

# Probable Role of Gaumutra (Cow Urine) in the Management of Dyslipidemia : A Review

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## Abstract

Dyslipidemia characterized by abnormal lipid levels in the blood, is a significant risk factor for cardiovascular diseases. Traditional *Ayurvedic* medicine has long utilized *Gaumutra* (cow urine) for its purported health benefits, including its potential role in managing dyslipidemia. This review article outlines the therapeutic implications of *Gaumutra* in lipid regulation, exploring its bioactive compounds such as urea, creatinine and various phenolic compounds that may contribute to lipid metabolism. *Gaumutra* may exert hypolipidemic effects by enhancing lipid oxidation, improving cholesterol elimination and modulating metabolic pathways associated with lipid synthesis. Additionally its antioxidant properties may reduce oxidative stress, further supporting cardiovascular health. The synergy of *Gaumutra* with other complementary herbs commonly used in *Ayurveda*.

**Keywords:** *Ayurveda*, Cow Urine, *Gaumutra*, Dyslipidemia.

## Introduction

Lipid disorders are common with 95% of western populations having raised cholesterol levels compared with undeveloped societies. Cholesterol contributes up to half of population cardiovascular disease (CVD) risk worldwide. Dyslipidemia is one of the significant CVD risk factors. It can be caused by a monogenic disorder as observed in subjects with familial hypercholesterolemia (primary dyslipidemia), or by more complex conditions such as obesity, hypertension and diabetes mellitus type 2 (secondary dyslipidemia).

Polygenic conditions and environmental factors can also cause or worsen dyslipidemia.<sup>[1]</sup> Dyslipidemia includes all alterations in the lipoprotein profile associated with increased CVD risk. Dyslipidemia is defined based on the National Cholesterol Education Program-adult Treatment Panel III (NCEP-ATP III) guidelines as a total cholesterol level  $\geq 200$ mg/dl, triglycerides  $\geq 150$ mg/dl, LDL (low-density lipoprotein) cholesterol  $\geq 130$ mg/dl, and HDL (high-density lipoprotein) cholesterol  $< 40$ mg/dl for men and  $< 50$ mg/dl for women. Abnormal levels of any of the above lipid parameters were considered as dyslipidemia.<sup>[2]</sup> In *Ayurveda*, there is no direct description of dyslipidemia in classical texts. Here in dyslipidemia, it seems that the predominant *Dosha* and *Dushya* are *Kapha* (body humor) and

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*Meda* (fat) respectively. So, it can be correlated with *Medoroga*, *Medodushti*, *Rasagat Medas Vriddhi* and *Rasa-Raktagat Medas Vriddhi*.

### Prevalence of Dyslipidemia<sup>131</sup>

- The global burden of dyslipidemias has increased over the past 30 years. In India about 25-30% of urban and 15-20% rural population is currently suffering from dyslipidemia.

### Prevalence of Dyslipidemia In Multisite Indian Studies<sup>14,51</sup>

Study And Sites	Year Reported	Sample Size	Prevalance (%)	
			Men	Women
Indian Industrial Population Surveillance Study: Urban	2006	10,442	25.1	-
India Migration Study: Rural	2010	1983	21.1	27.8
ICMR Integrated Disease Surveillance Project: Urban	2010	15,223	31.7	32.8
ICMR Integrated Disease Surveillance Project: Rural	2010	13,517	19.5	26.4
ICMR Integrated Disease Surveillance Project: Periurban/Urban Slum	2010	15,751	18.1	23.4
Indian Women's Health Study: Urban	2013	2008	-	27.7
Indian Women's Health Study: Rural	2013	2616	-	13.5
India Heart Watch: Urban	2014	6123	25.1	24.9
ICMR INDIAB Study: Rural & Urban	2014	2042	13.9	-
FitHeart Study: Urban	2014	46,919	29.0	30.8

### Need of Study

- Dyslipidemia with its increasing prevalence is a common public health problem in developing countries and a major contributing factor to the development of cardiovascular diseases.
- Management of dyslipidemia as per contemporary treatment modalities include use of statin group of drugs, it is successful remedy but having long term side effects and complication. Hence an effort has been made to combat the objective parameters of dyslipidemia with the help of promoting use of *Goumutra* (cow urine) in the management of dyslipidemia.

