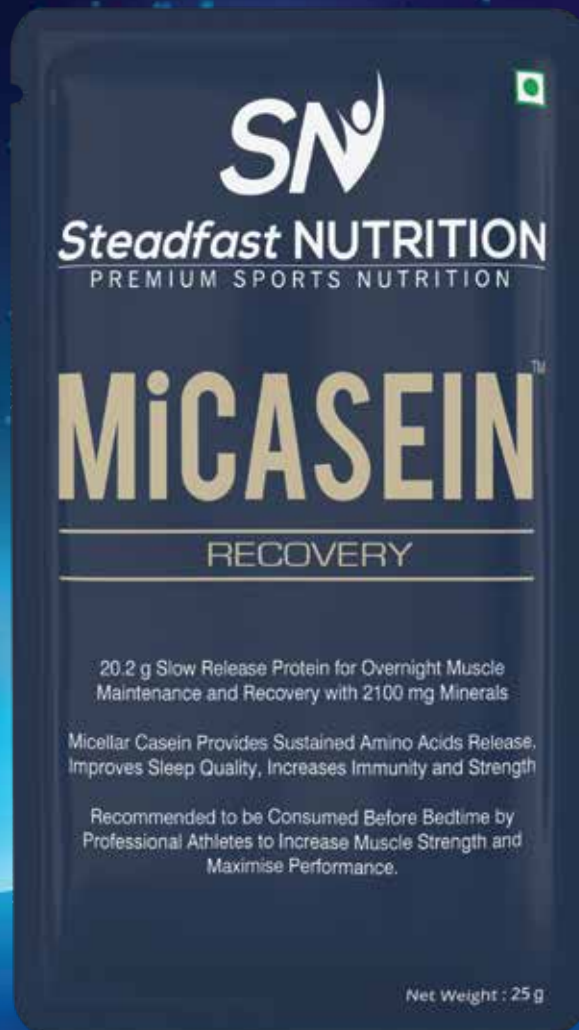




***Steadfast* NUTRITION**

PREMIUM SPORTS NUTRITION

# MiCASEIN™



20.2 g Slow Release Protein for Overnight Muscle Maintenance and Recovery with 2100 mg Minerals

Micellar Casein Provides Sustained Amino Acids Release, Improves Sleep Quality, Increases Immunity and Strength

Recommended to be Consumed Before Bedtime by Professional Athletes to Increase Muscle Strength and Maximise Performance.

Net Weight : 25 g

## Why Night Protein?

Milk protein is a combination of 80% casein and 20% whey protein. Whey protein is a well known post workout protein as it stimulates muscle protein synthesis that helps in recovery and repair of the muscles. Prolong and intense workouts leads to wear and tear of the muscles which requires adequate protein to build and regain the strength. Apart from muscle building there is another factor known as muscle maintenance that plays a major role in prevention of muscle fibre breakdown.

When there is long gap between meals the body gets into the starvation mode, body starts the utilisation of protein for energy production because of the absence of carbohydrates. To utilise protein, body starts the breakdown of muscle fibres to make the protein available. This state is known as catabolism which leads to breakdown of muscles and hence, leading to muscle loss. The longest gap in between the meals is the time when you are sleeping. During sleep your body regenerates and heal cells from all the wear and tear and protein is an essential nutrient required for the integrity of cell membrane. Therefore, to prevent the muscle loss one of the effective way is to start consuming a slow release protein before sleep. This will provide all the required amino acids that can prevent the muscle breakdown while sleeping.

The best protein to consume before sleeping is casein protein because it is a slow digesting protein. Casein forms micelle structures on consumption a thick, gel-like structures which gets dispersed in water as an emulsion. Once consumed, different digesting enzymes viz. lipase, chymotrypsin, trypsin starts metabolising these micelles by breaking them down in smaller structures which leads to steady release of amino acids and hence, prevents the breakdown of the muscle protein. Consuming casein protein delays the gastric emptying which provides longer duration for the absorption of amino acids which prevent the breakdown of muscles and helps in improving strength of the muscles. Apart from night, casein can also be consumed during the day when you have missed a meal or have prolong gap in between your meal.

