

*Aadvik*

# Camel Milk Guide Book



By : Aadvik Foods & Products Pvt. Ltd.

## **A Note To The Readers**

This book is completely based on the needs of our customers, their queries on the products that they have bought from us, i.e., camel milk. This book is a detailed description of how camel milk has helped them and their families.

We have tried to provide the best information possible with the help of research papers, user feedback, and other sources. We'd like to inform you that the information provided may vary from person to person. The dosage, timing, etc. may vary, as it has been provided in a general way, not keeping a specific individual in mind.

We'd recommend taking your physician's advice before making any dietary changes for clinical purposes.

## **Introducing Aadvik Foods**

We'd like you to know more about us before we start with Camel Milk. We're Aadvik, India's first company to brand, market, and sell Camel Milk and its products in India and abroad. We have a diverse range of customers, from mothers to their kids, to celebrities, to health-conscious individuals, we make health accessible to all! We're trying to make our way into every person's daily diet by "Adding Wealth to Your Health."

Along with our customers, we are also sensitive towards taking care of camels, camel herder communities, and the environment. When we started Aadvik in 2016, the camel population in India was declining at a very rapid pace, camel herder communities like Raika and Rabari of Rajasthan & Gujarat were struggling to meet their basic needs, but with your support, we have been able to provide sustainable income to more than 200 of these families and we will continue to support them. This wouldn't have been possible without your support, so we also want to thank you guys for your belief in us and camel milk.

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## **Chapter 1: Background about Camels and Camel Milk:**

Known as the ‘Ship of the Desert,’ and a ‘Symbol of the Desert,’ camels are multipurpose animals, used for social and economic needs, where their population, in the past 5 decades, has increased about 4.43 fold. About 83% of this population can be found in the Eastern and Northern African regions, with the rest of them in the Indian Subcontinent and the Middle East.

The first question that comes to mind is, “Where do they come from?” Camels were first domesticated in the Arabian Sahara approximately 5000-6000 years ago. Domestic camels have been known to be the major source of meat, milk, even wool and leather products. There are two types of camels found all around the world, i.e., Bactrian and Dromedary. In India, mostly Dromedary camels are found, and they are more than 6 feet tall and weigh approximately 400 to 600 kg. They can survive up to six months without food or water! Now that is an interesting fact. However, during such time, they may lose half their body weight. They have a gestation period of about 12 to 14 months and usually deliver only one calf, which is seen as a suitable period of milking.

Camels in India are mostly one-humped, i.e., they belong to the dromedary group. They have adapted to the harsh and dry environments of the deserts and are mostly found in the Aravalli Hills. The Raika/Rebari community is the closest to these animals and they have certain taboos in their utilization of camels, such as never slaughtering them or eating their meat, never selling their wool, nor milk, or any female camel for that matter. Another interesting fact, they only sold male camels, once a year, according to their traditional customs, at the annual livestock fair at Pushkar, Nagaur, and Tilwara. Although there has been an increase in the total population of camels globally, it has been on a decline in India. There were approximately 1 million camels in the mid-1990s, but it reduced to 4,00,000 camels by 2012.

Camels are more sustainable as compared to cattle because they live on resources that other livestock do not consume, which would not get used in their absence. They browse over various plants, and this can stimulate tree growth and lead to the development of new green lands. Additionally, their numbers are small, and their feeding behaviour is in balance with the agro-ecosystem. They are much more efficient than cows in converting vegetation resources that they are feeding on in their milk.

Various researches have been carried out to figure out the beneficial properties and composition of camel milk, which have depicted positive results. On this informative page, you will find a detailed guide on camel milk, its composition, its benefits, reasons for its increased demand, with a specific focus on its benefits on autism, diabetes, immunity along with height, and body growth.

### **1.1. Growing Popularity of Camel Milk globally:**

With deep insight into the camel milk market, one can understand the increased demand for this specific product. Even though the price of camel milk is a bit on the higher side, as compared to the traditional cow and buffalo milk, owing to the reason that camel milk is produced in lower quantity than cow milk, the health benefits that it has, overshadows the higher prices. Along with this, the camel farmers have to travel long distances to get the milk to the milk centers, and this transportation cost also adds to

the higher price of camel milk.

Did you know that in various parts of Africa and the Middle East, camel milk is used to feed undernourished children? In the US and Canada, there has been an increased demand and adoption of camel milk among diabetic patients, owing to the insulin content it has. As a result of this, the companies in this market are strengthening their supply to these countries through both online and offline retailers.



Consumed both in raw and fermented forms, camel milk has a growing number of urban consumers, as manufacturers are expanding their contributions to provide to this population. In the UAE, Morocco, Algeria, India, Egypt, Australia, Africa, and Mauritania have an increased demand for camel milk ice cream, flavored beverages, chocolate, and sweets. Thus, it can be said that the camel milk dairy market has a great opportunity in terms of product innovation as per the increased demand in the untouched and developing markets.

Different organizations in the UAE have started selling chocolates, made from camel milk, which is now sold across the world, including the UK. In Australia, there is the availability of camel milk in the form of feta cheese, and a range of camel milk skincare products, including soaps and body butter.

The organizations that sell these products, export them to Singapore and Thailand and are expanding their business to export to various other parts of the world.

It is this demand for camel milk and its products that are bringing them to the farms and cities globally. As their bodies have the capability to adapt to high temperatures and droughts, they are known as the perfect animals for the world's changing climate. However, in traditional societies, camels and their benefits are still a well-kept secret.

## 1.2. How is the Camel milked?

Milking a camel is a task. Cows can be easily milked by machines, whereas camels are quite the difficult ones to milk by machines, as they have their milk stored in structures within an udder called the alveoli. As these are tiny sacs that are lined with milk-producing cells, it becomes difficult to milk them. For this reason, instead of using machines to milk the camels, the farmers prefer to milk them by hand in a standing position.



Firstly, a camel may only provide up to 4 litres of milk per milking. Second, as milking camels through machines is a new concept, they are not specifi

cally designed for the camels. The presence of the calf is very important to milk a camel. Therefore, a milker might have to sit with every individual camel from the beginning of the milking season to the end, to make sure of a proper milk out. This makes it a daunting process, which is both time-consuming and physically draining. As the machine milking process is new, the camel herders follow their age-old tradition of milking the camels by standing on one foot and

## Chapter 2: Camel Milk Properties:

There is an increasing interest in foods that not only have nutritional value but also have physiological benefits. The present composition of camel milk has successfully made it a promising drink when compared to bovine milk. Most of the camel milk is drunk fresh.

Did you know that you can also consume it when it has a slightly salty taste? Normally, camel milk has a little salty taste. The first milk of the camel, i.e., the colostrum, is slightly diluted and is white in colour when compared to cow colostrum. Other composition levels depend on the lactation period.

When compared to other forms of milk produced by other mammals, camel milk is mostly known for its better digestibility in the human gastrointestinal tracts because of the small fat globules and its hypoal-

### 2.1. Physicochemical Properties:



Camel Milk is opaque white in colour, with a normal milky odour and saltier taste. The **taste of the camel milk** completely depends on the vegetation and food habits of the camel. In addition, the freezing point of camel milk ranges **between  $-0.57^{\circ}\text{C}$  and  $-0.61^{\circ}\text{C}$** .

**It has a calorific value of 665 kcal/L, as compared to that of cow's milk at 701 kcal/L.**

The **calorific value of camel milk** may be determined by the difference in lactose, protein content, and fat, as it has a lower amount of milk solids. Camel milk has a **pH rate that ranges between 6.4 to 6.7** and is almost similar to that of sheep milk, but it is slightly lower than that of bovine milk. It has a **water content between 87% to 90%**.

## **Different Types of Camel Milk:**

Based on the product type, camel milk can be divided into raw camel milk, pasteurized camel milk, and camel milk powder. Camel milk is often referred to as **a complete meal** in itself, as it **has all the required nutrients** for a human body to sustain throughout the day. Did you know in ancient times, the nomads and herders would rely only on camel milk for their long journeys?

Camel milk, when consumed:

- Depicts that it is a complete food in itself,
- Has all the nutrients and vitamins required by the human body.
- Is said to have more amino acids, anti-microbial properties, vitamins, minerals, and fatty acids than pasteurized milk.
- Contains Prebiotic Bacteria, which helps in keeping the gut healthy.
- Contains Immunoglobulins, which can help strengthen the immune system.
- Acts as an incredible source of nutrition.
- Helps control blood sugar levels.

- Helps control cholesterol levels.
- Helps promote immune health.
- Acts as a good source of nutrition for lactose intolerance.

\* Since raw camel milk is not so easily available in the market and hygiene at the farm plays a very important role; it is safer to consume Raw camel milk/ powder only when the source is known.

## 2.2. All About Camel Milk Powder:

### How is Camel Milk Powder made?

There are two processes being widely used for the **production of camel milk**, namely spray-drying and freeze-drying. These two processes help in converting milk into powder form. Each process has the ability to affect the physicochemical properties of dried milk.

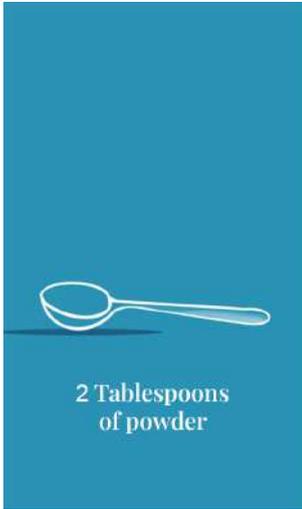
The **spray-dried** process is a method in which heat is applied for a very short span of time and has a high evaporation point, which gives a high-quality product at a lower cost. The **freeze-drying** process is one where water is removed from a frozen solution by **sublimation**. With the usage of vacuum, the ice evaporates almost immediately, without turning into water.

