TUDCA is a type of bile salt that is more potent and effective than ox bile for treating health issues such as liver and gallbladder diseases, obesity, psoriasis, and gut bacteria. Learn how bile acids help digestion, fat metabolism, fat-soluble vitamins, gallstones, gut bacteria, and neurological health.

TUDCA: Uses, Benefits, and Properties Explained

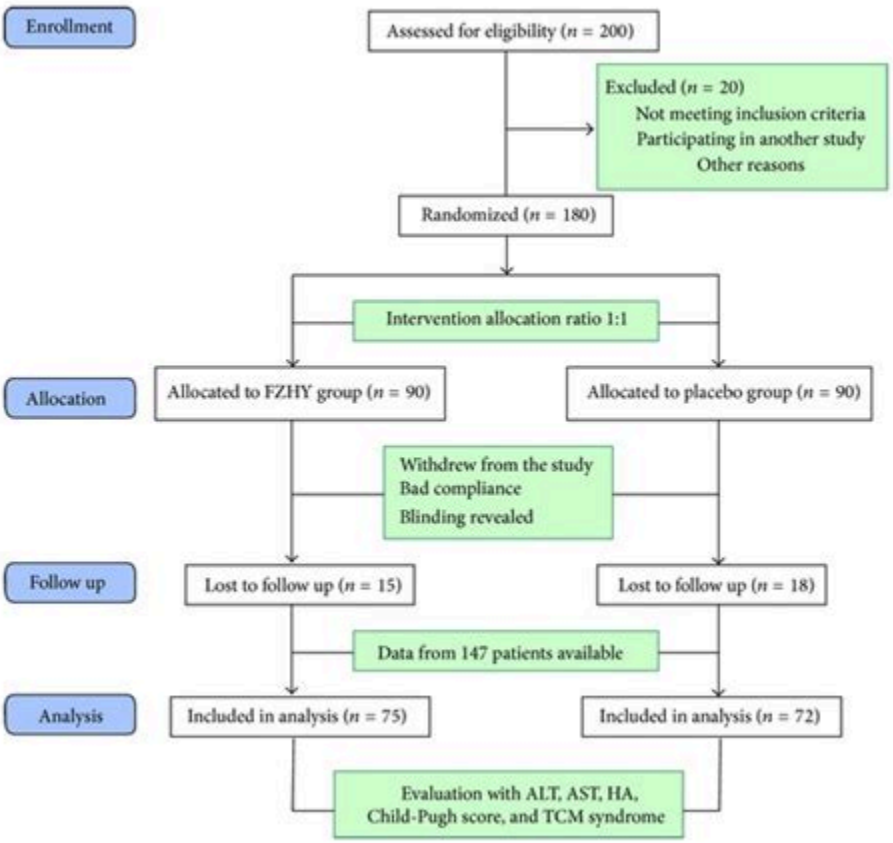
TUDCA is available as a dietary supplement usually in capsule form. For lowering enzyme levels, 1500 mg was the most effective, but studies have found that 500 mg was the most cost-effective []. Another

study suggested that taking 60 mg/kg/day is a tolerable dose for humans []. For healthy obese persons, taking 1,750 mg per day for four weeks has been tolerated by most [].

Benefits of TUDCA: Benefits of bile salts on gut health - Dr. Berg

The average concentrations of TUDCA, TCDCA, and TCA in 93 Ursidae bile salts were 3087. 8 ± 1626 μg/mL, 1968 ± 678. 1 μg/mL, and 212. 6 ± 154. 1 μg/mL, respectively . Of note, it is believed that the relative high level of TUDCA and TCDCA makes bear bile different from biles derived from other animals [4, 15, 19].

A multicenter, randomized, double-blind trial comparing the efficacy .



Shop Affiliate Article Submissions 9 Impressive Benefits of TUDCA - the Gut Supplement Supplements The liver plays quite the role in maintaining our optimal health. It is the go-to organ for filtering dangerous toxins out our transport system (blood) and eliminating them from our bodies.

Review: The bile acids urso- and tauroursodeoxycholic acid as .