Micellar casein is a natural form of casein which provides gradual release of amino acids important to prevent muscle breakdown. Micellar casein provides slow release of amino acids for upto 8 hours which not only prevent muscle breakdown but also increase lean muscle mass, improves muscle adaption to exercise training and enhance strength during workout. The micelle structure formed on consumption of micellar casein is larger in size and required much longer time to digest and absorb. This helps in providing prolong recovery to the muscles. Consuming the protein post workout helps in recovery and repair of the muscles happened because of the workout, however, prolong gap because of sleeping can lead to muscle breakdown. Hence, consuming micellar casein before sleeping provides prolonged overnight recovery by making all the amino acid available for the body. Therefore, Micellar casein leads to slow and gradual release of amino acids in the body that also improves sleep quality. Consuming micellar casein protein enhances the recovery and repair of cells by providing all the required amino acids.

**Remember that progress never sleeps and neither will your muscle gains.**

## What is MiCasein™

MiCasein™ is Micellar Casein Protein, a 24.3 g of slow release protein providing sustained muscle growth and recovery in a serving. MiCasein™, the perfect companion for use as a night time supplement or in-between meals when traditionally muscle would be in a catabolic state making body use muscle protein due to long gaps between meals. MiCasein™ that boosts metabolism and satiety has No added Artificial Colours, Flavours, Preservatives, Thickeners or Sweeteners. MiCasein™ is 100% Micellar casein in its original form.

Longer gaps between the meals makes human body to break muscle fibres for the utilisation of protein, this process is better known as catabolism. In absence of carbohydrates body start utilising protein for energy production and can lead to muscle loss. This can lead to catabolic state where body start breaking muscles to release the protein. The longest gap is during your sleeping and therefore, consuming a high quality protein before sleeping can prevent the muscle breakdown. Consuming casein protein provides steady and gradual release of all amino acids.

## Benefits of MiCasein™

MiCasein™ is slow digesting protein which helps in gradual release of amino acids leading to prolonged recovery. However, there are many other functions of Micasein viz.

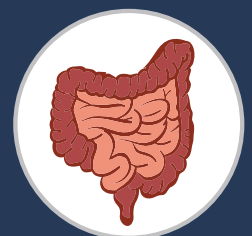
**1. Prevent Muscle Breakdown:** MiCasein™ works as anti-catabolic protein as it prevents the muscles breakdown by providing gradual and prolong release of amino acids. It specifically contains glutamine which works as a shield against muscle protein breakdown.



**2. Improved Muscle Growth:** Consuming MiCasein™ before sleeping provides prolong and gradual release of amino acids which improves muscle growth as these amino acids are important for stimulating muscle protein synthesis.



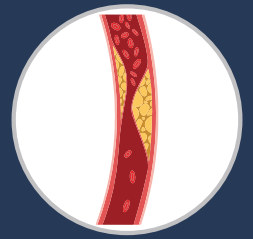
**3. Improve Colon Health:** MiCasein™ helps in improving colon health because of it's micellar nature that gradually deliver them required energy. The slow and steady release of amino acid helps in improving colon health over a period of time with gradual recovery.



**4. Boost Immunity:** MiCasein™ protein boost immunity by improving free radical scavenging in cells which prevents free radical damage. Casein protein contains many different types of peptides including glutamine amino acid which boost formation of glutathione that is an anti-oxidant.



**5. Improve Cholesterol Profile:** MiCasein™ is slow to digest and gets absorbed in digestive system which improves the serum cholesterol level by leading to the formation of fewer chylomicrons or an increase in chylomicron clearance. These chylomicrons are known to carry triglyceride molecules to depositing tissue which leads to accumulation of cholesterol in body.

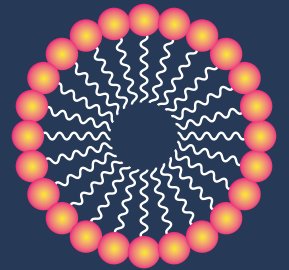


**6. Improve Weight Management:** MiCasein™ has the tendency to keep you full for longer because of slow digestion and absorption which actually prevents over eating and binge eating. This can help in managing weight in healthy range along with improved muscle mass and reducing fat mass. Long gaps between the meals makes body utilize glycogen reserves stored in our body for energy. Thus, MiCasein™ helps in metabolism, leading to improved weight management.