This powdered milk, made from either of the two processes, is known as dry milk powder. It can be made from whole milk, skimmed milk, and even low-fat milk. Camel milk powder is **very convenient** to have in your kitchen pantry, as it does not require refrigeration unless it is reconstituted into liquid milk.

### How to reconstitute Camel Milk Powder:

#### What do we mean by Reconstitution?

In terms of cooking, reconstitution is the process of rehydrating dried food by placing



Aadvik's delicious  
Camel Milk Powder



In terms of cooking, reconstitution is **the process of rehydrating dried food** by placing it in water or some other liquid, to bring them back to the original resemblance of its original shape, size, and texture. There are two types of powder available, i.e., granulated and fine.

For the granulated milk powder, follow the following steps:

**Step 1:** Measure out the camel milk powder and water content. Mix and Stir.

**Step 2:** Let the mix rest for a little while. Mix it again and then pour into bottles and store them.

**Step 3:** Enjoy your camel milk.

For fine milk powder, follow the following steps:

**Step 1:** Take the required amount of milk powder in a glass.

**Step 2:** Take 50 ml of water and pour it into the glass and mix it until smooth.

**Step 3:** Take the rest of the required amount of water and mix it with the mixture.

**Step 4:** Your milk is ready to be consumed.

### **How to store Camel Milk Powder?**

Camel milk powder is readily available in the market. It is very easy to store camel milk powder. Just keep it under room temperature. All you have to do is keep it away from direct heat, moisture, and sunlight. It can also be stored in a refrigerator for extended shelf life.

### **How much powder do you need to make the required consumable amount?**

Remember, 20 gm of camel milk powder makes approximately 200 ml of camel milk. You only need 2 tablespoons of camel milk.

### **When should you consume camel milk?**

Camel milk powder is always ready for consumption, whether it is in the morning, or at night.

### **What is the right temperature of water to be used to consume camel milk powder?**

Experts state that camel milk powder should be dissolved in lukewarm water, at a temperature of 38 - 42 °C.

### **What if the powder settles down at the bottom after stirring it?**

If the powder settles down at the bottom, even after stirring, try using Lukewarm water, when possible. The powder usually tends to dissolve more properly in warm water.

### **Is heating required after reconstitution?**

It is preferable not to heat or microwave the mixture after mixing it, as it loses its nutrients, immunoglobulins, and antibodies present in the milk.

However, you can use lukewarm/ warm water to reconstitute the milk powder.

### **What is the colour and texture of camel milk powder?**

The natural colour of camel milk is white, however, when it goes through the different processes of turning into powder, it might have a slightly yellow colour.

The texture of camel milk powder is thin and smooth, which has a grainy taste, is a little nutty, and is slightly salty.

What to do if someone sees lumps in the mixture?

If lumps are seen in the mixture, try to add the powder slowly with small amounts of water (preferably hot) into a thick paste quickly until the lumps dissolve. Then, gradually add water, and the results should be very smooth.

You can even add the powder, with the required amount of water in a mixer at a speed range of 30-250 rpm, which allows for the proper mixing of the mixture without the formation of lumps. However, do not blend it in the mixture much, as full-fat milk/ powder may give out cream or butter that you will be able to see floating on the top.

## **Chapter 3: Composition of Camel Milk:**

### **3.1. Gross Chemical Composition of Camel Milk:**

**Table 1: Chemical Composition of the milk of different species as compared to Camel Milk**

<b>Proximate</b>	<b>Water%</b>	<b>Protein%</b>	<b>Fat%</b>	<b>Ash%</b>	<b>Lactose%</b>
Camel	86-88	3.0-3.9	2.9-5.4	0.6-0.9	3.3
Cow	85-87	3.2-3.8	3.7-4.4	0.7-0.8	4.8-4.9
Buffalo	82-84	3.3-3.6	7.0-11.5	0.8-0.9	4.5-5.0
Sheep	79-82	5.6-6.7	6.9-8.6	0.9-0.1	4.3-4.8
Goat	87-88	2.9-3.7	4.0-4.5	0.8-0.9	3.6-4.2
Human	88-89	1.1-1.3	3.3-4.7	0.2-0.3	6.8-7.0

(Source: Kanhal and Hamad, 2010)

Having been evaluated in various parts of the world, the composition of camel milk shows that when there is a low value of total solids and fat, it depicts **positive effects**, as compared to cow's milk.

A major component of camel milk is its water content, i.e., 84% to 90%. However, the differences in the composition of camel milk can be attributed to various factors such as geographical location and feeding conditions. The specific composition of camel milk has made it a **promising alternative** to bovine milk.

With a **higher value of certain vitamins and minerals**, camel milk is considered significant for consumption. With its richness in vitamin C, it is 3-5 times and 1.5 times higher than bovine and human milk respectively. Bactrian camel milk is a great source of Vitamin A, which is twice what is found in cow milk and is **high in Vitamin D** and riboflavin. It has 55% more zinc as compared to goat and cow milk, which can help in the **dietary growth** of individuals suffering from deficiencies in micronutrients.

Camel milk is rich in chloride, which may be because camels consume forage such as Acacia, Atriplex, which have a higher content of salt and may be considered as one of the **reasons for the salty taste of camel milk**.

### 3.2. Mineral and Vitamin profile of Camel Milk:

**Table 2: Mineral Profile of Camel Milk in Different Stages**

Mineral	Early lactation	Late lactation
Ca	94.06±0.75mg	97.32±0.51
P	41.68±0.55mg%	47.14±0.52mg%
Mg	11.68±0.22mg%	13.58±0.31mg%
Na	29.70±0.53mEq/L	35.49±0.89mEq/L
K	50.74±0.51mEq/L	71.86±1.43mEq/L
Fe	1.00±0.12mg/dl	-
Zn	2.00±0.02mg/dl	-
Cu	0.44±0.04mg/dl	-

(Source: Singh, Ghorul, & Sahani, 2006)

**Table 3: Vitamin Profile of Camel Milk**

Vitamins	Quantity
A ( $\mu\text{g}\%$ )	20.10 $\pm$ 10.00
E ( $\mu\text{g}\%$ )	32.70 $\pm$ 12.80
B1 ( $\mu\text{g}\%$ )	19.60 $\pm$ 6.40
Pantothenic acid (mg/ml)	0.90
Niacin (mg/ml)	4.60
Vitamin C (mg/ml)	35.00

(Source: Stahl, Stallman, Duehlmeier, & Wernery, 2006)

In terms of proteins, camel milk can be divided into two parts: caseins and whey proteins. These proteins play an important role, as they have various functions.

The fat content in the dromedary camel is 1.2% to 6.4%. Although the short-chain fatty acids are lower in amount, the long-term fatty acids can be seen in higher amounts, which are important for nutrition. The number of linoleic acids and unsaturated fatty acids is also high. It has fat and water-soluble vitamins such as Vitamins A, D, E, and B, especially Vitamin C. It even has minerals such as Calcium, Potassium, Zinc, Kaluim, Magnesium, and Phosphorus.

#### **Chapter 4: Benefits:**

There are various potential benefits of Camel Milk in treating different diseases that have been mentioned below.

#### **Diabetes:**

## Camel Milk for Diabetes

- Contains Insulin-like Proteins
- Helps Maintain Blood Glucose Levels.
- Has Antioxidant Properties.



Containing insulin-like proteins, camel milk is known to be **beneficial for individuals suffering from diabetes**. It further contains tissue repairing proteins that can help in overcoming diabetes. Insulin is one of the most significant proteins in camel milk, and it has the ability to pass through the stomach into the intestines. Therefore, insulin is not destroyed and coagulated and can be easily absorbed into the blood, which **helps in reducing blood sugar**. It is beneficial for patients suffering from Type-1 and Type-2 diabetes, as it helps the body in making enough insulin.

Camel milk insulin does not generate coagulum in the acid environment of the stomach, which is possible in the insulin of other mammals. Through this, it can be said that the antioxidant action of **camel milk prevents metabolic syndrome that includes insulin resistance and hyperglycemia**.

Studies have shown that the insulin concentration of camel milk is higher in comparison to cow milk, which can be used as an injunction to insulin therapy because it seems **safe and efficacious in improving long-term glycemic control** and even helps in reducing the insulin requirement in type 1 diabetic patients.

### Allergies:

There are many adults and children who suffer from different food allergies. Camel milk does not contain allergens and helps in maintaining the immunity system,

which becomes helpful for children to overcome their allergies. Experts have stated that giving camel milk to children helps them in recovering from their allergies with no known side effects.



Camel milk is known for its **positive effects in the treatment** of food allergies, because it has anti-inflammatory properties, hypoallergenic properties, along with nanobodies that are comparatively smaller than those in a human body. There are casein molecules present in camel milk that are larger in size as compared to cow or human milk. Therefore, it means that it does not react to children suffering from autism and even those with the most sensitive allergies to milk and casein.

**Camel milk does not contain beta-lactoglobulin, which is one of the major causes of milk allergies.** It has been found in a study that camel milk has a lower pH level than other types of milk, which means that when the milk reaches the stomach, it does not affect it in a negative way and is also helpful in stabilizing the milk faster than any other form of milk.

### **Immunity Benefits:**

Making **immunity stronger** is one of the basic benefits of camel milk that helps the body in fighting various diseases. Individuals with auto-immune diseases have immune systems that attack their own body tissues. There are various traditional treatments for these diseases, but camel milk benefits these disorders by **boosting the immunity system**. Experts have said that

camel milk nanobodies, as a single domain, have shown various promising and therapeutic properties in terms of infections and immunity.



## Camel Milk for Improving Immunity

- Contains Immunoglobulins (Igs).
- Has Infection-Fighting Properties.
- Has the Ability to Neutralise Enzyme Activity of a Bacteria/ Virus.

