Recommended Supplements, Vitamins, and Minerals for Recovery and Prevention:

Protein:

- Sedentary adults: 0.8 grams of protein per kilogram of body weight per day.
- Active individuals or athletes: 1.2 to 2.2 grams of protein per kilogram of body weight per day, depending on the intensity and duration of physical activity.

To calculate your daily protein needs, you can use the following steps:

1. Convert your weight from pounds to kilograms: Divide your weight in pounds by 2.205 to get your weight in kilograms.

2. Multiply your weight in kilograms by the appropriate protein intake factor:
   - Sedentary adults: Multiply by 0.8
   - Active individuals or athletes: Multiply by a factor between 1.2 to 2.2, based on your activity level and goals.

For example, if you are a sedentary adult weighing 70 kilograms, your daily protein needs would be approximately 56 grams (70 kg x 0.8 g/kg).

If you are an active individual or athlete with the same weight and aim to consume 1.6 grams of protein per kilogram, your daily protein needs would be approximately 112 grams (70 kg x 1.6 g/kg).

It's essential to distribute your protein intake throughout the day, including protein-rich foods in your meals and snacks. Including a variety of protein sources in your diet can also help you obtain a balanced mix of essential amino acids and other nutrients. If you have specific dietary goals or health concerns, consider consulting with a registered dietitian or healthcare professional to determine the optimal protein intake for your individual needs.

Dietary Sources:
Meat (Chicken, Turkey, Beef, Pork, Lamb), Fish (Salmon, Tuna, Cod, Trout, Sardines), Seafood (Shrimp, Crab, Lobster, Scallops), Eggs (Whole and Egg Whites), Dairy (Yogurt, Cheese, Cottage Cheese), Plant-Based Protein Sources (Tofu, Tempeh, Edamame, Lentils, Chickpeas, Black beans, Quinoa, Peas, Chia Seeds), Nuts and Seeds (Almonds, Peanuts, Chia Seeds, Pumpkin Seeds, Flax seeds), Legumes (Lentils, Chickpeas, Black beans, Kidney Beans), Dairy Alternatives (Plant-Based Milk: Soy Milk, Almond Milk, and Oat Milk)

Magnesium:

Magnesium is involved in hundreds of biochemical reactions in the body, including muscle function and energy production. It helps relax muscles, reduces muscle cramps, and supports muscle recovery.

- Adult men (ages 19-30): 400-420 mg per day
- Adult men (ages 31 and older): 420 mg per day
- Adult women (ages 19-30): 310-360 mg per day
- Adult women (ages 31 and older): 320 mg per day

Pregnant and breastfeeding women may need slightly higher amounts of magnesium:
- Pregnant women (ages 19-30): 350-400 mg per day

- Pregnant women (ages 31 and older): 360 mg per day
- Breastfeeding women (ages 19-30): 310-360 mg per day
- Breastfeeding women (ages 31 and older): 320 mg per day

Dietary Sources: Nuts, Seeds, Whole grains, Leafy greens, and Legumes.

Zinc:

Zinc is involved in tissue repair and supports the immune system, making it crucial for healing injuries and promoting recovery. Zinc is an essential mineral that plays a vital role in various bodily functions, including immune function, protein synthesis, wound healing, and DNA synthesis.
- Adult men (ages 19 years and older): 11 mg
- Adult women (ages 19 years and older): 8 mg
- Pregnant women: 11 mg
- Breastfeeding women: 12 mg

Dietary Sources: Meat, Poultry, Seafood, Nuts, Seeds, Whole Grains, and Legumes

Vitamin C:

Vitamin C is a potent antioxidant that helps reduce oxidative stress and inflammation, supporting muscle recovery. It is also essential for collagen formation, which is crucial for healthy connective tissues.
- Females 75 mg per day
- Males 90 mg per day.
- The recommended daily dosage during pregnancy is 85 mg, and during breastfeeding, it is 120 mg.

