fruit
- Low fat yoghurt/cottage cheese

Mid-afternoon Snack

- 1-2 portions of fruit

Evening meal

- 2 portions of mixed vegetables
- A large portion of lean red meat or salmon
- A large sweet potato
- Low fat yoghurt
- Portion of fruit

Match Day

The focus 3 hours before a match should be on foods that will fuel your performance, help repair damaged muscle and protect the immune system, with hydration also being important.

Fuel: Low GI carbohydrate

Examples include Brown rice, brown (wholewheat) pasta, sweet potato, porridge, wholewheat brown bread (>3 g fibre per slice). Eating these types of carbohydrate will help provide a sustained source of energy as opposed to High GI carbohydrates such as white pasta/rice/bread, cornflakes, sweets/chocolate.

Recovery: Lean Protein

Protein provides amino acids which are used to repair muscle which has been broken down over the course of a GAA match. Having protein in your pre match meal ensures there is a pool of amino acids present to help with the repair process.

Examples include chicken/turkey breast, free range eggs, fish, lean steak, beans/lentils/pulses, dairy (low-fat milk, low-fat natural yogurt), nuts/nut butters.

Protect: Healthy fats

Healthy fats (monounsaturated/polyunsaturated fat). These healthy fats have been shown to help reduce inflammation which causes muscle soreness; and help maintain the body's immune response during the stresses of high intensity exercise.

Examples include monounsaturated fats like avocado, olive oil, nut butters, hummus; and polyunsaturated fats (omega-3s especially) such as salmon/mackerel and walnuts/flaxseeds.

Practical examples:

3-4 h before (assuming one has had a good healthy breakfast based on the principles mentioned above)

2 cups brown pasta (cooked)/1 1/3 cups brown rice (cooked)/4 slices wholewheat bread

+

1 large chicken breast/ 4 medium eggs/ 170 g fish

+

Good fats – palmful walnuts

Hydration should begin in the days leading up to the match. Don't leave it until the day of the match. Have a watch bottle with you during the day. **2-3 h before the match consume 400-600 ml fluid (water)**. If you fail to pass urine or your urine is not clear then you are not hydrated and may need to consume additional fluids. **Hydration is especially important during the summer months when championship matches take place.** Breaks in play and the half time interval should be seen as prime opportunities to help prevent dehydration.

Breakfast Cereal

Low GI	
All-bran (UK/Aus)	30
All-bran (US)	50
Oat bran	50
Rolled Oats	51
Special K (UK/Aus)	54
Natural Muesli	40
Porridge	58

Medium GI	
Bran Buds	58
Mini Wheats	58
Nutrigrain	66
Shredded Wheat	67
Porridge Oats	63
Special K (US)	69

High GI	
Cornflakes	80
Sultana Bran	73
Branflakes	74
Coco Pops	77
Puffed Wheat	80
Oats in Honey Bake	77
Team	82

Bread

Low GI	
Soya and Linseed	36
Wholegrain Pumpnickel	46
Heavy Mixed Grain	45
Whole Wheat	49
Sourdough Rye	48
Sourdough Wheat	54

Medium GI	
Croissant	67
Hamburger bun	61
Pita, white	57
Wholemeal Rye	62

High GI	
White	71
Bagel	72
French Baguette	95

Snacks & Sweet Foods

Low GI	
Slim-Fast meal replacement	27
Snickers Bar (high fat)	41
Nut & Seed Muesli Bar	49
Sponge Cake	46

Vegetables

Low GI	
Frozen Green Peas	39
Frozen Sweet Corn	47
Raw Carrots	16
Boiled Carrots	41
Eggplant/Aubergine	15
Broccoli	10
Cauliflower	15
Cabbage	10
Mushrooms	10
Tomatoes	15
Chillies	10
Lettuce	10
Green Beans	15
Red Peppers	10
Onions	10

Medium GI	
Beetroot	64

High GI	
Pumkin	75
Parsnips	97

Fruits

Low GI	
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Total	76
Cheerios	74
Rice Krispies	82
Weetabix	74

Staples

Low GI	
Wheat Pasta Shapes	54
New Potatoes	54
Meat Ravioli	39
Spaghetti	32
Tortellini (Cheese)	50
Egg Fettuccini	32
Brown Rice	50
Buckwheat	51
White long grain rice	50
Pearled Barley	22
Yam	35
Sweet Potatoes	48
Instant Noodles	47
Wheat tortilla	30

Medium GI	
Basmati Rice	58
Couscous	61
Cornmeal	68
Taco Shells	68
Gnocchi	68

Nutella	33
Milk Chocolate	42
Hummus	6
Peanuts	13
Walnuts	15
Cashew Nuts	25
Nuts and Raisins	21
Jam	51
Corn Chips	42
Oatmeal Crackers	55

Medium GI	
Ryvita	63
Digestives	59
Blueberry muffin	59
Honey	58

High GI	
Pretzels	83
Water Crackers	78
Rice cakes	87
Puffed Crispbread	81
Donuts	76
Scones	92
Maple flavoured syrup	68

Legumes (Beans)	
Low GI	

Cherries	22
Plums	24
Grapefruit	25
Peaches	28
Peach, canned in natural juice	30
Apples	34
Pears	41
Dried Apricots	32
Grapes	43
Coconut	45
Coconut Milk	41
Kiwi Fruit	47
Oranges	40
Strawberries	40
Prunes	29

Medium GI	
Mango	60
Sultanas	56
Bananas	58
Raisins	64
Papaya	60
Figs	61
Pineapple	66

High GI	
Watermelon	80

Canned Potatoes	61
Chinese (Rice) Vermicelli	58
Baked Potatoes	60
Wild Rice	57

High GI	
Instant White Rice	87
Glutinous Rice	86
Short Grain White Rice	83
Tapioca	70
Fresh Mashed Potatoes	73
French Fries	75
Instant Mashed Potatoes	80

Kidney Beans (canned)	52
Butter Beans	36
Chick Peas	42
Haricot/Navy Beans	31
Lentils, Red	21
Lentils, Green	30
Pinto Beans	45
Blackeyed Beans	50
Yellow Split Peas	32

Medium GI	
Beans in Tomato Sauce	56

Dates	103
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Dairy

Low GI	
Whole milk	31
Skimmed milk	32
Chocolate milk	42
Sweetened yoghurt	33
Artificially Sweetened Yoghurt	23
Custard	35
Soy Milk	44

Medium GI	
Icecream	62

Reader friendly supplementation info;

The use of Creatine;

<http://www.totalgaacoach.com/use-of-creatine>

Cheapest place to buy protein powder in bulk:

<http://www.myprotein.com/ie/>