Molecular Vision 2019; 25:610-624 <http://www.molvis.org/molvis/v25/610>
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Review: The bile acids urso- and tauroursodeoxycholic acid as neuroprotective therapies in retinal disease

Alejandra Daruich,[1,2] Emilie Picard,[1] Jeffrey H. Boatright,[3,4] Francine Behar-Cohen[1,5]

[1]INSERM, UMRS1138, Team 17, From physiopathology of ocular diseases to clinical development, Université Sorbonne Paris Cité, Centre de Recherche des Cordeliers, Paris, France; [2]Ophthalmology Department, Necker-Enfants Malades University Hospital, AP-HP, Paris, France; [3]Department of Ophthalmology, Emory University School of Medicine, Atlanta, GA; [4]Center of Excellence, Atlanta Veterans Administration Medical Center, Decatur, GA; [5]Ophtalmopole, Cochin Hospital, AP-HP, Assistance Publique Hôpitaux de Paris, Paris, France

Bile acids are produced in the liver and excreted into the intestine, where their main function is to participate in lipid digestion. Ursodeoxycholic acid (UDCA) and tauroursodeoxycholic acid (TUDCA) have shown antiapoptotic, anti-inflammatory, and antioxidant effects in various models of neurodegenerative diseases. However, little is known about signaling pathways and molecular mechanisms through which these bile acids act as neuroprotectors, delaying translation to the clinical setting. We review evidence supporting a potentially therapeutic role for bile acids in retinal disorders, and the mechanisms and pathways involved in the cytoprotective effects of bile acids from the liver and the enterohepatic circulation to the central nervous system and the retina. As secondary bile acids are generated by the microbiota metabolism, bile acids might be a link between neurodegenerative retinal diseases and microbiota.

Bile acids are produced in the liver and excreted into the intestine, where their main function is to participate in the emulsification, absorption, and digestion of lipids. They have a secondary role as a steroid hormone modulating various metabolic process, such as hepatic glucose metabolism and liver cell survival [1].

Traditional Asian medicine recommended the use of vertebrate and invertebrate bile for patients with visual disorders [2]. For more than 10 years, numerous studies have confirmed that the hydrophilic bile acids, ursodeoxycholic acid (UDCA) and tauroursodeoxycholic acid (TUDCA), are protective in diseases affecting the central nervous system and the retina [3]. However, there is no clinical indication for the use of bile acids in neurodegenerative diseases. Although antiapoptotic, anti-inflammatory, and antioxidant effects have been shown for these molecules, little is known about primary signaling pathways and molecular mechanisms through which bile acids act as neuroprotectants, delaying translation to the clinical setting. We review evidence supporting a potentially therapeutic role for bile acids in retinal disorders, and the mechanisms and pathways involved in the cytoprotective effects of bile acids from the liver and the enterohepatic circulation to the central nervous system and the retina.

Correspondence to: Francine Behar-Cohen, INSERM, UMRS1138, Team 17, From physiopathology of ocular diseases to clinical development, Université Sorbonne Paris Cité, Centre de Recherche des Cordeliers, 15 rue de l'Ecole de Médecine, 75006 Paris, France. Phone : +33 (1)44.27.81.64; FAX :+33 (1) 44.27.81.77; email: francine.behar@gmail.com

The bile acids: Chemical structure and physiology: Bile acids are the major constituents of human bile [1]. They have a 24-carbon structure containing 5β-steroids, and their main role is the emulsification of lipids, a fundamental step for lipid absorption and digestion [4]. Primary bile acids, cholic acid (CA) and chenodeoxcholic acid (CDCA), are synthesized from cholesterol in the liver (Figure 1) via two main pathways, the classical and alternative pathways. The classical pathway is initiated by cholesterol 7α-hydroxylase (CYP7A1), which is regulated by the farnesoid X receptor (FXR). The alternative pathway can be initiated by different enzymes that are also expressed outside the liver [1].

