Shoreline Orthopaedics

Nutrition for Total Joint Surgery

- Surgery places immense stress on your body and your body has unique needs to recover after surgery.
- Studies have shown that up to 50% of patients scheduled to have a total joint replacement have some form of malnutrition.
- Optimizing your nutrition prior to surgery and after surgery has shown to decrease the complications of surgery such as infection, fracture, wound healing, anemia, hospital length of stay, and many others.
- Even young and healthy or middle-aged adults can benefit from nutritional optimization.

Pre-Surgery Recommendations

- Optimize Medical Co-Morbidities
    - Diabetics
        - Meet with your primary care physician to optimize blood glucose control and maintain optimal HgA1C as well as daily blood sugars
        - Doing resistance (weight training) exercises helps to maintain healthy blood sugars and improves muscle mass
        - Maintaining optimal blood glucose control helps decrease infection and improve wound healing and overall recovery
    - Heart Disease/High Cholesterol
        - Meet with cardiologist
        - Minimize risk factor profile and ensure heart is safe for surgery
        - Continue with aerobic exercise – ideally 5 days a week for 30 minutes
    - Tobacco Use – Vaping/Smoking/Chewing
        - Nicotine has shown to decrease blood flow, which decreases wound healing. There has also been shown to be an increased risk of infection, blood clots, heart attacks, and lung complications.
        - Avoid nicotine products and replacement products completely and ideally quit a minimum 6 weeks prior to surgery and continue this post-operatively.

- Aim to eat a well-balanced diet that will help decrease inflammation, minimize muscle mass loss, heal wounds, promote bone health and manage weight.
    - Foods that lower inflammation
        - Fruits and vegetables
        - Legumes (beans)
        - Omega-3 rich Fish (Salmon, Halibut, Tuna, Sardines, Scallops, Herring, Anchovies, Oysters, Trout, Mackerel)
        - Omega-3 rich fats (Walnuts, Olives/Olive Oil, Avocados/Avocado Oil, Flaxseed, Chia Seeds)
    - Foods that minimize muscle mass loss
        - Double your protein intake for at least 2 weeks prior to surgery
        - You should aim to eat 1-2g of protein per kilogram of weight
            - i.e. 200lb person (90kg) should consume a minimum of 90g of protein each day

- High quality protein foods
  - Eggs/Egg Whites
  - Greek Yogurt
  - Fish
  - Lean Meats (ideally grass fed/finished)
    - Beef, chicken, turkey, pork, bison, venison, etc.
  - Protein Supplements – Powders and Shakes
    - Make sure to use a brand that is independently tested and verified for purity
    - Avoid brands with excessive sugar/sugar substitutes
    - Make sure it contains Leucine and Glutamine, which are important for muscle synthesis
      - Ideally a minimum of 1.5g of Leucine per serving (3g is ideal)

- Supplements
  - Make sure to select supplements that are USP certified
  - Vitamin D3
    - Minimum 2,000IU (50mcg) per day 1 month prior to surgery
      - Your physician may recommend more
      - You may see this combined with Vit K or K2 – this helps with absorption
  - Multi-vitamin
    - Make sure it has Vitamin C, Zinc, Magnesium and Calcium
    - Vitamin C
      - 500mg twice daily
      - Has been shown to help decrease pain, decrease inflammation, promote wound healing, and is important in collagen synthesis
    - Calcium
      - 1200mg per day
        - 500-600mg from supplements
        - Remaining requirement from calcium rich foods
          - i.e. Dairy products, kale, spinach, broccoli, Salmon, sardines
    - Magnesium Glycinate
      - Essential for Calcium and Vitamin D absorption
      - Start taking at least one month prior to surgery
      - Shown to help decrease pain and improve tendon healing

Post-Surgery Recommendations

- Medical Co-Morbidities
  - Diabetics
    - Continue to maintain optimal blood sugars to help with recovery, wound healing, and prevent infection
  - Heart Disease/High Cholesterol
    - Continue with aerobic exercise/activity and recommended by your physician
  - Tobacco use - Vaping/Smoking/Chewing
    - Continue to avoid any nicotine products to aid in wound healing, infection prevention, avoidance of other post-surgical complications, and for overall health

- Diet
  - Continue to eat a well-balanced and nutritious diet as outlined above

  - Continue to supplement protein intake for a minimum of 3 months post-surgery
    - Double your protein intake for at least 2 weeks after surgery
    - After 2 weeks, you can return to 1-2g of protein per kilogram of body weight
    - This has shown to decrease muscle loss/atrophy and improve overall recovery

- Supplements
  - Continue to use your multi-vitamin and other supplements outlined above for at least 3 months after surgery to help with nutritional optimization, wound healing, and bone health