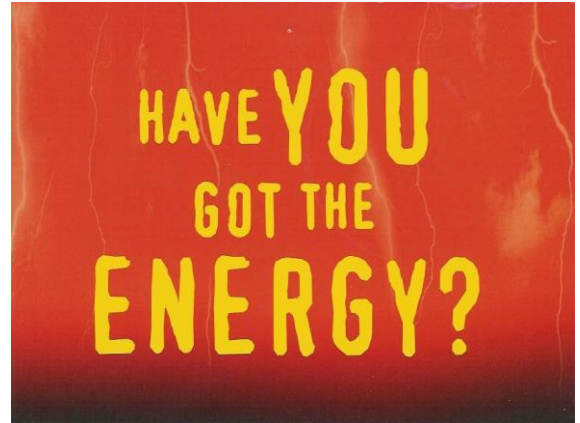
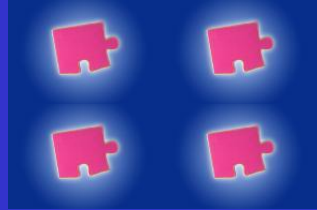


Fuel your football: Is there any point?

Sharon Madigan
Sports Dietitian



Nutrition and hydration: One piece of the performance puzzle?



Nutrition and Football

- How what you eat and drink plays a role
- What's important?
 - Fluids
 - Carbohydrates
 - Protein
 - Preparation

Where does energy come from?

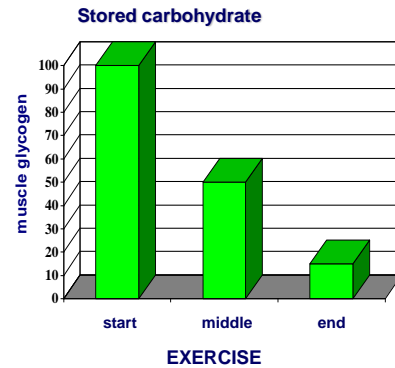
There are four components in food and drinks that are capable of producing energy:

- > **Carbohydrate (CHO)**
- > **Protein**
- > **Fat**
- > **Alcohol**

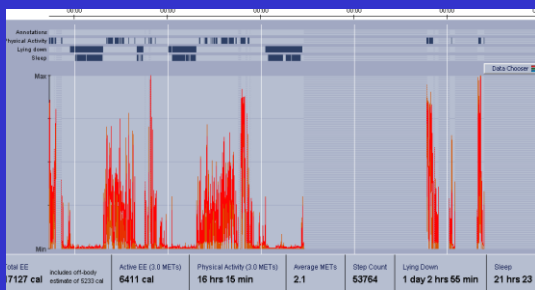


The energy content of nutrients

- 1 gram **fat**: **9kcal** or 38kj
- 1 gram of **alcohol**: **7kcal** or 29kj
- 1 gram of **protein**: **4kcal** or 17kj
- 1 gram of **carbohydrate**: **3.75kcal** or 16kj



Your energy needs are high



Energy requirements

Total Energy Expenditure 21018 calories	Average METs 2.0	Sedentary (up to 3.0 METs) 55 hrs 35 min
Number of Steps 54682 steps	Active Energy Expenditure (3.0 METs)* 6484 calories	Moderate (3.0 - 6.0 METs) 12 hrs 58 min
Lying Down 1 day 2 hrs 55 min	Physical Activity Duration (3.0 METs)* 16 hrs 30 min	Vigorous (6.0 - 9.0 METs) 3 hrs 6 min
Sleep 21 hrs 23 min	<small>*Active Energy Expenditure and Physical Activity Duration require at least two consecutive minutes at 3.0 METs or higher.</small>	Very Vigorous (9.0 METs and higher) 26 min

Calorie Requirement average over 3 days = averaged 3800 calories
Intake – Approx 2400 calories.

Weight gain and weight loss

- Need to start in pre season as 4 weeks before key matches is too soon.
- Small changes in the things that you do most frequently will make the biggest differences in weight loss.
 - Butter and spread on bread; sugar in tea; alcohol
- For weight gain you need to focus on good eating habits 7 days per week.

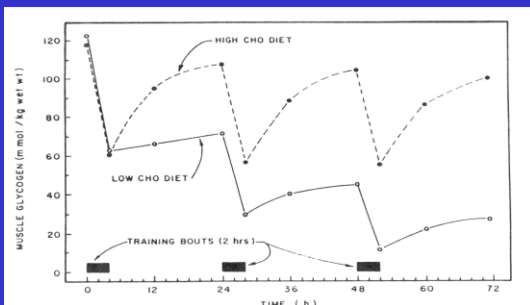




Recovery ... rehydration and refuelling

- Replacing the fluid and electrolytes lost in sweat
- Refuelling the muscles and liver of expended energy
- Allowing the immune system to deal with damage caused by the exercise bout
- Making new muscle and repairing damage

Fuel Replacement After Exercise



(Costill 1985)



Eating and drinking before training or matches

- ☉ Carbohydrate meal or snack 1 – 2 hours before training or match
- ☉ Always take a drink (at least 500mls)

Eg

- ✓ Sandwich or roll (bacon)
- ✓ Yogurt and fresh fruit
- ✓ Pancakes or scones
- ✓ Breakfast cereal with milk



Key points Match day nutrition

- Experiment before and during training to develop a food and fluid plan that best suits you
- Be organised – take snacks and drinks with you
 - Carbohydrate drinks
 - Water
 - Snacks
- Refuel and rehydrate after matches
- Investigate what to expect when travelling away from home; how many of you depend on the chippy?

