

# Chocolate Milk and Recovery

The Scientific Support



**REFUEL** | got chocolate milk?<sup>™</sup>

# POST-GAME Nutrition



## 2-HOUR RECOVERY WINDOW

- ✓ Can affect performance **at the next game/practice**
- ✓ Can help reduce **the chances of injury**
- ✓ Boost the health, well-being **of athletes**

**IT'S JUST AS IMPORTANT AS PRE-GAME NUTRITION!**

# WHAT'S IN IT?



# Chocolate Milk's Liquid Assets

Protein	Carbohydrates	Electrolytes	Fluids	Calcium and vitamin D	B vitamins	9 essential nutrients
To help <b>build muscle</b> , reduce muscle breakdown and work with carbohydrates to restore muscle glycogen	To <b>refuel muscles</b> (restore muscle glycogen)	To help <b>replenish</b> what's lost in sweat (sodium, calcium, potassium and magnesium)	To help <b>rehydrate</b> the body	To <b>strengthen bones</b> and help reduce the risk of stress failure	To help convert food to <b>energy</b>	Offers <b>additional nutrients</b> not typically found in traditional sports drinks





# PERFORM

# AIDS PERFORMANCE For The Next Bout Of Exercise



Chocolate milk

VS.



Carbohydrate sports drink



After recovering with chocolate milk, athletes:

- Exercised **LONGER** and with **MORE POWER** during a second workout
- Cycled **51% LONGER**
- Had significantly **MORE POWER** and **RODE FASTER**, shaving about six minutes from their ride time
- Had **TWICE THE IMPROVEMENT** in V02max (measure of aerobic fitness)

## NEW STUDY Finds Recovering With Chocolate Milk Gave Runners A Performance Edge

*Recreational runners ran 23 percent longer in a follow-up run after drinking fat free chocolate milk compared to a typical sports drink*



23%



# REFUEL



# Chocolate Milk HELPS REPLACE MUSCLE GLYCOGEN

The Right Mix of  
Carbohydrates  
and Protein

**3.25:1**



16 ounces of fat free chocolate milk after exercise led to **greater concentration of glycogen in muscles** at 30 and 60 minutes post-exercise, compared to a carb only sports drink with the same calories



**REBUILD**

# A Muscle Building **ADVANTAGE**



**NET  
MUSCLE  
SYNTHESIS**

- In a study of moderately trained male runners those who drank fat free chocolate milk after exercise **had enhanced skeletal muscle protein synthesis** – a sign that muscles were able to repair and rebuild – **compared to a fluid replacement drink (with *just* carbohydrates).**
- **Athletic men and women who drank milk one hour after a “leg resistance exercise routine” experienced a significant increase in two measured amino acids**

# Reduced **EXERCISE-INDUCED MUSCLE DAMAGE**

**Athletes who drank regular or flavored milk after a rigorous workout had less exercise-induced muscle damage** than those who drank water or typical sports drinks, according to several studies.



## **EXERCISE-INDUCED MUSCLE DAMAGE**

can lead to future impairments in muscle performance, which could affect future exercise bouts

# Improved **BODY COMPOSITION**



- **Compared to other electrolyte beverages lacking protein:**
  - Canadian researchers found that active adults who drank milk after resistance exercise experienced **greater support for muscle gain**
  - Other studies found that untrained men and women who drank fat free milk after exercise **gained more muscle and lost more body fat** at the end of a 12-week training program

Researchers suggest **MILK'S ADVANTAGE** may be due to **unique properties of milk proteins** that may cause differences in speed of digestion and absorption.

A black and white photograph of a woman in profile, drinking from a bottle of 'LOW FAT CHOCOLATE MILK'. She has a white towel draped over her shoulder. The background is dark and out of focus. A semi-transparent dark box is overlaid on the lower right portion of the image, containing the text 'REHYDRATE AND REPLENISH' in white, bold, uppercase letters. A thin orange horizontal line is positioned below the text box.

# REHYDRATE AND REPLENISH

# Milk

## HELPS REPLACE ESSENTIAL ELECTROLYTES

### Lost In Sweat

#### Potassium

Milk provide 360mg:  
**12%** of the daily value

#### Magnesium

Milk provides 27mg:  
**8%** of the daily value

#### Calcium

Milk provides 300mg:  
**30%** of the daily value

#### Sodium

Milk provides 100mg:  
**4%** of the daily value

# Milk

## HELPED RESTORE HYDRATION BETTER

Than Other Popular Post-Exercise Beverages

4 hours



Significantly more urine excretion  
after drinking water or sports drink  
compared to milk

Researchers believe **milk's natural electrolyte content and energy density** may help restore and maintain hydration after exercise