Additionally, the **immunoglobulins** (Igs) and the protective proteins in camel milk have contributed towards its infection-fighting and eradication properties. The Igs in camel milk are able to penetrate the body tissues as they are smaller in size, which the human Igs are unable to do. Therefore, camel milk has the capability to enter the kidney or inside a cell and neutralize the enzyme activity of an infectious bacteria or virus.

### Antibacterial and Antiviral properties:



## Camel Milk & Antibacterial Properties.

- Contains Lactoferrin & Lysozyme.
- Acts as a Bactericidal Agent.
- Help Fight Auto-Immune Diseases.

Camel milk is known to **contain antimicrobial enzymes** namely lactoferrin and lactoperoxidase, along with protective proteins like caseins, and smaller immunoglobulins. With higher concentrations of Lactoferrin and Lysozyme

than bovine milk, it acts as a **bactericidal agent**. Various studies have shown that lactoferrin has inhibitory activity on the bacteria present in the body.

Camel milk is known to have **medicinal properties**, which have been proven by recent studies done on the antimicrobial activity of camel caseins. The immunity system of a camel is stronger than that of a human and the smaller immunoglobulins pass from the camel milk into human blood easily. Immunoglobulins are found in camel milk throughout the lactation process and drinking camel milk will provide a 'tool' for fighting auto-immune diseases by **fixing the immune system**. Camel milk also has synergistic action along with antibiotics that can be used to reduce the dosage of antibiotics and bacterial antibiotic resistance.

#### **Lactose Intolerance:**

Different studies have been conducted on patients with lactose intolerance, who consumed camel milk. **The results of these studies show a positive effect and state that camel milk is a suitable option for people with lactose intolerance.** Experts have stated that lactose-intolerant people can easily digest camel milk. The reason behind it is that camel milk has a higher concentration of L-lactate, whereas cow milk has a higher concentration of D-lactate.

#### **Antioxidant Activities:**

Did you know that the effects of alpha lactoglobulin were higher in camel milk than other bovine milk, as it contains a higher level of antioxidant amino acids residues, which help in digesting the food properly?

Experts have found that camel milk has alpha-lactoglobulin, which helps in digestibility. They have also said that cultured camel milk has shown a **higher level of antioxidant activity** than bovine milk that is available in the market.

## 4.1. Camel Milk and Autism:

### What is Autism?

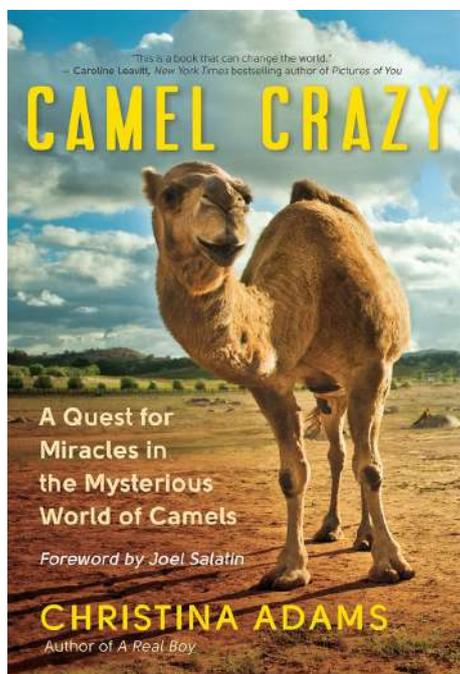
Autism Spectrum Disorder (ASD) is a **complex developmental disorder** that is related to symptoms such as restricted, repetitive patterns of behaviour, interests, and activities, along with communicative and social interactive issues. People with autism suffer from deficits in social and emotional reciprocity and have difficulty in maintaining relationships.

Autism, or Autism Spectrum Disorder, is known for its various conditions such as challenges with social skills, cognitive behaviour, repetition, speech, and nonverbal communication. Autistic children are known to have hyper behaviour.

### Does Camel Milk Help in Autism?



Camel Milk and Autism have been known to have a relationship that is quite old. There have been recent studies, which show that individuals suffering from autism spectrum disorder suffer from **psychological and metabolic abnormalities**, and particularly from lower immunity or inflammation, oxidative stress, mitochondrial dysfunction, and environmental toxicant exposure. Research-based evidence has shown that consuming camel milk is beneficial for autistic individuals as it is rich in enzymes, vitamins, and minerals.



Extensive research has been conducted on the reasons that lead to autism, and it has been found that oxidative stress is one of the major reasons. Excess oxidative stress takes place when the reactive oxygen species levels increase above the antioxidant abilities of a single cell. Research conducted on autistic children showed that the high levels of antioxidant vitamins such as Vitamin C, A, and E, along with minerals like magnesium and zinc in camel milk help in decreasing oxidative stress.

Autistic children tend to have lower levels of magnesium, which is said to be a leading factor in oxidative stress in autistic children. Zinc plays an important role in the positive activity of various enzymes in living organisms. It even prevents cell damage as it has antioxidant properties. When all these vitamins and minerals are consumed together, they improve the functions of detoxifying molecules, activation of antioxidant enzymes and improves absorption of antioxidant vitamins.

Did you know that along with other problems related to autism, it is also known to be associated with gastrointestinal diseases? It has smaller-sized antibodies, which becomes easier for autistic children to digest, thus improving their digestive abilities.

Various researches have been conducted regarding camel milk and its benefits on the immune system, as autistic children have reduced immune system regulation. Due to this, they become more prone to diseases such as allergies, which **can be overcome by consuming camel milk**. It contains no beta-lactoglobulin and beta-casein, which is known as the main cause of cow

milk allergy. Camel milk even contains different protective proteins that contain mainly enzymes that exert antiviral, antibacterial, and immunological properties.

There have been various studies conducted by experts, which state that when autistic individuals consume camel milk, they tend to become quieter and less hyperactive. The experts even stated that children under the age of 15, when they consume camel milk, show reduced symptoms of autism.

One such example of this is [Christina Adams](#), the author of “[Camel Crazy- A Quest for Miracles in the Mysterious World of Camels.](#)” When she found out that her kid is autistic, she began her search for a cure, which marked the beginning of a journey with camels and their milk. This book is her expedition, her mission as a mother, who has travelled the globe for her child.

[Camel Crazy](#) has won the [Nautilus Book Award](#), and the author [Christina Adams](#) has been featured by [CBS San Diego](#), [NPR](#), [The Public Library of Science DNA Blog](#), [Dubai One](#), [Gulf News](#), [Khaleej Times](#), etc.

Further, she has also written “[A Real Boy: A True Story of Autism, Early Intervention, and Recovery.](#)” Her son, [Jonah Adams](#) was diagnosed with Autism at 2 years and 8 months. A doctor refused to believe that such a healthy and happy person could be given such a diagnosis. This is a true story of [Jonah’s mother, Christina Adams](#), who seized this small window of opportunity to provide her son with full recovery. The author has shared her experience and journey which she undertook to give her child a second chance at life.

She is an American award-winning journalist, writer, and speaker. She is a **specialist and leader in Camel Milk** and has done deep research on the benefits of camel milk, especially around autism. Her works have also been featured by various top newspapers like [The Washington Post](#), [The Los Angeles Times](#), and the list goes on!

On this note, Aadvik Foods also conducted a webinar with Christina Adams on Camel Milk & Autism, where she shared her journey and how camel milk helped her autistic kid. She has even answered most of the frequently asked questions regarding the dosage, taste, etc. about camel milk. To get a view of the webinar.

## **FAQs About Camel Milk & Autism:**

### **1. What should be the dosage of camel milk for autistic children:**

Answer: With each child having his/her own requirement, their dosage also depends on their consumption capabilities. There have been many cases where children can take up to 1 tbsp of camel milk, two times on a daily basis. This dosage is then gradually increased according to how much their body can take on a daily basis.

As a general rule, start with 30 ml of camel milk two times per day on an empty stomach. Increase this dosage every 3-5 days, until a dosage of 200 ml is reached. This dosage can also be increased to 500 ml per day, if and as your child's body can take it.

### **2. Is camel milk beneficial for autism?**

Answer: Autism or ASD, is characterized by challenges in social skills, speech and non-verbal communication, repetitive behaviour, and many more. Different experts have said that consumption of camel milk can help in improving the allergies and inflammation in ASD, along with other inflammatory diseases. Further, research-based evidence shows that camel milk is rich in enzymes, antibodies, along with vitamins and minerals that benefit autistic children.

Furthermore, experts have also stated that camel milk helps in reducing oxidative stress among autistic individuals, as it is known as one of the major causes of autism. Parents have reported improved sleep, better motor planning abilities, better spatial awareness, more eye contact, better

language-speaking abilities, fewer gastrointestinal issues, and improvement in skin diseases too!

### **3. Is it okay to mix honey or chocolate with camel milk for an autistic child?**

Answer: No, the addition of honey or chocolate can cause the sugar levels to spike up, which can be negative for the child. Organic Grade B maple syrup is the best for them. It helps in regulating the insulin output from the pancreatic cells and maintaining blood sugar levels. Chocolate can also increase autistic symptoms and is not recommended for their consumption. To enhance the taste of the milk, it can be turned into a smoothie by using fresh fruits. A pinch of coffee can also help.

### **4. How would you know whether your autistic child is allergic to milk or not?**

Answer: If you see that your child has developed a rash, is suffering from eczema, or loose stools, he/she may be having an allergic reaction to camel milk.

### **5. What to do if a toddler is suffering from speech and communicative issues? If the beginning dosage is 200ml, what is the maximum amount a toddler can take?**

Answer: Try camel milk as any other food, and you will be able to see the difference in their speech ability. Giving them camel milk for 72 hours has shown positive results. It not only improves speech but also improves their sleeping ability. One can start with camel milk with smaller dosages, then increase it as per their body can take it. The amount recommended for camel milk that a toddler can take is up to 200 ml.

