

## FLUIDS

Hydration is another key component in living a healthy life with SCD. It helps keep red blood cells soft and round. Water is the best source of hydration. Other good choices include pure fruit juices such as orange juice, apple juice, coconut water and tart cherry juice.

Whole fruits and vegetables are also good for hydration. Avoid caffeinated beverages or energy drinks. These will dehydrate you and weaken the immune system.



### How hydrated are you?

Individuals with SCD have a higher metabolic rate which increases their fluid needs.

The **Minimum Daily Requirement** of fluid intake for a person with sickle cell is:

Daily Fluid (oz.) = .75 x body weight in lbs.

Example: A person weighing 120 pounds would need a minimum of 90 oz./day

**Drink More if You Can**

***FOOD AS MEDICINE IS A MAJOR COMPONENT IN THE COMPREHENSIVE SICKLE CELL TREATMENT PLAN.***

If you have further questions or would like assistance creating a healthy meal plan, contact the **SCDAA/PDVC Team.**



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**“Living Well With Sickle Cell”  
Nutrition  
for  
Sickle Cell Disease**



***Sickle Cell Disease Association of America,  
Philadelphia/Delaware Valley Chapter***

## IMPORTANCE OF NUTRITION

A balanced, nutritional diet is extremely important for those with sickle cell disease (SCD). It helps promote good health and decreases complications. Individuals living with SCD require more calories than the average person. They produce more oxidants, tend to have a weaker immune system and always have some level of inflammation in their body. Their heart works harder and they make and destroy a greater number of red blood cells. If the body has enough of the "right" fuel it will be easier to replace red blood cells, repair damage, and build strength and resistance.

### What can happen if my body does not contain enough energy and nutrients?

You may feel weak, tired, experience increased infections, delayed growth and have a longer recovery time after pain episodes.

There are five (5) parts of a SCD Nutrition Diet to include for a person with sickle cell: **Restorative, Anti-Inflammatory, Anti-Bacterial, Anti-Oxidant and Fluids.**

## RESTORATIVE

Red blood cells (RBCs) lose their round, doughnut shape and become sickled (crescent moon-shaped). These sickled cells are stiff and tend to get stuck in the blood vessels. Sickled cells are destroyed more easily causing patients with SCD to have a short supply of healthy RBCs that can carry oxygen efficiently throughout the body.

## RESTORATIVE



To help with red blood cell regeneration, stabilization and oxygen distribution, patients with SCD should consume foods high in:

**Iron:** legumes (beans, nuts, peas) red meat, liver, dark leafy green vegetables., dried raisins, egg yolks, blackstrap molasses  
**(Unless on chronic transfusions)**

**Folate:** enriched breads or cereals, dried beans, peas, nuts, asparagus, broccoli

**Vitamin B12:** beef liver, fish, red meat, eggs, dairy products

**Vitamin B6:** fish, turkey, chicken, potatoes, tomatoes, bananas, legumes, nuts, whole grains

**Vitamin A:** grapefruit, mango, watermelon, apricots, oranges, plums

## ANTI-INFLAMMATORY

Individuals with SCD are in a constant state of inflammation and the body is always trying to repair itself. They often experience bone and joint inflammation of the hands, shoulders, knees, elbows and hips which can result in pain and a limited range of motion. Foods that contain anti-inflammatory properties include: **kale, green beans, celery, beets, broccoli, tart cherry juice, pineapple, salmon, walnuts, flaxseeds, turmeric and dark chocolate.**



## ANTI-BACTERIAL

SCD affects the immune system putting patients at a high risk for infection, especially respiratory, kidney, bone, and blood infections. The following nutrients boost the immune system:

**Zinc:** yogurt, beef, chickpeas, oysters, Swiss cheese, cashews

**Protein with high Sulfur content:** parmesan cheese, hard boiled eggs, turkey breast, tuna

**Thiocyanate:** African yams, cassava, Brussel sprouts, cauliflower

**L-theanine:** black tea and green tea



## ANTI-OXIDANT

The complications of SCD can increase the levels of "Reactive Oxygen Species", also known as free radicals. Individuals with SCD also have lower than normal levels of anti-oxidants, the chemicals that rid the body of free radicals. Free radicals are poisonous to the body when present in high levels. The following foods have anti-oxidant properties:

**raisins, blueberries, blackberries, strawberries, red grapes and cherries.**

