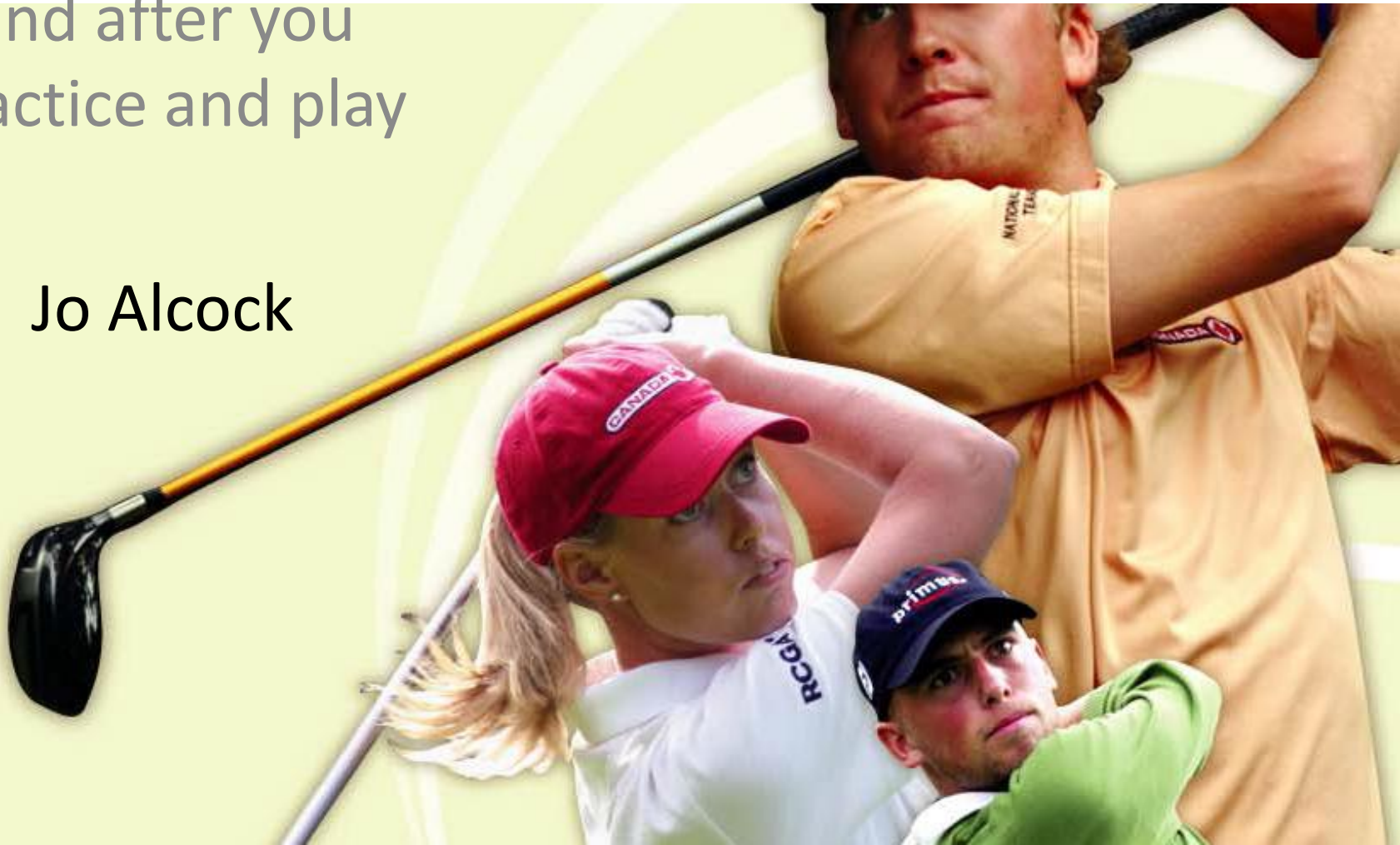


Golf Nutrition

What to eat before
and after you
practice and play

Jo Alcock



Why is optimal nutrition important?

- **The energy demands of playing golf:**
- The average round is 227 minutes and players walk around 9800 yards
- Most time is spent at low to moderate exercise intensity, however due to the nature of golf and different terrains, there are considerable temporary physical demands on the body
- Research suggests that young people expend about 1000-1500 calories during a round – assuming the bag is carried!
- **Why worry about what you eat?**
- Evidence suggests that adjusting what and when you eat is important to help you achieve your goals of sports performance both in daily training and in the competition setting
- There is an overwhelming body of research concluding that during prolonged exercise (i.e. > 45-60 minutes) the consumption of
1) carbohydrates and 2) water will greatly increase performance

Young people

Estimated average requirements for energy of young people - NB. does not include any sporting activity

Age (yrs)	Boys (kcal)	Girls (kcal)
11-14	2220	1845
15-18	2755	2110

Calories burnt during golf

Average calories expended – based on 16yr old male – 5'5" tall and around 9 ½ stone (61kg)

Activity	Calories in 60 minutes
Golf – carrying clubs	280
Golf – driving range	125
Golf – using power cart	156
Full round of golf (4 hrs)	Calories in round
Golf – carrying clubs	1120
Golf – using power cart	624

Pre-exercise - Meal

- **When should I have my “pre-game meal”?**
- The pre-exercise period is defined as the 3-4 hours before exercise begins
- This is the time needed for a large meal to digest (the smaller the meal, the quicker it can be digested)
- An additional snack can be taken about an hour before you play
- **What would make a good pre-game meal?**
- High in carbohydrate to maximise glycogen stores
- Low in fat and fibre to facilitate gastric emptying and minimise gastrointestinal distress
- Moderate in protein
- Familiar and well tolerated, as determined through experimentation in previous sessions – no new or scary foods!