Dietary Sources: Citrus Fruits, Berries, Kiwi, Guava, Pineapple, Mango, Broccoli, Bell Peppers, Spinach, Tomatoes, and many more.

Vitamin D:

Vitamin D is essential for calcium absorption, which is vital for muscle function and strength. It also plays a role in immune function, which can aid in injury prevention.
- Infants (0-12 months): 400-1000 IU (International Units) per day
- Children (1-18 years): 600-1000 IU per day
- Adults (19-70 years): 600-800 IU per day
- Adults (71 years and older): 800-1000 IU per day
- Pregnant and breastfeeding women: 600-800 IU per day

-Vitamin D is essential for maintaining bone health, supporting the immune system, and promoting overall well-being. It can be obtained through exposure to sunlight, but dietary sources and supplements are also necessary, especially for individuals who may have limited sun exposure or live in regions with insufficient sunlight.
-Dietary Sources: Fatty fish (salmon, mackerel, tuna), Fortified Dairy Products, Fortified plant-based milk, and Egg yolks.

B Vitamins:

B Vitamins (B1, B2, B3, B6, B12): B vitamins play a crucial role in energy metabolism, helping the body convert food into energy for muscle function and recovery.
Vitamin B5 (Pantothenic Acid): Pantothenic acid is involved in the production of coenzyme A, which aids in energy metabolism and supports muscle recovery.

Vitamin B7 (Biotin): Biotin is essential for carbohydrate, fat, and protein metabolism, all of which are essential for muscle function and recovery.
Vitamin B9 (Folate): Folate is involved in DNA synthesis and repair, supporting cell growth and tissue healing.

- Vitamin B1 (Thiamin): Pork, Whole Grains (Wheat, Oats, and Brown Rice), Legumes (Beans, Lentils, Peas), Nuts and Seeds.
    - Adult men: 1.2 mg
    - Adult women: 1.1 mg
- Vitamin B2 (Riboflavin): Dairy Products (Milk, Yogurt, Cheese), Lean Meats (Chicken, Turkey, Beef), Fortified Cereals, Leafy Green Vegetables (Spinach and Kale)
    - Adult men: 1.3 mg
    - Adult women: 1.1 mg
- Vitamin B3 (Niacin): Poultry (Chicken and Turkey), Fish (Tuna and Salmon), Peanuts, Whole Grains (Barley and Wheat), Legumes (Lentils and Chickpeas)
    - Adult men: 16 mg NE (Niacin equivalents)
    - Adult women: 14 mg NE
- Vitamin B5 (Pantothenic Acid): Meat (Beef, Chicken, Pork), Avocado, Whole Grains, Broccoli
    - Adult men: 5 mg
    - Adult women: 5 mg
- Vitamin B6 (Pyridoxine): Chicken and Turkey, Fish (Salmon and Tuna), Potatoes, Bananas
    - Adult men: 1.3-1.7 mg
    - Adult women: 1.3-1.5 mg
- Vitamin B7 (Biotin): Egg Yolks, Nuts, Whole Grains
    - Adult men: 30 mcg
    - Adult women: 30 mcg
- Vitamin B9 (Folate): Leafy Green Vegetables (Spinach, Kale), Legumes (Lentils, Chickpeas, Beans), Avocado, Citrus Fruits (Oranges, Lemons)
    - Adult men: 400 mcg DFE (Dietary Folate Equivalents)
    - Adult women: 400 mcg DFE
- Vitamin B12 (Cobalamin): Animal Products (Meat, Fish, Poultry, Dairy), Fortified Plant-Based Milk (Soy, Almond, or Oat Milk)
    - Adult men: 2.4 mcg
    - Adult women: 2.4 mcg

The recommended daily dosages for supplements, vitamins, and minerals varies depending on age, sex, and individual health requirements. The above suggestions + dosages are directly from The National Institutes of Health (NIH) guidelines for adults.