Bile acids are transported from the hepatocytes through the bile canaliculi and stored in the gallbladder. Following food intake, the presence of fats and proteins in the stomach results in the release of bile acids from the gallbladder into the duodenum. In the intestine, gut microbiota produces the secondary bile acids by modification of the primary bile acids, via 7α-dehydroxylation, deconjugation, and oxidation or epimerization of the hydroxyl groups at C-3, C-7, and C-12 (Figure 1). The secondary bile acids deoxycholic acid (DCA) and lithocholic acid (LCA) are formed by dehydroxylation of CA and CDCA, respectively, performed by dehydratases of the anaerobic flora from the human colon. Epimerization of hydroxyl groups of CDCA by the hydroxysteroid

KEY POINTS: TUDCA (tauroursodeoxycholic acid) is a unique bile acid found in small amounts in the overall composition of bile. It has been used in Chinese medicine for thousands of years as a digestive aid and liver support, and now we are able to produce it as a supplement.

Substitutes for Bear Bile for the Treatment of Liver Diseases: Research .

Hindawi Publishing Corporation
Evidence-Based Complementary and Alternative Medicine
Volume 2016, Article ID 4305074, 10 pages
http://dx.doi.org/10.1155/2016/4305074

Hindawi

Review Article

Substitutes for Bear Bile for the Treatment of Liver Diseases: Research Progress and Future Perspective

Sha Li, Hor Yue Tan, Ning Wang, Ming Hong, Lei Li, Fan Cheung, and Yibin Feng

School of Chinese Medicine, Li Ka Shing Faculty of Medicine, The University of Hong Kong, Pokfulam, Hong Kong

Correspondence should be addressed to Yibin Feng; yfeng@hku.hk

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Bear bile has been a well-known Chinese medicine for thousands of years. Because of the endangered species protection, the concept on substitutes for bear bile was proposed decades ago. Based on their chemical composition and pharmacologic actions, artificial bear bile, bile from other animals, synthetic compounds, and medicinal plants may be the promising candidates to replace bear bile for the similar therapeutic purpose. Accumulating research evidence has indicated that these potential substitutes for bear bile have displayed the same therapeutic effects as bear bile. However, stopping the use of bear bile is a challenging task. In this review, we extensively searched PubMed and CNKI for literatures, focusing on comparative studies between bear bile and its substitutes for the treatment of liver diseases. Recent research progress in potential substitutes for bear bile in the last decade is summarized, and a strategy for the use of substitutes for bear bile is discussed carefully.