### **6. Does camel milk help alone, or can something be added with it for autistic children?**

Answer: There are parents who have said that raw camel milk has helped their autistic children in a huge way, along with Nemechek. These help the children in making perfect eye contact, respond properly to name-calling, normal speech, and proper interaction with others. The GFCF diet, along with the removal of other dairy and sugars, helps in the same.

Along with this, there are various therapies available to help autistic kids, such as speech & language therapy, music therapy, occupational therapy, picture exchange communication system, applied behaviour analysis (ABA), cognitive behaviour therapy, joint attention therapy, etc.

To know more about autism and the various types of therapies for them.

### **7. Is it normal for autistic children to have emotional crying problems and stimming?**

Answer: It is normal for autistic children to have emotional days like any other human. However, if he/she is suffering from stimming, then you should check the directions on the package. It is recommended to start very low. Sometimes it is just a drop or two, and then work up the dosage. A higher dosage may kill off the yeast and bacteria faster than their body can detox the toxins which are released.

### **8. Has camel milk actually helped children with autism?**

Answer: There are numerous parents who have said that camel milk has helped their children with autism. Consuming camel milk makes them more empathetic, and helps in expressing their feelings better. They tend to become calmer and have improved speech. It has even helped in boosting their immunity, improving gastrointestinal issues, and developing cognitive skills.

### **9. Should the dosage of a 4-year-old autistic child consuming 5ml/day be increased, who does not like dairy?**

Answer: If your child with autism does not like to drink milk, add in a bit of stevia, which is a healthy sugar alternative and is a natural sweetener. The dosage should be increased to 120 ml a day to see the

best results. However, increase the dosage from 5 ml slowly and reach 120 ml.

### 10. Does camel milk help older children with autism?

Answer: According to various research conducted by experts, camel milk has known benefits in helping children above the age of 15 with autism.

### 11. At what dose can gain be seen in children with ASD?

Answer: Try to give camel milk in the morning, on an empty stomach. Start slow with the dosage and then increase it accordingly. Start with a few drops initially, then increase the dosage.

## 4.2. Camel Milk and Gut Healing:

### Signs of an unhealthy gut:

The common signs of an unhealthy gut are:

- Stomach Discomfort
- Fatigue
- Unintentional weight changes
- Autoimmune conditions
- Food cravings
- Skin irritation



An important source of energy and nutrients, camel milk has various functional effects. It has **high anti-inflammatory properties**, which have positive effects on the stomach and gastrointestinal issues. It even has high levels of unsaturated fatty acids and vitamins that help improve the carbohydrate metabolism of the human body.

Camel milk has antibacterial properties and contains antimicrobial enzymes namely lactoferrin and lactoperoxidase that make the immunity stronger and can be digested easily due to the presence of smaller-sized immunoglobulins. It even has **higher concentrations of lysozyme** than bovine milk. It is known to be highly nutritious, as it contains only 2-3% fat. The molecules connect with the protein element of the milk, which makes it easier for the liver to process it, thus making digestion easier. Camel milk has **lower pH** levels than other types of milk, so that when it enters the stomach, the casein micelles do not break down into caseins and whey, and therefore, do not break into casomorphins.

## **FAQs About Camel Milk & Gut Healing:**

### **1. What should be the dosage of camel milk for individuals with gut problems?**

Answer: Start with approximately 100 ml of camel milk daily. If you see any signs of bloating or any other issues, you may be overdoing it. Stop with the dosage and start with small amounts. You will see the difference yourself.

### **2. Does camel milk improve digestion?**

Answer: Camel milk does help in improving digestion as it is lighter and has a lower pH level, which does not allow the casein micelles to break down into caseins and whey.

### **3. Can camel milk improve stomach health?**

Answer: It helps in improving stomach health, as it contains healthy fatty acids that give the body the energy to work throughout the day. Consuming 120 ml of camel milk on a daily basis can help in improving stomach health.

### **4. How much dosage should you begin with?**

Answer: Camel milk is like medicine, which should only be started with a few drops or teaspoons. Over-consumption of camel milk can cause the immune system to be negatively affected and can overstimulate it.

For 5-10-year-old kids: Start with 50 ml and increase it to 200 ml a day.

For 10-15-year-old kids: Start with 100 ml and increase the dosage to 200 ml a day.

For individuals above 15 years: Start with 100 ml a day and increase the dosage to 400 ml a day.

### **How long before one can see any difference in improvement in gut health?**

Answer: You can see noticeable improvement within 3-5 days, or it may even take up to 2 weeks to show any signs of improvement in gut issues.

### **5. Does Camel Milk help when one is suffering from Bowel Syndrome?**

Answer: There have been cases where people have said that consuming camel milk has helped them overcome their bowel issues. Begin with a lower dosage, then increase it accordingly. If one begins at a high dosage, then it may lead to bloating, cramping, and irritation, where you will need to stay by the washroom the entire day.

### **6. Is camel milk good for Diarrhea?**

Answer: Diarrhea caused by rotavirus has been treated by camel milk for hundreds of years. Research has suggested that camel milk contains antibodies that can help treat diarrheal diseases, which are common among children.

### **7. What should be done if one is suffering from constipation? Will camel milk help? What can be taken along with it?**

Answer: Camel milk can be consumed if one is suffering from constipation, however, the dosage must be checked before starting the consumption. Green vegetables like peas, fruits like dragon fruit, peaches, may help. Magnesium citrate supplements can also be given to them.

Answer: If you see that consuming  $\frac{1}{4}$  part of camel milk is causing bloating and pain in the stomach, then you should reduce the dosage to  $\frac{1}{8}$  tsp or just start with a drop. Bloating is a common side effect of camel milk, which will reduce within 3-5 days of consuming it.

However, camel milk may not be the cause of it, you can cut down on your consumption of other dairy products to see better results from camel milk.

### 9. Has anyone healed their baby's gut with camel milk, who suffers from constipation, bad diapers, eczema, body rashes, vomiting, etc?

Answer: Camel Milk will surely help a baby with gut issues. There have been a few mothers who use camel milk in such situations. Start with a drop, then increase the dosage accordingly to how the child reacts to the milk. If the symptoms increase, then stop the milk immediately and consult a physician.

#### 4.3. Camel Milk and Milk Allergies:



There sure are various allergies that are caused due to the consumption of milk and its ruminants, which can even lead to anaphylactic reactions. Experts conducted different research on children with milk allergies. The results of the research showed that consuming camel milk led to massive improvement in the health of the children.

The effect of camel milk on allergies is that it **does not contain allergens,**

which are potent in cow milk. Another aspect related to this is that the components of camel milk contain immunoglobulins, which are the same as compared to that of mother's milk. This helps in reducing allergic reactions in children and improves their future reactions to different types of allergies.

In cow's milk, lactose is naturally found, whereas camel milk does not contain beta-lactoglobulin. A human body has the capability to produce lactase that breaks down the lactose into smaller amounts of sugar, which can be easily digested by the body. Camel milk is now completely changing this narrative. It has very **low levels of lactose**, which can be easily digested by individuals with lactose intolerance.

Cow Milk Protein Allergy (CMPA) is known as the most common allergy that is seen in infants and children. Most children grow out of this allergy by the age of 4, but with some, it persists throughout their life. **The only solution** to this is the complete elimination of cow milk and its by-products from their lives.

## **FAQs About Camel Milk & Milk Allergies:**

### **1. What is the dosage of Camel Milk for individuals with Milk Allergies?**

If your child has milk allergies, start camel milk slowly. They should not exceed 500 ml on a daily basis and should not remain on this dosage for a period longer than 6 months. Decrease the dosage if they show any signs of allergy such as eczema, constipation, or rashes.

### **2. Does camel milk show any signs of allergies or symptoms?**

Answer: Consuming camel milk can show signs of allergies. If an individual has been diagnosed with casein allergy, there is a chance that you may develop an allergy to camel milk. If you are lactose intolerant, then you may do well on camel milk.

### **3. What are the signs of allergies to bovine milk?**

Answer: Rashes, Diarrhea, Loose stools, Excitable/Aggressive Behaviour, or signs of eczema.

#### 4. How would you know when to increase the dosage to reduce the symptoms of allergies?

Answer: If you have not seen any benefits or a reduction in the symptoms, then the dosage can be increased every 3 days until you see a reduction in your milk allergies. Decrease the dosage of milk if the symptoms do not reduce.

#### 5. Can you be allergic to camel milk?

Answer: Camel milk allergy is a very rare and distinct disease. One may have allergenic reactions to camel milk such as rashes, bloating, loose bowel movements, if the dosage is kept very high.

#### 6. How long does it take to see the allergic reactions go away for a baby who had been consuming cow milk?

Answer: Once you switch your baby to camel milk, it may take 2-4 weeks for the symptoms to completely disappear.

#### 4.4. Camel Milk and Height Growth:



**Camel Milk for Height Growth**

- Has a Higher Concentration of Calcium.
- Ayurveda claims Camel Milk to Boost Height.
- Ashwagandha & Shatavari, when added to Camel Milk, helps increase height.

Camel Milk, today, is associated with height growth. It has a **high concentration of calcium**, which experts state might be one of the reasons that camel milk helps in height growth. Different researches conducted on camel milk show that consuming a mere 120ml provides the body with 5% of the daily calcium intake and 29% of the daily thiamine value.

Ayurveda has been gaining popularity recently too because of its claims about camel milk and its **height-increasing abilities**. People are getting attracted to natural and herbal ways of healing. It states that to enhance the ability of camel milk to increase height, one should add Ashwagandha and Shatavari powder to it.