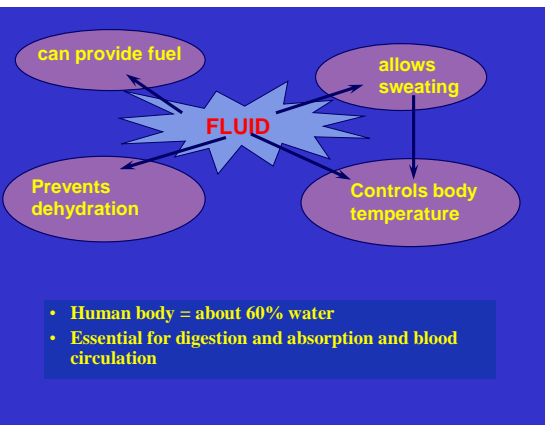
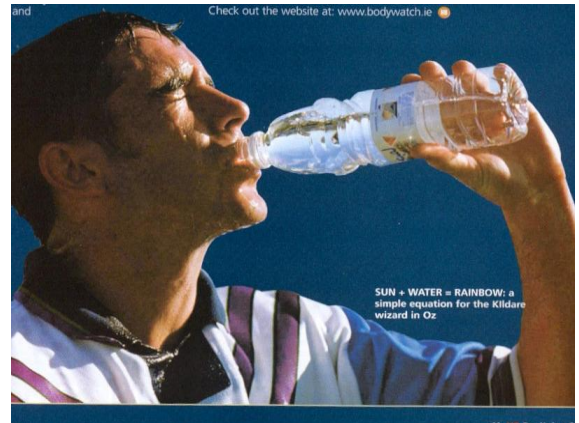
Good diet and hydration can affect reaction times



Diet can affect Concentration!



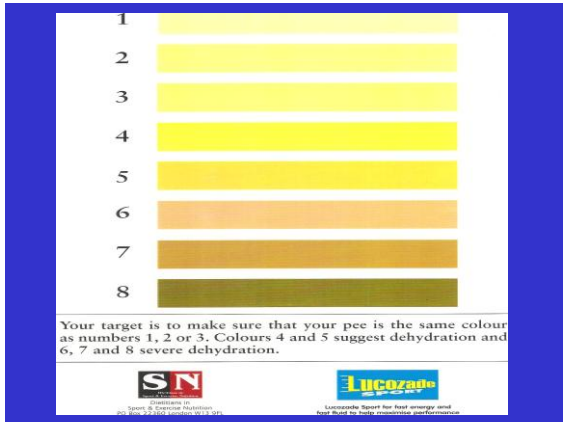
Dehydration & Rehydration



What are the effects of fluid loss on performance

- Impaired Performance
- Capacity for muscular work reduced by 20-30%
- Heat Exhaustion
- 2% body weigh loss
- 4%
- 5%
-





What drinks during exercise?



Drinks during exercise?

- Water is fine for anything up to an hour / 1.5 hours.
- If you are trying to loose weight then water is fine with milk before and after training.
- If you are not carrying weight and need to gain weight then sports drinks, milkshakes, smoothies can be used before, during and after training.



Alcohol



- Contributes to energy intake and may result in weight gain
- Affects training and performance especially recovery
- Will slow down recovery from injury



Too much booze and you loose

- Increased urine loss and inadequate post exercise rehydration.
- Decreased food intake and delayed carbohydrate replacement.
- Swelling of blood vessels and worsening of injuries which result from bruising or swelling.
- Poor judgement which increases the risk of accidents.
- A hangover which can further decrease food and fluid intake
- A gradual increase in body fat stores.



Sweat losses ...

- 1 – 2 litres / hour
- **Thirst is not a good guide of need for fluid**
- **Small losses of body water can impair performance if they are not replaced**
- **Practise drinking water during training**

Is diet important in and out of season?

- Less exercise so more of a chance to gain weight.
- This means that the first part of the in season is spent trying to loose fat weight.
- Follow bad habits which could lead to injury: dehydration and alcohol.

Preparation



- Players should have access to suitable snacks and drinks at all times.
- This requires planning and preparation by players and coaches.
- Habits will only be changed in the long term.

How will nutrition help?



How will nutrition help?



- Its all about the edge: Some changes may give you the extra edge against other footballers.
- Allows quicker recovery.
- Enables you to train at a greater intensity.
- Promotes overall good health.

Take home messages

- Start drinking enough fluids now: Water, squash and sports drinks. Practice running with fluids during training and then it will be easier during matches.
- Smaller frequent meals rather than three big meals.
- Reduce fried foods, chips, butter, alcohol and increase suitable foods and drinks.
- Prior to and directly after weights sessions use milk or yoghurt drinks (500mls) to promote muscle development. Also thought to be as useful as sports drinks.
- If you want to gain or loose weight do it now!
- Meal and snack timing is the key.

Before Matches /Training

- Day / evening before is important.
- Breakfast should be early and then another smaller snack prior to a lunch time start.
- Later matches the main meal would be 2-3 for 6pm start.
- Small amounts of water and other drinks regularly through the day.
 - Try and avoid players drinking a vast amount just before as it will be no benefit.

During Matches / training

- Fluids will be the most important part.
- This requires practice during training
- Maybe small snacks at half time
- Focus on fluid replacement if subs are made.

After matches / training

- Sandwiches in the changing room if you can
- Makes meals available at training / match venues or ask players to bring foods with them. Very important for after school / college / work.
 - Go from school / work to club training.
- Fluids: usually players can lose about 1-2kg depending on weight so this needs to be replaced ASAP.
 - Soup and milk good

Timing and recovery after training and matches is crucial



Question time?