### Aim & Objectives

- To evaluate the efficacy of *Goumutra* (Cow urine) in the management of dyslipidemia.
- To find out an effective and safe remedy for dyslipidemia.

### Materials And Methods

- For this review study literary material i.e. *Ayurvedic* text, authentic publications indexed in Google scholar & pub Med and modern medical literature have been reviewed.

### Goumutra Review

<i>Rasa</i>	<i>Katu, Kshara</i>
<i>Anurasa</i>	<i>Lavana</i>
<i>Guna</i>	<i>Teekshna, Ushna, Laghu</i>
<i>Veerya</i>	<i>Ushna</i>
<i>Vipaka</i>	<i>Katu</i>
<i>Karma</i>	<i>Medhyam, agnideepanam, shodhana</i>
<i>Doshakarma</i>	<i>Na Vatalam Kaphavatanuth Pitalam Samyakdosha</i>
<i>Vyadhikarma</i>	<i>Shoolahara Aanahahara Gulmahara Udarae Hitham Kandushamana Krimihara Kushtahara</i>

### Discussion

*Goumutra* (cow urine) holds a place in traditional Indian medicine, particularly in *Ayurveda*. Its usage in various health conditions, including dyslipidemia, has been explored through various studies and anecdotal evidence. *Goumutra* contains several bioactive compounds, including urea, creatinine and various minerals. Some studies suggest these components might influence lipid metabolism. Cow urine has been attributed with antioxidant properties, which may help reduce oxidative stress associated with dyslipidemia. The presence of minerals like calcium, magnesium and

phosphorus may play a role in metabolic processes that regulate lipid levels. Some studies have suggested that cow urine can improve lipid profiles by reducing levels of triglycerides and LDL cholesterol while increasing HDL cholesterol, potentially mitigating cardiovascular risks. *Goumutra's* purported anti-inflammatory properties may help alleviate chronic inflammation contributing by dyslipidemia.<sup>[6]</sup> Ingredients in cow urine could potentially help in managing glucose and fat metabolism by increasing insulin sensitivity which positive effect on lipid profiles. Therapy of cow urine is a cleansing and

detoxifying process instead of nourishing in nature. Cow's urine consists of many healthy components such as urea, enzyme urokinase, iron, nitrogen, salts, copper and gonadotropin. Urea is the main content present in cow's urine which acts as a powerful hypolipidemic and antibacterial agent. Enzyme urokinase helps in preventing and dissolving blood clots that's improving blood circulation. Iron, nitrogen, salts, copper and gonadotropin also help in synthesis of RBCs, lowering the cholesterol by their diuretic properties, controls fat deposition and helps in prevention in various infections.<sup>[7]</sup> *Goumutra* is *Ushna* (hot), *Teekshna* (piercing), *Arooksha* (not completely dry) *Katu* (pungent) and *Lavana* (salty taste); all these properties play important role to lowering and controlling the cholesterol level. In some *Ayurvedic* formulations, *Goumutra* is combined with other herbs traditionally known for their lipid lowering properties, such as turmeric, garlic and *Amla*. These combinations are believed to enhance the overall therapeutic effect, which may make it challenging to isolate the effects of *Goumutra* alone. Cow urine is often considered a detoxifying agent in *Ayurveda*. The theory is that improving overall metabolic detoxification can help in better lipid processing in the body. Some compounds in *Goumutra*, like specific antioxidants, have been associated with reducing inflammatory markers and oxidative stress, both of which can be contributors to regulate cholesterol levels.<sup>[8]</sup>

### Conclusion

This review article addressing the potential benefits of *Goumutra* for managing dyslipidemia. While traditional *Ayurvedic* practices have long extolled the benefits of *Goumutra* (cow urine) in various health conditions, including dyslipidemia, most of the studies available are limited and often

not rigorously designed. Here's an overview of some of the existing research and studies that focus on *Goumutra* and its potential relationship with dyslipidemia.

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