It has been mentioned in the ayurvedic texts that Shatavari and Ashwagandha affect the ‘asthi dhatu’, i.e., the bones, in a positive way. HGH or the Human Growth Hormone is responsible for the growth of the human body, along with its development. Experts state that adding ashwagandha and Shatavari to camel milk helps to maintain the chemical balance in the body as well as the cell rejuvenation, which, in turn, helps in improving the human growth hormones. **It has been found in Ayurvedic scriptures that to help increase height, Shatavari and Ashwagandha can be consumed along with camel milk at least twice a day.**

Along with consuming camel milk, there are a few exercises, which an individual must go ahead with to see the best results. These are:

- 1. Tadasana:** Stretch your arms out and stand on your tip for five minutes
- 2. Chakrasana:** Another great way to elongate your spine, Chakrasana can be done for approximately five minutes.
- 3. Surya Namaskar:** One of the best exercises for both the mind and body, Surya Namaskar can be done by everyone to increase height. A simple way to start the day, a mere five minutes of exercising with Surya Namaskar can bring extraordinary results.

### **FAQs About Camel Milk & Height Growth:**

**\*Disclaimer:** An individual’s growth is dependent on his/her environment/ genetics/ lifestyle and several other factors. Camel Milk is among one of those factors which aids in stimulating height growth hormones. Adding Ashwagandha and Shatavari may further strengthen the biochemical activity of camel milk.

### **1. What is the dosage of Camel Milk for Height Growth?**

According to various studies and research upon customer feedback, you can take 200 ml of camel milk, with one teaspoon of Ashwagandha and Shatavari powder both, and consume it twice daily.

### **2. How does camel milk help in height growth? Is camel milk better than cow's milk for height growth?**

Answer: Camel Milk contains a high amount of calcium, potassium, zinc, magnesium, and other proteins and minerals, which help in keeping the body fit and healthy, thus, helping in increasing height. It usually helps individuals under the age of 21.

Yes, camel milk has a higher calcium content than cow's milk, which experts state, might be one of the reasons that camel milk helps in height growth

### **3. Is there any other aspect that should be considered while consuming Camel Milk for height growth?**

Answer: Consuming just camel milk for height growth may not bring the results you were looking for. Doing exercises such as Tadasana, Chakrasana, and Surya Namaskar may help too. Along with consuming camel milk, you can even add Shatavari and Ashwagandha powder to it, to see the best results.

### **4. Will Shatavari and Ashvagandha help?**

Answer: Ayurvedic scriptures have mentioned that Shatavari and Ashvagandha help in improving the 'asthi dhatu' i.e., the bones, which improve the height of the individual.

### **5. Can drinking camel milk actually help you increase your height? Or is it a myth?**

Answer: According to health experts, 20% to 40% of your child's growth mainly depends on non-genetic factors such as nutrition, which plays a very significant role. Consuming camel milk helps make their bones and immunity stronger, which in turn, helps to increase their height and keep them fit

and healthy. Your height depends on various factors such as genetics, and consuming camel milk may help in boosting your height, if a few exercises are done along with it such as Surya Namaskar, tadasana, etc.

### **6. How much milk should you consume per day to increase height?**

Answer: On average, experts say that consuming 3 cups of camel milk every day until the age of 18, which can bring the best results in increasing height, as it has a high dosage of Vitamin A, D, Calcium, proteins, and other minerals required by the body for proper growth.

### **7. For how long should one consume camel milk to see the best results for height growth?**

Answer: Height growth is a natural process and sometimes it is totally dependent on genetics. However, Camel milk has helped a lot of our customers increase their height and most of them were teenagers (below 18 Years).

Usually, height growth stops almost after 21 years but there are possible chances if you could follow a proper diet. Almost 70-75% of our customers have received positive results with regards to height increase after drinking camel milk. You can start with 200 ml milk daily. For better taste, you can add Honey or Thread Mishry in it.

You can even add a few things to your diet, which includes pulses, green vegetables, and less oily food, and most importantly good sleep.

As per our customers, those who succeeded in increasing their height have mentioned that they regularly drank camel milk with a 1-hour session of yoga and along with that ashwagandha, shatavri powder, bamboo murabba & masoor daal (pink lentil).

We suggest you try this for 4-5 months regularly and let us know the positive changes in your body.

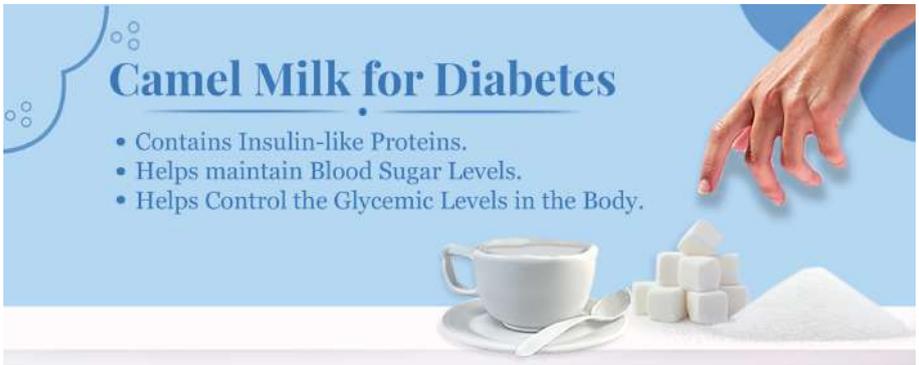
### **4.5. Camel Milk and Diabetes:**

## What is Diabetes?

Diabetes is a disease, which happens when **blood glucose, also known as blood sugar** reaches a higher level in the body. Blood glucose is the main source of energy, which comes from the food that humans eat. Additionally, Insulin is a hormone that is generated by the pancreas, which helps the glucose present in the food to reach the cells, to generate energy for the body.

There are two types of diabetes, namely type 1, where, there is a failure of the pancreas to produce insulin in the human body, and type 2, where, the body does not generate much insulin or resists insulin, which **can cause serious health problems**.

## How does camel milk help in diabetes?



Did you know? Camel milk has insulin-like elements that help to control the blood sugar levels among diabetics. People suffering from type 2 diabetes have an elevated level of blood glucose, and among type 1 diabetics, an important hormone called Insulin is not generated properly in the body. To cure this disease, the oral form of insulin therapy has been a method of treating diabetes for years, where experts have found camel milk as an adjunct to insulin therapy.

Camel milk is known to control the glycemic levels in the body.

Clinical research on camel milk has shown that consuming it can **decrease blood glucose levels** and reduce the insulin requirement among type 1 diabetics by 30%.

Since camel milk has a higher level of zinc present in it, it helps the body in secreting insulin in the pancreatic beta cells. People suffering from diabetes have an increased risk of heart diseases and strokes. It contains fewer amounts of fat, which helps in maintaining cholesterol levels, thus, keeping the heart-healthy. The bioactive compounds present in **camel milk help in keeping the heart-healthy**.

Camel milk has antioxidant properties and has a higher dosage of Vitamins A, C, D, E, and K, and is also a rich source of minerals like sodium, potassium, copper, magnesium, and zinc, which allow it to protect the tissues from any injury that can be caused by toxic agents. **Researchers have said that since camels prefer feeding on green grass, vegetation, in particular, desert bushes and herbs, their milk may provide phytochemicals that are excreted in camel milk, which may be beneficial for diabetics.**

## **FAQs About Camel Milk & Diabetes:**

### **1. What should be the dosage of camel milk for diabetics?**

The recommended dosage of camel milk for a diabetic patient is 400-500 ml per day, which experts say has shown positive results, which has to be increased gradually from 50-100 ml.

### **2. Does camel milk help in improving diabetes?**

Answer: There have been various researches, where experts state that camel milk contains insulin-like properties, which help in improving the blood glucose levels and even help in reducing the insulin dosage among type 1 diabetics. Take this along with anti-diabetic herbs like Amla and Dhatriphala (*Emblica Officinalis*), Pitanga (*Eugenia Uniflora*), Gudhal or Jasson (*Hibiscus Rosa-Sinensis*), etc.

### **3. How can diabetics use camel milk?**

Answer: According to various researches, camel milk can be used either raw or can also be consumed in various recipes in either their breakfast with oats or during the night before going to bed. Replacing your daily cow milk with camel milk for your daily intake can be helpful.

#### **4. Is there any positive experience of camel milk with blood sugar control among Type 1 Diabetics?**

Answer: Yes, consuming camel milk has shown positive results in controlling the blood sugar levels among Type 1 diabetics. With its insulin-like properties, it has been shown to reduce the insulin dosage in both Type 1 and Type 2 diabetic patients.

#### **5. Is there insulin in camel milk?**

Answer: Camel milk contains approximately 52 micro-unit/ml of insulin-like proteins and it has a higher amount of zinc, which plays a significant role in the insulin secretion activity in the pancreas.

#### **6. Can camel milk be used to reduce inflammation in type 2 diabetics?**

Answer: Camel milk has anti-inflammatory properties, which help in reducing inflammation in the body, and can help reduce the risk of type 2 diabetics.

#### **7. Can camel milk reduce fasting blood glucose levels?**

Answer: Most of the research that has been conducted on camel milk shows that camel milk consumption has a positive effect on glycemic controls, by reducing blood sugar levels, decreased insulin resistance, and improves the lipid profiles of diabetic patients.

#### **8. Does camel milk help in maintaining weight among diabetics?**

Answer: Since obesity is one of the major causes of diabetes among human beings, consuming camel milk may be beneficial. Firstly, camel milk contains less fat, which means that you will not gain extra weight. Secondly, it will help maintain the cholesterol levels in the body, which does not allow the body to gain extra weight, thus maintaining it. Although you may feel

bloated or your stomach may feel heavy after consuming camel milk, there is nothing to worry about, as it is a characteristic of camel milk.