## How Does It Work?

MiCasein™ is the night protein comprising of micellar casein without any added artificial flavours, colours, preservatives, thickeners or sweeteners. On consumption, it forms micelle structures that are thick, gel-like structures which get dispersed in water and form an emulsion. Different digesting enzymes digest these micelles by breaking them down into smaller structures which leads to the release of amino acids. This process takes longer and hence leads to steady and gradual release of amino acid for prolonged recovery and prevention of muscle breakdown. The micelle structure can be distorted or changed using acid or alkali reaction or extreme heat exposure but once the micelle structure gets disrupted, it cannot be formed again. Casein protein is one of the two proteins that make up dairy protein, the other being Whey protein. It is typically known as the 'slow' digesting component of milk protein. When casein is made from milk it entraps calcium and phosphorus in between its micelle structure. Micellar Casein is pure casein protein which has a bigger micelle structure which takes longer time to digest in the system.



MiCasein™ works as a shield against muscle breakdown by providing all the essential amino acids required for muscle recovery. It also contains a non-essential amino acid, proline, which plays an important role in protein synthesis in the body and increased activity maximises its requirement for muscle recovery. The main property of MiCasein™ is the formation of micelle structures which delay digestion and lead to steady and gradual release of amino acids. These micelles are thick, gel-like structures which get dispersed in water and form an emulsion. Once consumed, different digesting enzymes digest these micelles by breaking them down into smaller structures which leads to the release of amino acids. This process takes longer and hence leads to steady and gradual release of amino acid for prolonged recovery and prevention of muscle breakdown.

## When To Take MiCasein™?

**Before Bed:** MiCasein™ provides slow release of amino acids which can provide recovery up to 8 hours, hence making it an ideal protein before going to bed. MiCasein™ gives steady and gradual release of amino acids which not only prevents muscle breakdown but also improves the sleep quality due to satiety which is important for overall muscle growth and recovery.

**Between Meals:** When there is a long gap in between the meals then MiCasein™ can rescue from any muscle damage. Long gaps may lead to starvation which ultimately depletes muscle protein from the body to utilize it as an energy source. MiCasein™ can be taken in between meals to prevent the muscle breakdown. In addition, it provides satiety and fullness which can help in avoiding unwanted junk meal to manage your weight.

## Who Can Take MiCasein™?

Any sportsperson or fitness enthusiast can consume MiCasein™ depending upon the daily activity. MiCasein™ is also meant for those people whose daily intake of protein is less and needs to overcome the early bed fatigue due to insufficient protein in their body making MiCasein™ use as a good adjunct for a bed time meal.



**Fitness Enthusiasts:** If you workout regularly and are looking to gain and maintain muscle mass then MiCasein™ is just for you. Since, MiCasein™ is a slow digesting protein it provides recovery for the longer duration and prevents breakdown of the muscles. Right quantity and quality of protein can help in improving muscle mass.



**Endurance Athletes:** Longer duration of activity depletes the energy reserves from the body and required longer recovery to maintain the performance. MiCasein™ is slow releasing protein which provides all the essential amino acids important to prevent the muscle breakdown and stimulate muscle protein synthesis.



**Strength Athletes:** Higher and intense training leads to wear and tear of muscle which can lead to muscle breakdown which needs to be taken care by right and balanced quantity of protein in diet. Post workout is time for speedy recovery but to prevent muscle breakdown a balance between slow and fast protein is important. Casein protein provides slow release of amino acids which prevent the muscle breakdown and improves the muscle mass. In addition, MiCasein™ provides the satiety and keeps the stomach full for longer which may help in managing weight of the athlete.

## Casein Protein vs Whey Protein

Both, Casein and Whey protein are derived from milk that varies in many aspects including solubility, digestion time, absorption and amino acid profile. Difference between casein and whey protein on different aspects are as following:

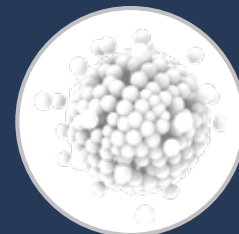
**1. Solubility:** Whey protein has a higher solubility and mixes well in water whereas casein gets dispersed in water and forms an emulsion. Casein forms micelle like structures which keeps the molecule stable.



**2. Digestion Time:** Casein protein takes longer time to digest as compared to whey protein. On an average whey protein gets digested within an hour's time whereas casein takes upto 8 hours to get digested. This also leads to slow absorption of casein protein in human digestive track as compared to whey protein.