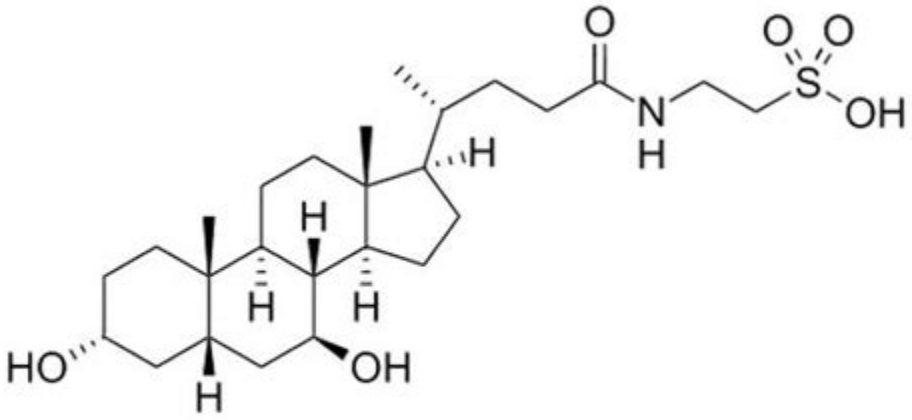
1. Introduction

Bear bile is the dried gallbladder bile collected from the black bear (*Selenarctos thibetanus*), the brown bear (*Ursus arctos*), or other species of Ursidae, under the category of animal drugs in Traditional Chinese Medicine (TCM), and has been used in TCM clinical practice for thousands of years [1–3]. Among the classic prescriptions of TCM, there are 396 kinds of prescriptions containing bear bile constitute [4]. In the point of TCM view, bear bile is a cold medicine and is bitter in flavor and cool in nature, and it is entering meridian of liver, gallbladder, and heart, so it could clear heat, relieve toxin, clear away liver fire, and stop endogenous wind [5, 6]. In recent decades, modern pharmacological studies also claimed that bear bile has a wide range of pharmacological actions, including hepatoprotection and antibacterial, antiviral, anti-inflammation, antigallstones, hypolipidemic, and some other effects [7–10]. In TCM clinical practice, bear bile was used in fever fighting, detoxification, and reduction of inflammation, swelling, and pain [4, 5]. Particularly, it was widely used for curing a variety of liver diseases, such as fibrosis, biliary cirrhosis, and even liver cancer [6]. Bear bile shows strikingly abilities to reduce liver fire and liver heat, which refer to the pathological phenomenon within the liver from the point of Chinese medicine view.

However, the application of bear bile has drawn substantial concerns and controversy from worldwide public, media, and animal rights folks. The first concern is that the extensive consumption of bear bile in China and other Asian countries has made bears become endangered species. Although bears are listed in the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), the illegal abuse of innocent bear for huge profits worldwide is continuing [3, 11–13]. The second concern is the extreme cruel and inhuman method to extract bile from living bear. The extraction method named "Free-dripping Fistula Technique" by inserting a catheter into the bear gallbladders to drain the bile daily was applied in thousands of bear bile extraction factories [14, 15]. It once was thought to be a great technological progress from "kill the bear to get the bile" to "drain bile from living bear." But the extraction of bile from living bear is such an unbearable torture, which does not kill the bear in an instant but will render it a pain worse than death. The bears would suffer tremendous mental stress and physical trauma for decades and result in illnesses and chronic infections caused by the presence of foreign

For more than 10 years, numerous studies have confirmed that the hydrophilic bile acids, ursodeoxycholic acid (UDCA) and tauroursodeoxycholic acid (TUDCA), are protective in diseases affecting the central nervous system and the retina [3]. However, there is no clinical indication for the use of bile acids in neurodegenerative diseases.

Research Breakdown on TUDCA - Examine



However, overall given that TUDCA is a bile acid and all that you now know about bile flow. TUDCA is far superior to NAC in terms of what it does for the liver. NAC is also more common to create side effects as opposed to TUDCA which has little to no side effects. For this reason we recommend TUDCA over NAC. TUDCA vs Milk Thistle:

9 Impressive Benefits of TUDCA - the Gut Supplement - BulkSupplements

Bile is a greenish-yellow fluid made by your liver and stored in the gallbladder. What are bile salts? Bile salts help with the digestion of fats. They also help the body absorb fat-soluble.