Additionally, along with camel milk, you can opt to do yoga also. Continue with the medicine prescribed by your physician, reduce your sugar intake and you can consume anti-diabetic herbs like Amla and Dhatriphala (*Emblica Officinalis*), Pitanga (*Eugenia Uniflora*), Gudhal or Jasson (*Hibiscus Rosa-Sinensis*), Curry Patta (*Murraya Koenigii*), Banana (*Musa Sapientum*), Anar (*Punica Granatum*), etc.

#### 4.6. Camel Milk and Immunity



**Did you know? In many Arab countries, camel milk is given to children to improve their immune system, without knowing how it works.**

Camel milk contains proteins and vitamins that help the body in fighting disease-causing organisms. It contains two main elements namely lactoferrin and immunoglobulin. These are proteins that give camel milk its immunity-boosting properties.

Lactoferrin has anti-bacterial, anti-fungal, anti-inflammatory, and anti-viral properties. It even has antioxidant properties, which provide the body with the boost it requires. The whey protein in camel milk also plays a significant role, as it contains disease-fighting properties, and **helps the body fight** free radicals. Lactoferrin even helps in protecting the DNA cells.

The immunoglobulins (Igs) and the protective particles present in camel milk help in providing the body with **disease-fighting abilities** and eradication capacity. Camel Igs have the capability to enter the tissues and cells, which human Igs are unable to do. The Lysosomes present in the milk takes part in the immune system that is completely based on targeting the structures of the commonly invading pathogens. It further contains Peptidoglycan Recognition Protein (PGRP), which is said to be the highest concentration in camel milk and it can help in stimulating the individual's immune system.

## **FAQs About Camel Milk & Immunity:**

### **1. What should be the dosage of camel milk for boosting immunity?**

Answer: Consuming camel milk on a daily basis, with 200 ml being the dosage will help to boost immunity.

### **2. Can consuming camel milk in breakfast help in boosting immunity?**

Answer: Camel milk has all the required nutrients and minerals that the body needs to function properly in a day such as Vitamins A, C, D, K, potassium, magnesium, iron, calcium, etc. Consuming this empty stomach is considered beneficial to see the best results.

### **3. Should camel milk be boiled for the best results?**

Answer: Experts say that boiling the milk might result in nutrient loss, which will affect the immunity-boosting properties. Thus, it is recommended that camel milk should not be boiled, however, it can be consumed after warming it a little bit.

### **4. Should you consume Raw Camel Milk to boost immunity?**

Answer: Consuming both raw and pasteurized forms of camel milk is beneficial for boosting immunity.

However, if you are consuming the Raw form of camel milk, make sure that you trust the farm from where you are receiving it.

Since raw camel milk is not so easily available in the market and hygiene at the farm plays a very important role; it is safer to consume Raw camel milk/ powder when the source is known.

## Chapter 5: Thoughts/Myths about Camel Milk:



Well, with the benefits, come the negative remarks. Not everything is passed down as good, a few individuals find negative elements about various things. So is the case with camel milk, as there are various myths around it. A few of them are:

**Myth 1-** There have been various myths regarding camel milk and its benefits on autistic children. People say that it does not have any positive impact.

**Fact-** Camel milk contains antioxidant properties, which help in reducing oxidative stress among autistic individuals, where oxidative stress is said to be one of the major reasons for autism.

**Myth 2-** Camel milk cures diabetes.

**Fact-** There have been various researches conducted by experts, which state that camel milk has positive results on individuals suffering from diabetes, both Type 1 and Type 2, as it has insulin-like properties, and helps in controlling the blood sugar levels.

**Myth 3-** It tastes bad. There are various misconceptions that camel milk has a strong, pungent flavor with an animal finish.

**Fact-** This is not the case, the taste of camel milk completely depends upon what the camels eat, and since camels mostly eat the vegetation available in the deserts, their milk tastes salty. The milk is very white in colour and is slightly frothy in texture. Along with this, many people may not be able to distinguish between the different types of milk available in the market.

**Myth 4-** Raw Camel Milk is healthier and nutritious than pasteurized milk.

**Fact-** Raw camel milk is said to be more nutritious, however, it may not be for everyone to consume, as it can lead to food poisoning if the milk taken is not from a trusted supplier. Traditional camel herders have consumed it raw for thousands of years, but it may not suit the living and eating habits of the city people. So it is recommended to consume it in pasteurized form.

**Myth 5-** Drinking raw milk may not be safe, however, there are no negative impacts while consuming soft cheese, and yoghurt made from raw milk.

**Fact-** Raw milk from unhygienic farms, etc. made into different products can still cause illness-causing diseases. When consuming such products, make sure that they are made of pasteurized milk.

**Chapter 6: Who should not consume Raw or Pasteurized Camel Milk?**

Health experts suggest that raw camel milk should not be consumed in raw form. If and when it is being consumed in its raw form, you must be careful of your supplier and have tha

**Raw milk consumption** is specifically harmful to pregnant women, kids, older adults, and individuals with compromised immune systems. You should consume Raw Camel Milk only if you trust the supplier, as not every camel breeder maintains all the precautionary measures, and this can lead to various diseases too.

Camel milk is **salty in taste** and has a higher amount of salt present in it. **People with High Blood Pressure** should keep a check on the dosage of the milk they are consuming, as the amount of salt can cause their pressure to rise.

## **Chapter 7: Different Types of Camel Milk Products:**

**Camel Milk Powder:** It is the powdered form of camel milk that is made specifically by either spray-drying or freeze-drying processes. It is easier to store and handle. Just as camel milk, its powder form is also known to retain all the beneficial properties. It can be found in three different variants, i.e., Raw Camel Milk Powder, Plain Camel Milk Powder (Freeze-dried), and Flavoured Camel Milk Powder.

**Camel Milk Ghee:** An irreplaceable part of the Indian Culture, ghee acts as a medicine and has even been mentioned in Ayurvedic scripts. Camel milk is gaining popularity today, because of which camel ghee is also gaining strength in the market. To know more about the benefits of camel ghee on the skin, [click here](#).

**Camel Milk Chocolates:** The taste of chocolates, added with the healthy side of camel milk, camel milk chocolates With a unique taste of cocoa and pure camel milk, it shows a velvety blend of both the products, that is said to be an impeccable and unique treat for your tastebuds.

**Frozen Camel Milk:** Camel milk, in frozen form, is said to be rich in

calories, proteins, and carbohydrates, and that it can be compared to cow's milk. As it has more potassium, calcium, Vitamin C, and iron, camel milk is more nutritious and beneficial than cow's milk. As it is frozen, it can be stored for a longer period of time.

**Raw Camel Milk Powder:** Packed with all the vitamins and nutrients, raw camel milk powder is said to be the same as raw camel milk. It is easier to store and has a longer shelf life, and it just tastes like camel milk. It can even be used by all age groups and is not restricted to only people who need it.

**Camel milk Cosmetics:** Being rich in natural AHAs, that help in exfoliating the skin and renewing the skin cells, camel milk acts as a natural moisturizer, and keeps the skin hydrated. Camel milk moisturizer helps to even out the skin tone and brightens it. If you have dry skin, then camel milk moisturizer is the perfect alternative for you. For silky smooth skin, camel milk body butter can be used. It is rich in healthy vitamins and minerals and even contains disease-fighting immunoglobulins that help in healing the skin. Camel milk soap is another product that helps in keeping the skin smooth and healthy as it has Alpha-hydroxy Acids (AHAs). Have you ever tried camel milk skincare? If not, then try it today!

**Camel Colostrum Powder:** Camel Colostrum has various anti-microbial properties, as it contains immunoglobulins and lactoferrin. The first milk that the camels give after giving birth is called colostrum, and it is white in colour and is slightly diluted. When it is converted in powder form, it contains the same nutritional value that it has in the liquid form. It is good for immunity and helps in the overall growth of the body.

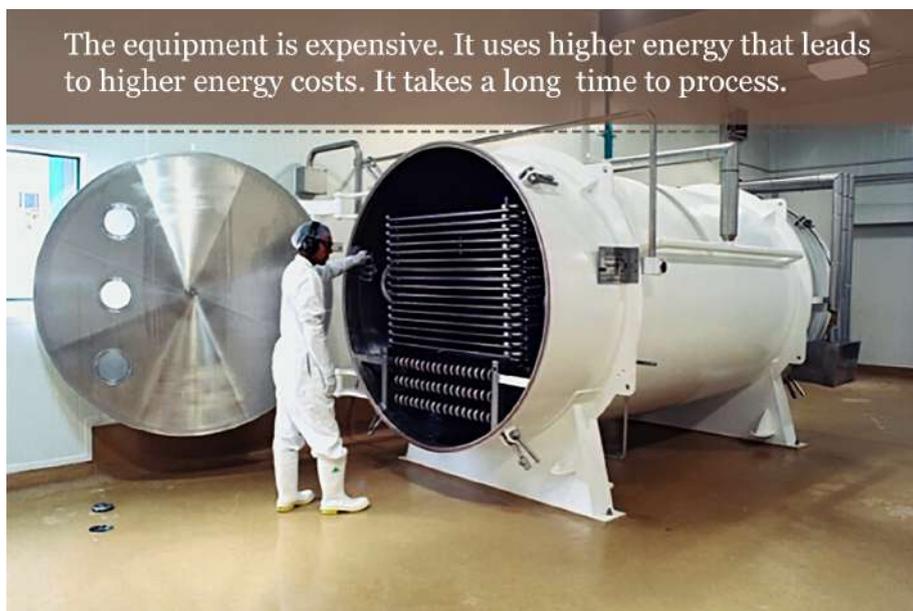
**Camel Milk Cheese:** This is something that is not available everywhere, as it is very difficult to make cheese out of Camel Milk. It has a very different process than normal cheese making processes, where you usually need lactic acids to see cheese like Chevre or Valencay. It is made with a higher dosage of Calcium Chloride by increasing the ripening time and temperature.

