SPORTS NUTRITION FOR TENNIS (Junior Athletes):

- Food is more than just something we eat when we are hungry, but rather has many different functions in the body
- There are many benefits of healthy eating including:
    - Improvements in recovery and performance
    - A healthy body composition
    - Reduction in illness and injuries
    - Overall long-term health

- Think of food acting as 'FUEL' for the athlete to train, perform and recover from exercise and competition (use analogy of a car)
- Introduce four pillars of peak performance:

1. Energy balance
    - Strive to match their energy intake with their energy expenditure
    - Aim to maintain during competitive season to meet needs of maturation and growth and needs of one's sport
2. Portion size
    - Aim to eat the correct portion sizes from each of the five food groups to meet energy balance
    - Macronutrients
        - Overview functions, food sources (ask athletes to guess)
        - Recommended amounts and timing (timing around sport)
        - Carbohydrates:
            - serve as a major fuel source during moderate to intense exercise and decreasing recovery times between activities
            - *simple* and *complex (*from foods higher in starches (polysaccharides) and oligosaccharides – more dietary fibre and micronutrients
            - aim for 3-8g/kg/day
        - Protein:
            - important for muscle & tissue rebuilding/repair
            - 0.8-1.2g/kg/day
            - good sources of complete protein include lean meats such as beef and pork, poultry, fish, eggs, soy, beans/ legumes, nuts/seeds, and dairy products
        - Dietary fats:
            - Aid in reducing heat loss, component of cell membranes, provide protection to organs, serve as a fuel for low intensity athlete
            - Saturated (butter, lard, full fat dairy, sweets, processed foods) & unsaturated (olive oil, nuts, peanut butter, fatty fish, avocado)
            - 20-25% of daily energy needs (less around training)
3. Timing of intake:
    - eat at regular intervals throughout the day to maintain energy levels
    - smaller, more frequent meals/snacks helps promote energy balance, timing of meals around practice/competition helps to fuel performance and promote regular muscle repair and energy replenishment

- eating breakfast 30-60mins of waking – helps cognitive performance and academic achievement (increases skills and decision making in sport too)
- aim for 'power hour' before and after practice/competition to improve performance and recovery
    - consume a light meals/snack before activity (maximise glycogen stores, and prepare athlete for activity)
    - aim for high in carbohydrates (min. 40g), moderate protein (10g), low in fat and lower in fibre
    - start small portions and build towards larger portion sizes (train the gut)
    - following practice/competition, aim to consume a meal or snack containing both protein and carbohydrate to replenish glycogen stores, facilitate protein synthesis and recovery
        - high in carbohydrates (~75g), protein (20-25g) within an hour after activity
    - Examples (pre-training/games):
        - fruit and yoghurt
        - Up & Go
        - Cereal/muesli/oats, milk & fruit
        - Bread/crumpet/wrap & honey + banana
        - Muesli bar
        - Fruit & rice cakes & peanut butter
        - Small bowl of pasta/rice & tomato sauce
        - Raison toast with jam
        - Tub of creamed rice with fruit
        - Fruit smoothie
        - Homemade banana bread/muffin
    - examples (post-training/games):
        - 2 cups low fat chocolate milk + 1 piece of fruit
        - 1 cup cooked oats + 1 cup milk + 1 piece of fruit + trail mix
        - 2 eggs, 1-2 pieces of toast, 1-2 pieces fruit + cheese
        - Wrap (large) + beans/tuna + fruit + cheese
        - Bagel/roll/crumpets/sandwich + hummus + cheese + 1 cup milk
        - Pasta/rice/noodles (1 cup) + mince/beans/tuna + cheese

4. Hydration:
    - Body weight can be used as a method to monitor hydration or urine colour
        - Lighter colour (more hydrated), darker (more hydrated)
        - Consume 1.5% of bodyweight losses
    - Thirst isn't always a good indicator (and often too late) especially when still growing
    - Sports drinks often not needed if <1-1 ½ hours and intensity is low and/or normal temperatures/humidity
    - Normally, water is sufficient before, during, and after activity
    - Before – 2-3 cups of fluid (including meals) + 1-2 cups 2hours pre-activity & 400-800mL during activity per hour

- Performance plates (take some paper) – draw plates before training and recovery meals versus easier day

5. Energy demands may increase or decrease as training intensity and/or volume changes
6. Visual representation of how to change energy balance

7. Individual energy needs are dependent on number of factors (e.g. age, gender, weight, growth needs, physical activity levels including school sport and concentration/brain needs at school)
8. Show different plate models for different training days:
    - Easy training/rest (e.g. light workout, walkthrough practice):
        - Stick to normal requirements (1/4 plate protein, ¼ plate carbohydrate, ½ plate vegetables)
        - 2000-2400kcals males, 1600-1800kcals females (450-550kcals each meal, 3 meals and a snack)
    - Moderation training (e.g. typical practice or competition):
        - Energy needs are greater, so increase the amount of energy consumed through fruit, vegetables and grain groups as these are the most carbohydrate-rich food groups
        - Males 2200-2800kcals, females 2000kcals (meals 500-650kcals, 3 meals and a snack)
    - Hard training (e.g. high intensity training, practice or competition lasting longer than 90mins or tournament/back to back games or twice per day training)
        - Increased portion sizes of carbohydrate-rich moods, mostly from wholegrains (if <3-4hrs before exercise)

- Use food models and bring food examples (e.g. convenience meals/snacks)