**3. Amino Acid Profile:** Whey protein is higher in leucine content as compared to casein protein, whereas, casein protein have higher glutamine content. Leucine is a branched chain amino acid which is responsible for stimulation of muscle protein synthesis whereas, glutamine helps in preventing muscles breakdown with gradual recovery.



**4. Role to Play in Body:** Whey protein stimulates muscles protein synthesis which is important for building muscular structure whereas, casein also helps in muscle protein synthesis and prevent muscle breakdown in longer duration of starvation and takes care of muscle maintenance. However, both proteins work toward the recovery and repair of the muscles.

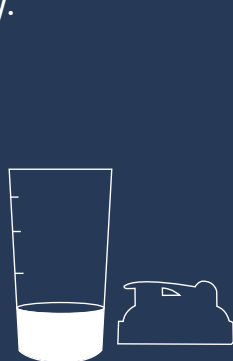


**5. Preferred Time of Consumption:** Whey protein is preferred to be consumed post workout whereas casein is preferred to be consumed before sleeping because of their respective digestion time. However, casein can be consumed in between meals when there is longer gap in between meals.

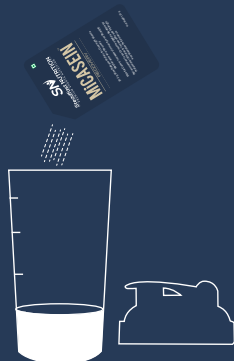


## How To Prepare MiCasein™?

Mix and dissolve one sachet of 30 g MiCasein in 250 to 300 ml water or milk. Consume 2 servings daily.



Take 100 ml Water  
in a Shaker



Tear off Sachet &  
Empty Content into Water



Shake Well

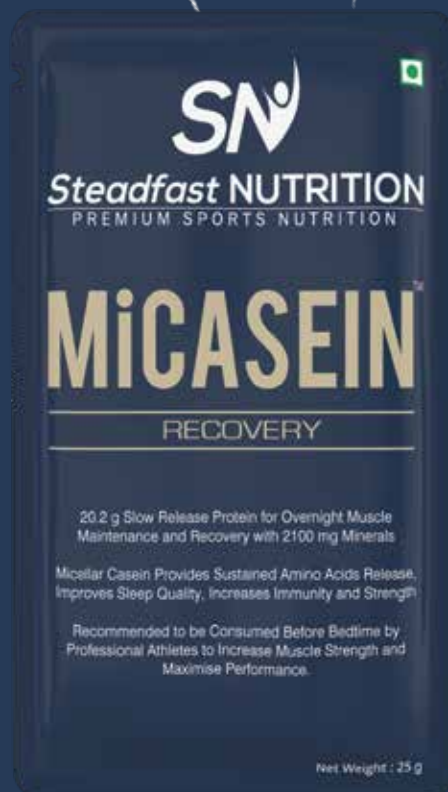


Top off with 150-200ml  
Water & Shake Again

# MiCASEIN™ Offers

IDEAL BEFORE BEDTIME  
OR BETWEEN MEALS

100% PROTEIN FROM  
MICELLAR CASEIN



BOOSTS METABOLISM  
AND SATIETY

24.3 G  
SLOW RELEASE PROTEIN

SUSTAINED MUSCLE GROWTH  
AND RECOVERY

NO ADDED ARTIFICIAL COLOURS,  
FLAVOURS, PRESERVATIVES,  
THICKENERS OR SWEETENERS

## AN OVERNIGHT RECOVERY FORMULA

All nutritional products of **Steadfast NUTRITION** dutifully adheres to the practices that are:



STEROIDS FREE



HEAVY METALS FREE



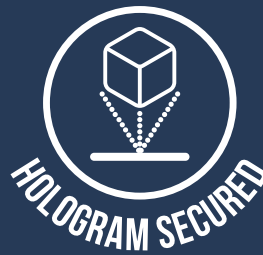
SACHET SANCTITY



SUPERIOR QUALITY



LAB TESTED



HOLOGRAM SECURED



SOURCED INTERNATIONALLY



FSSAI REGULATED



NO ASPARTAME ADDED



FOR ATHLETES, BY ATHLETES



GMP CERTIFIED MANUFACTURING FACILITY

JOIN THE **SN** COMMUNITY



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**Steadfast Nutrition**

**A Division of Steadfast MediShield Pvt. Ltd.**

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