The feta cheese made with camel milk has a much similar taste to that of goat milk feta cheese, but it is a little tangier with the texture on the chalkier & brittle side.

**Camel Milk Ice-Cream:** It is made with 100% camel milk and it is beneficial for health-conscious individuals and even kids. Flavor can be added to it such as vanilla, chocolate, strawberry, etc.

It is creamy in texture, as it has the natural homogeneity of camel milk. It is found in different parts of the world and it is gaining much popularity among the masses!

## Chapter 8: Why is Freeze Dried Camel Milk so expensive?



First, to clarify, freeze-drying is a process where the liquid product is crystallized at lower temperatures and is **removed by sublimation**. Here, sublimation is the process of the direct transition of water from a solid state to a gaseous state without melting.

Freeze drying is a considerably expensive process. The equipment that is used to make freeze-dried products is quite expensive, and it is **three times more expensive** than other equipment used for other separation processes. Furthermore, the high energy demands lead to higher energy costs.

Additionally, it has a long process time, as, if heat is added to the food products, it can cause melting or structural deformations.

Freeze drying is used for camel milk **to ensure** that all the nutrients such as proteins, enzymes, and other vitamins are maintained in powder form.

Camel milk can be easily rehydrated, which means that it is of **high quality**, as the freeze-dried camel milk is porous.

However, as an **inherent characteristic** of any freeze-dried power, there is the separation of the milk particles, which is completely normal.



## Conclusion

Camel Milk & its products act as a good bioactive adjuvant for the people living in the arid & semi-arid areas. The awareness and utilization of camel milk are increasing vastly as it is known to have therapeutic properties as compared to other bovine milk.

It can be said that **camel milk is beneficial for all**, irrespective of their age, gender, etc. However, we can also say that the dosage of camel milk should be considered for all differently, in terms of height growth, diabetes, autism, lactose intolerance, etc. Along with this, the numerous nutrients present in camel milk help in **promoting the body's natural defenses**, and thus, it can be considered as a good source of protein, calcium, zinc, magnesium, phosphorous, Vitamins **A, B, C, D & E**, which help meet the daily nutritional needs of every human.

We have tried to answer as many questions as possible and have segregated each question accordingly and we hope that this book has proven helpful to you. If you have any other questions regarding camel milk and its benefits, reach out to us at **info@advikfoods.com**. We will try to provide answers to the best levels we can.

To see the results for yourself, you can visit our website **www.advikfoods.com** and get your pack of Raw, Pasteurized, or Flavored camel milk today!

## Chapter 9: Recipes:



**Did you know?** You can use camel milk powder in various ways! A few of them are here and don't worry, we've tried them all! You can try them, as even the recipes have been written!

### 1. Protein Shake

#### Ingredients:

- 1 scoop of whey protein powder. Any flavor can be selected, such as vanilla, chocolate, etc.
- 4 tbsp of camel milk powder.
- 1 Banana. More can be used depending on the liking.
- 3 spoonfuls of creamy peanut butter.
- 5 -7 ice cubes. This will determine the thickness.

#### Process:

Collect all the ingredients and toss them into a blender and turn it on.  
Within

minutes, the delicious protein shake will be ready, which is perfect for either pre or post-workout. Your health will take a turn for the better with camel milk in daily life.

## 2. Banana, Walnut, and Cinnamon Shake

### Ingredients

- 2 tbsp Camel Milk Powder, mixed with 200 ml warm water.
- 1 frozen banana
- 1 banana for garnishing
- Handful of walnuts
- 5 Medjool dates or normal dates
- 5g cinnamon
- 5g ginger
- Handful of ice

### Process:

- Place all the ingredients in the blender
- Blend until smooth.
- Pour into a glass.
- Slice the remaining banana into small pieces and garnish it on the top.

## 3. Banana Almond with camel milk muffins

### Ingredients:

- 1 cup almond meal
- 3 ripe bananas
- 3 tbsp camel milk powder, mixed with an adequate amount of water.
- ½ cup flour sifted
- 1 tsp vanilla extract
- 3 tbsp honey
- 2 eggs/ buttermilk

### Process:

- Preheat the oven to 180 degrees C

- Grease a 12-cup muffin pan with vegetable oil.
- Crush the bananas
- Add camel milk, vanilla extract, mashed bananas, buttermilk, baking powder to the bowl and mix well.
- Add the almond flour and sifted flour to the moist mixture and mix well.
- Bake it for approx. 25 minutes, until the toothpick inserted in the center of the muffin, is clean.
- Remove the muffins from the oven and place them on a wire rack, and wait for them to cool completely before serving.

#### 4. Turmeric Camel Milk latte

##### **Ingredients:**

- 2 tbsp of Raw Camel Milk Powder.
- 1tsp ground turmeric
- 1tsp pure honey/ stevia
- 1tsp coconut oil
- ½ tsp cinnamon

##### **Process:**

- Steam the coconut oil and camel milk (add water accordingly) in an espresso steamer or a saucepan till frothy. If steaming in a pan, simmer the mixture, but do not boil
- Mix honey/stevia and turmeric in the mixture.
- Pour into a mug and sprinkle with cinnamon. If it is a chilled latte, it can also be served with ice.

#### 5. Banana Date Smoothie

##### **Ingredients:**

- 2 tsp chia seeds
- 2 cups camel milk
- 2 large ripe bananas sliced and pre-frozen
- 6 – 8 pitted Medjool dates or normal dates will suffice.

**Process:**

- Slice the banana
- Remove the seeds from the date
- Place the dates, chia seeds, and camel milk in a blender or food processor and blend for 2 minutes or until smooth.
- Add the banana to the blender and blend well until it is creamy.
- Place the smoothie into a long glass and enjoy.

**6. With oats****Ingredients:**

- 2 tbsp camel milk powder
- 200 ml warm water
- Oats according to choice.

**Process:**

- Just take 2 tbsp of camel milk powder, add it to 200ml of warm water, mix it with oats and enjoy your meal.

**7. In coffee, as a dairy alternative****Ingredients:**

- 1 cup/ 240 ml of hot water
- 1 to 2 tsp instant coffee
- 1 tbsp camel milk powder
- Cocoa, spices, or vanilla extract (optional)
- 1 to 2 tsp sugar (optional)

**Process:**

- Boil the cup of water either in a pot or kettle.
- Add the instant coffee into a mug and mix it with a tablespoon of cold water.

- Pour the hot water into the mug. Remember to leave space for milk or creamer.
- Add the camel milk powder and mix well. In place of using cow or buffalo milk, camel milk powder can be used for people who are lactose intolerant.
- Give it a good stir and enjoy it.



## 1. What does camel milk taste like?

The taste of Camel Milk depends upon the diet of the camels. In America, camel milk is said to have a sweet and slightly salty taste, whereas, in the Middle East, it has a more nutty and smoky flavour. In general, camel milk is opaque white in colour, with a strong smell, and is salty in taste.

## 2. Why is it so expensive?

Since a camel cannot be milked without her calf, yielding camel milk becomes very expensive. It takes twice as much animal husbandry to produce a litre of milk. Camels produce far less milk than cows, and they have much longer gestation periods. Not just this, the camel breeders have to travel long distances to get the milk to the dairies, which involves a high transportation cost. This is also one of the reasons for the higher cost of camel milk.

### **3. What is the shelf life of camel milk?**

The shelf life of raw camel milk is 2-3 days. After pasteurization, camel milk stays best for 3-5 days. The shelf life of frozen camel milk is 2-3 months but can be stored for up to 5 months. Although the fat may get separated from the milk and it may seem a bit lumpy and grainy, it is completely natural and does not indicate anything wrong with the milk. Just shake the thawed milk and strain it to get rid of any clumps.

### **4. Can I cook and bake with Camel milk?**

Yes. You can use camel milk for daily cooking as well as baking. It is the perfect replacement for your favourite recipes. Whether it is a breakfast smoothie, baking cakes, pasta sauces, etc. camel milk can be said to be a good alternative to your daily dairy.

### **5. Is camel milk good for kids?**

Having the closest resemblance to mammal milk, camel milk is different from other kinds of milk. For children, it is highly nutritious and safe for consumption. It improves their well-being, promotes their natural defences, and gives them their daily nutritional needs.

### **6. Are there any side effects of consuming camel milk?**

No, there are almost no side effects for consuming camel milk, as it has a higher volume of nutrients, proteins, and minerals that keep the body healthy and safe from various diseases. People with high blood pressure and pregnant women should avoid consuming camel milk.

### **7. Is camel milk salty?**

Yes, camel milk is salty, because it depends on the diet of the camel. The camels feed on the shrubs and plants available in the desert, which may be one of the reasons behind the saltier taste of camel milk.

## **8. Does it help with autism?**

Camel milk, when given to individuals suffering from autism, helps to improve their communicative skills, motor activities, keeps their brain and body healthy and reduces hyperactivity, so it can be said that camel milk positively helps in improving the symptoms of autism.

## **9. Does camel milk have higher insulin than other milk?**

Yes, camel milk has higher insulin properties than other milk and it has a higher content of zinc which plays a key role in insulin secretory activity in the pancreatic beta cells.

## **10. Can camel milk cause constipation?**

Yes, consuming camel milk may cause constipation due to the higher iron content.

## **11. Is it safe for children with allergies?**

Yes, it is safe for children with allergies, as it has a different protein profile than cow's milk and can be better tolerated by individuals with lactose intolerance.

## **12. When is the best time to drink camel milk?**

The best time to consume camel milk is in the morning. It must be the first thing on your to-do list for the day and the last thing in the evening on an empty stomach.