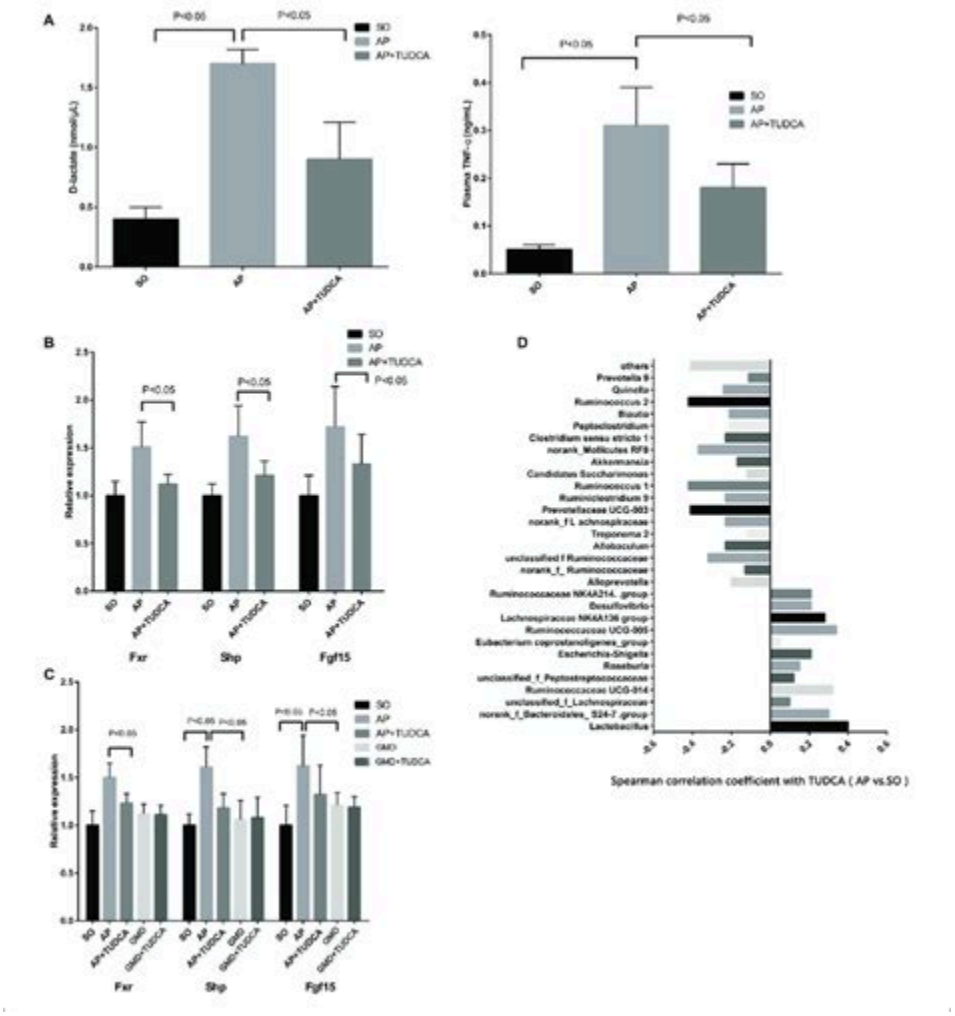
Enzymes vs. bile salts vs. ox bile vs. Tudca: does anybody . - Reddit

If you've been researching ox bile, TUDCA or purified bile salts, you may be wondering when is ox bile a bad idea. This video will explain how to use ox bile and TUDCA the right way. .

Bile Salts in Your Body: Function, Benefits, and More - Healthline

TUDCA vs Ox Bile? Anyone tried TUDCA or Ox Bile for GB issues? I've been using Allergy Research Group 125mg of Ox Bile for at least 2 weeks now and not noticing any difference whatsoever in digestion, positively or negatively.

The effect of Tauroursodeoxycholic acid (TUDCA) and gut microbiota on .



Structure 2 Pharmacology 2. 1 Absorption and bioavailability 2. 2 Distribution 3 Interactions with the Endoplasmic Reticulum 3. 1 ER stress and Ischemia/Reperfusion 4 Interactions with the Liver 4. 1 Cell death and count 4. 2 Cholestasis 4. 3 Gallstones 5 Interactions with Neurology

TUDCA: A Promising Neuroprotective Agent - Restorative Medicine

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Neurospine

Review Article

Curcumin as a Promising Neuroprotective Agent for the Treatment of Spinal Cord Injury: A Review of the Literature

Subum Lee[1], Dae-Chul Cho[2], Inbo Han[1], Kyoung-Tae Kim[2]

[1]Department of Neurosurgery, Korea University Anam Hospital, Korea University College of Medicine, Seoul, Korea
[2]Department of Neurosurgery, Kyungpook National University Hospital, School of Medicine, Kyungpook National University, Daegu, Korea
[3]Department of Neurosurgery, CHA Bundang Medical Center, CHA University School of Medicine, Seongnam, Korea

Corresponding Author
Kyoung-Tae Kim
https://orcid.org/0000-0003-4867-6854
Department of Neurosurgery, Kyungpook National University Hospital, 130 Dongdeok-ro, Jung-gu, Daegu 41944, Korea
Email: mkimkt7@gmail.com

Co-corresponding Author
Inbo Han
https://orcid.org/0000-0002-0834-9325
Department of Neurosurgery, CHA Bundang Medical Center, 59 Yatap-ro, Bundang-gu, Seongnam 13496, Korea
Email: hanib@cha.ac.kr