Pre-exercise - Snack

- **The functions of a pre-exercise snack are as follows:**
- Prevent low blood sugar by optimising glycogen stores (high energy)
- Ensure proper hydration (not thirsty)
- Leave the athlete neither hungry nor with undigested food in the stomach (not hungry, not full)
- Provide positive psychological reinforcement that the body is well fuelled (feel good factor)
- Avoid the exaggerated increase in plasma insulin concentrations that sometimes results in rebound hypoglycaemia in susceptible individuals - **NOT TOO MUCH SUGAR!!**

What if my round is early!!

- Liver glycogen may become substantially depleted overnight and beginning exercise with low blood sugar is likely to lead to early fatigue
- It is imperative that you eat before morning events, so try the following:
- Consume a small snack 30-90 minutes before exercise – see pre-exercise snack handout
- Eat high quality carbohydrates with your proteins at dinner the night before
- Pasta with meat sauce, long grain rice with stir fry veggies & chicken
- Have an evening snack (again focusing on carbohydrates) before going to bed

During the game

- *Since golf games take 4-5 hours, you should also pay attention to your nutrition **during your round to make sure you have as much energy near the end of your game as you had at the beginning!***



What to do during a game

- Consume carbohydrates – no more than 30-35 grams every hour
- Fluid – as much as is required to replace what is lost due to sweat - consuming 100 ml every 10 minutes is a good general guideline
- The obvious food that fits these criteria is a sports drink. Look for one that has 5-8 grams of carbohydrate per 100 ml
- This is the range where both fluid and carbohydrate delivery will be high
- Alternatively, plain old water could be consumed. But then food must be eaten to replace the carbohydrates
- Food eaten during a round must be convenient and transportable
- Some examples are granola bars, trail mix and dried fruit
- Bananas are also great as they have good carbohydrates and also potassium that you lose in sweat

Carbohydrates

- **How much carbohydrate?**
- There is general agreement that the body can only metabolise around 1 gram carbohydrate per minute
- Too little intake may not provide enough energy to sustain optimal work rates in muscle
- Too much may lead to gastrointestinal discomfort that compromise an athlete's ability to perform
- Golf is a low-moderate intensity sport and therefore requirement for carbohydrate is less than maximum
- We recommend about 30-35 grams of carbohydrates per hour during golf
- What does this mean in food and liquid?

What does this mean?



Sports drinks - ingredients

- Glucose – Glucose syrup
- Dextrose
- Sucrose
- Maltodextrin
- Citric Acid
- Aspartame
- Acesulfame K
- Antioxidants
- Sodium Chloride
- Sodium Citrate
- Potassium Phosphate
- Potassium Sorbate
- Colour
- Caffeine
- Taurine
- B Vitamins

Post game nutrition

- **What does exercise do to the body?**
- Breaks down body proteins (muscle)
- Depletes carbohydrate stores (glycogen)
- Dehydrates the body
- It is vital to eat **AS SOON AS IS PRACTICAL** after you exercise
- There is a window of time after which the body's capacity to rebuild itself diminishes
- It is important to capitalise with good nutrition during this window of time
- **So then what should I eat after golf?**
- Protein – approximately one quarter of your daily requirement
- Carbohydrate – still the most abundant nutrient
- Water – however much you lost and were not able to replenish during play (weighing before and after is the best way to assess this)
- Rule of thumb – replace 1.5 times more than fluid lost

Nutrition - summary

- Most energy required for exercise comes from glycogen provided by the diet several hours or days before
- Carbohydrates are converted to glycogen & stored in muscles & liver
- Insufficient fuelling of carbohydrate leads to low glycogen stores
- Risk of early fatigue
- Snacks before and during exercise to prevent hunger and maintain energy
- Moderate to low GI - “slow release”
- Easily digestible

Summary

- Avoid sugary snacks & treats
- This will avoid rise/falls in blood glucose leading to tiredness and early fatigue
- Don't introduce new or 'scary' foods before competitions
- Snack approx. 1 hour before exercise
- Include a glass of water
- Pre-exercise meals 2-4 hours before
- Consume approx. 500ml isotonic drink every hour
- Total carbohydrates – 30-35g per hour

Sample nutrition

- **Breakfast:**

Scrambled eggs, 500 ml water, piece of fruit, yogurt

- **During warm-up (stretching, range, putting and chipping time before you tee-off):**

Piece of fruit, water

- **During the first 6 holes:**

Banana, water or a mix of sports drink and water if it is hot

- **During the middle 6 holes:**

Half of a sandwich, water

- **During the last 6 holes:**

Granola bar or fruit, water (or Sports drink if getting tired) Redbull?

- **After the round and before post-round practice at the range / short game area:**

Nuts, water, second half sandwich, banana

Redbull

- Water
- Sucrose
- Glucose
- Sodium Citrate
- Magnesium Carbonate
- Citric Acid
- Taurine
- Caffeine
- Glucoronolactone
- Inositol
- Niacin
- Pantothenic Acid
- Vitamin B6
- Vitamin B12
- Flavouring
- Caramel colour
- Riboflavin
- 27.5g Carbohydrate and 112 Kcals per tin