## **13. How much camel milk should cancer patients consume?**

Consumption of camel milk and its dosage may depend on the needs of the cancer patients. However, there is a rule: 30ml three times daily on an empty stomach is the maximum dosage. Camel milk consumption should be initiated slowly.

There are many cancer patients who cannot take higher doses of camel milk due to the after-effects of chemotherapy and radiation. For this reason, milk consumption should be started at a low dosage and increased gradually over a period of time, due to the weakened immune system of the patient.

#### **14. Is it okay to take supplements with camel milk?**

Camel milk has the properties of acting as a carrying agent to transport significant nutrients to the cells, therefore, it is okay to consume some supplements with the milk. However, it is not considered acceptable to mix other kinds of milk with camel milk as a mix of both can affect the effectiveness of each.

#### **15. My child has lower levels of iron and is currently consuming iron supplements. I have read that camel milk is higher in iron, should I continue giving him his iron supplements?**

We would recommend consulting a physician first. Camel Milk, although has higher levels of iron, over time, your child may need to continue on his iron supplement. If he becomes addicted to a combination of camel milk and his iron supplements, it indicates that his iron levels are elevated. Therefore, a periodic check of his iron levels is recommended.

#### **16. What are the different signs of allergies from camel milk?**

There are various symptoms that include rashes, diarrhoea, loose stools, eczema, excitable or aggressive behaviour.

#### **17. What are the signs of detoxing?**

The symptoms of each illness may be different. For example, different autistic children may show different signs. Some may get more excited for a few days, however, there may be no signs of detoxing with camel milk. There may be signs of 'die-offs' or allergies, but not detox.

### **18. Can I mix camel milk with coconut or almond milk?**

It is recommended to consume camel milk alone, but it is okay to consume it with coconut or almond milk in small amounts if there is no allergy to them.

### **19. Is there any benefit to camel milk as compared to human milk?**

Camel milk is known to have more nutritional value than any other milk, therefore, it could be better for a child whose mother is unable to generate enough milk to supply him/her with the daily requirement of nutrients.

### **20. Can I compliment camel milk with maple syrup?**

Yes! The taste of camel milk can be enhanced with a small amount of maple syrup.

### **21. How long should I stay on camel milk before noticing any improvement in gut healing?**

It depends on your body. It may take 3-5 days or may even take 2 weeks to see any improvement in your gut.

### **22. Can I add sugar to camel milk?**

Yes, you can add sugar to camel milk; however, diabetic and autistic people should avoid adding it. Sugar can lead to the proliferation of fungi and other pathogens. To get a sweet taste, Grade B maple syrup can be added.

### **23. When should I stop drinking camel milk?**

As Camel Milk is good for the overall growth of the body and even protects it from various ailments and viruses, you should continue drinking camel milk, as it will be beneficial for you.

## **24. Why should I start slowly consuming camel milk?**

Although camel milk has wonderful healing properties, if consumed too fast at a high dose, then it can lead to discomfort and this can be confused as a reaction to the milk, when it is just the healing process or the ‘die-off’ of the pathogens due to the antibacterial, antiviral and antifungal properties of camel milk.

## **25. Are there any adverse side effects or bad symptoms after going off camel milk?**

No. There should be no adverse side effects after going off camel milk.

## **26. My daughter has been drinking a cup of camel milk daily. We ran out and had to order more. It has been 6 days without it. Can she start back at the same amount or is there any need to adjust it?**

Since six days is not a long time, she should be fine with the same dosage that she was on previously. If she had been off the camel milk for a longer period of time, then the dosage would have to be adjusted.

## **27. Is there any loss of nutrients when camel milk is frozen?**

Different researches have been conducted on this and they have shown that there is no decrease in the enzymes in the milk when frozen. However, there is a slight decrease in Vitamin C. Studies show that there is not enough significant loss of Vitamin C to be concerned about the loss of the value of the milk.

## **28. What is the die-off effect?**

Die-off or Herxheimer reaction occurs when yeast, bacteria, or virus-cell are rapidly killed and metabolic by-products are released into the body.

### **29. What are the symptoms of die-off?**

earache, headache, sore throat, runny nose, fatigue, nausea, swollen glands and/or lymph nodes, gas, bloating, diarrhoea, joint and muscle pain, rash, hives, sweating, sinus infections, vaginal or prostate infections.

### **30. Does pasteurized camel milk have the same die-off effects and can the dosage be increased quickly?**

When the camel milk is pasteurized, most of the probiotic, antibacterial, and antifungal properties are reduced, and consuming pasteurized camel milk is considered harmless in relation to the die-off effects.

When you start consuming camel milk, start at a lower dosage to allow the body to get adjusted to it. If the consumption of camel milk is started at high dosages, it may have different reactions on different individuals, and it may become difficult to determine whether it was an allergic reaction to the milk or something else. So, it is better to start with a lower dosage and gradually increase it.

### **31. Can camel milk be served warm?**

Yes, the milk can be served warm, However, heating the milk can cause it to lose some of its nutritional benefits. Therefore, we suggest that the temperature of the milk be kept very low to barely warm the milk if it is warmed, and never warm the milk in a microwave. Microwave heating can cause most of the nutritional value to be lost.

### **32. Are there any positive aspects of camel milk when it comes to arthritis?**

Arthritis is an auto-immune disease that affects the joints. Contributing to this disorder are allergens. The immunoglobulins in camel milk help in preventing allergens from attacking the immune system.

### **33. Does camel milk trigger any allergies or symptoms?**

It may. If an individual has been detected with casein allergy, then there is a chance that they may develop an allergy to camel milk. However, if they are lactose intolerant, then they should do well on camel milk.

### **34. Can my pet benefit from camel milk?**

Yes. Pets may benefit from camel milk. Many pet owners feed their pets with camel milk. Many breeders supplement mother dog's milk with camel milk and they have said that the puppies are healthier and have better coats than the puppies feeding only on their mother's milk. There are cats and dogs with autoimmune disorders, who have shown signs of amazing recovery while on camel milk.

### **35. Can camel milk be used for height growth?**

Camel milk has a high amount of calcium and other significant nutrients necessary for the overall growth and development of the body, hence, it may prove successful in increasing the height until a certain age and it depends on various other factors also.

### **36. How to store camel milk powder? Should I store it in the fridge?**

Camel milk powder can be stored in a cool and dry place. It can also be stored at room temperature.

### **37. What is the difference between raw camel milk and camel milk? Why is raw camel milk so expensive?**

Raw camel milk is not pasteurized, which means that it is not heat treated. All the nutrients and proteins are maintained in the milk. However, many precautions are taken and safety measures are also kept in check because they are required to handle raw camel milk, which is the reason for its higher price.

### **38. Is camel milk good for autism and hyperactivity?**

According to different research conducted around the world, camel milk has beneficial qualities when it comes to autistic kids, as it can help in improving their digestion, immunity and reduces their hyperactivity.

### **39. Can camel milk help in antiviral and immunity support?**

With the current pandemic and various diseases around, it is important to stay fit and healthy. Every individual's body needs nutrition and support, and one of the best and real whole food available in the market is camel milk. It is an ancient superfood with various nutritional benefits that keep the body healthy.

In various researches, it has been stated that camel milk contains disease-fighting immunoglobulins that have been proven to penetrate upon consumption, boosting the immunity of the individual. Camel milk is also known to contain various antiviral properties in the form of Lactoferrin, which interacts with the viral cell surfaces inhibiting viral adhesion and entry into the host cells that help in the treatment of viral infections. Various authors have stated that Lactoferrin overpowers influenza virus inflammation or inflammatory cells in the lungs. Along with providing a great immune system and antiviral activity, camel milk also contains higher levels of potassium, calcium, magnesium, copper, Vitamin C, B, sodium, zinc, iron, etc. With camel milk becoming a regular consumption, it helps protect against viruses and has no known allergic reactions, which means that camel milk can be consumed by all.

### **40. Is Camel Milk healthy?**

Camel milk has a very high proportion of Vitamin C which is noteworthy. It also contains lanolin and elastin, which have a positive effect on the skin. This is one of the major reasons why camel milk is also found in beauty products, such as creams, etc.

### **41. How do camels live?**

Unlike cows, camels are not kept in bulk, which helps in giving them a healthier life. In accordance with this, camels living a better life have

an effect on their milk. An interesting fact about camels is that they can only be milked if they feel good and if their calf is around.

## **42. Why Camel Milk?**

Having been around for centuries, camel milk is a natural beauty product and is one of the best alternatives to cow's milk. Camel milk is also known for its medicinal and nutritional qualities.

Consuming camel milk can be very beneficial to one's health as it contains high amounts of vitamins and minerals and has a low amount of lactic acids, which makes it an ideal source of dairy consumption for those who are lactose intolerant.

To be used as a beauty product, camel milk is considered ideal, because it is higher in Vitamin C than cow's milk and has 10 times more iron as compared to cow's milk. The natural antioxidants present in camel milk promote healthy skin and help prevent dryness.

## **43. Is camel milk good for people with congenital heart diseases?**

Camel milk is beneficial for all individuals, even the ones with heart diseases. However, it is suggested that they should begin consuming pasteurized camel milk, rather than raw camel milk.

## **44. Is camel milk beneficial for the environment?**

One glass of cow milk that you consume, leads to greenhouse gas emissions, as raising livestock generates approximately 14.5% of the global greenhouse gasses, which is very bad for the environment. Livestock farming even creates a huge carbon footprint and has a very high global warming potential.

In contrast to this, camel milk is beneficial for the environment, as one glass of camel milk that you consume does not cause greenhouse emissions. They eat vegetation, such as grasses, herbs, leaves, etc. and they can easily adapt to the changing environment of the deserts. They do not require a very large land to graze, as compared to cows, which makes them beneficial for the environment.

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