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Curcumin is a polyphenolic chemical derived from the rhizomes of *Curcuma longa*. It has been used throughout the Indian subcontinent for medicinal purposes, religious events, and regional cuisine. It has various pharmacological benefits owing to its anti-inflammatory and antioxidant properties. Its neuroprotective effects on the brain and peripheral nerves have been demonstrated in several *in vivo* neuronal tissue studies. Because of these functional properties of curcumin, it is considered to have great potential for use in the treatment of spinal cord injuries (SCIs). Numerous immunopathological and biochemical studies have reported that curcumin can help prevent and alleviate subsequent secondary injuries, such as inflammation, edema, free radical damage, fibrosis, and glial scarring, after a primary SCI. Furthermore, following SCI, curcumin administration resulted in better outcomes of neurological function recovery as per the Basso, Beattie, and Bresnahan locomotor rating scale. However, to date, its utility in treating SCIs has only been reported in laboratories. More studies on its clinical applications are needed in the future for ensuring its bioavailability across the blood-brain barrier and for verifying the safe dose for treating SCIs in humans.

Keywords: Antioxidant, Curcumin, Inflammation, Neuroprotective agent, Recovery of function, Spinal cord injury

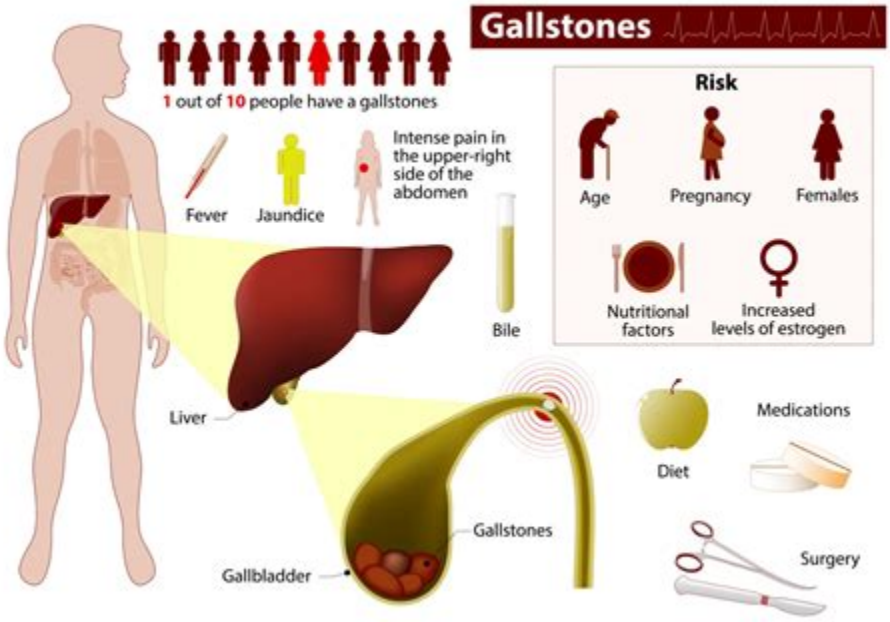
INTRODUCTION

Spinal cord injuries (SCIs) have 2 phases—primary and secondary injuries.[1] A primary injury is caused by mechanical insult and structural damage, whereas a secondary injury is a sequence of systemic and local neurochemical and physiological alterations. Subsequent edema, ischemia, inflammation, cytokine production, free radical damage, glial scar formation, apoptosis, and necrosis contribute toward the development of secondary injuries.[2] A primary injury is immediate and irreversible; in contrast, a secondary injury worsens with time and necessitates therapeutic intervention. Thus, preventing or aggressively treating secondary injuries is the mainstay of care for acute SCIs.[3,4]

Curcumin is a promising therapeutic drug for SCI treatment because it reduces the incidence of secondary injuries. It is a yellow extract derived from *Curcuma longa* that is frequently used as a spice and food-coloring ingredient in India (Fig. 1). Curcumin has antioxidant and nonsteroidal anti-inflammatory pharmacological properties.[5,6] Preclinical and clinical trials have revealed its various pharmacological activities, including its anti-inflammatory, antibacterial, anticancer, and neuroprotective

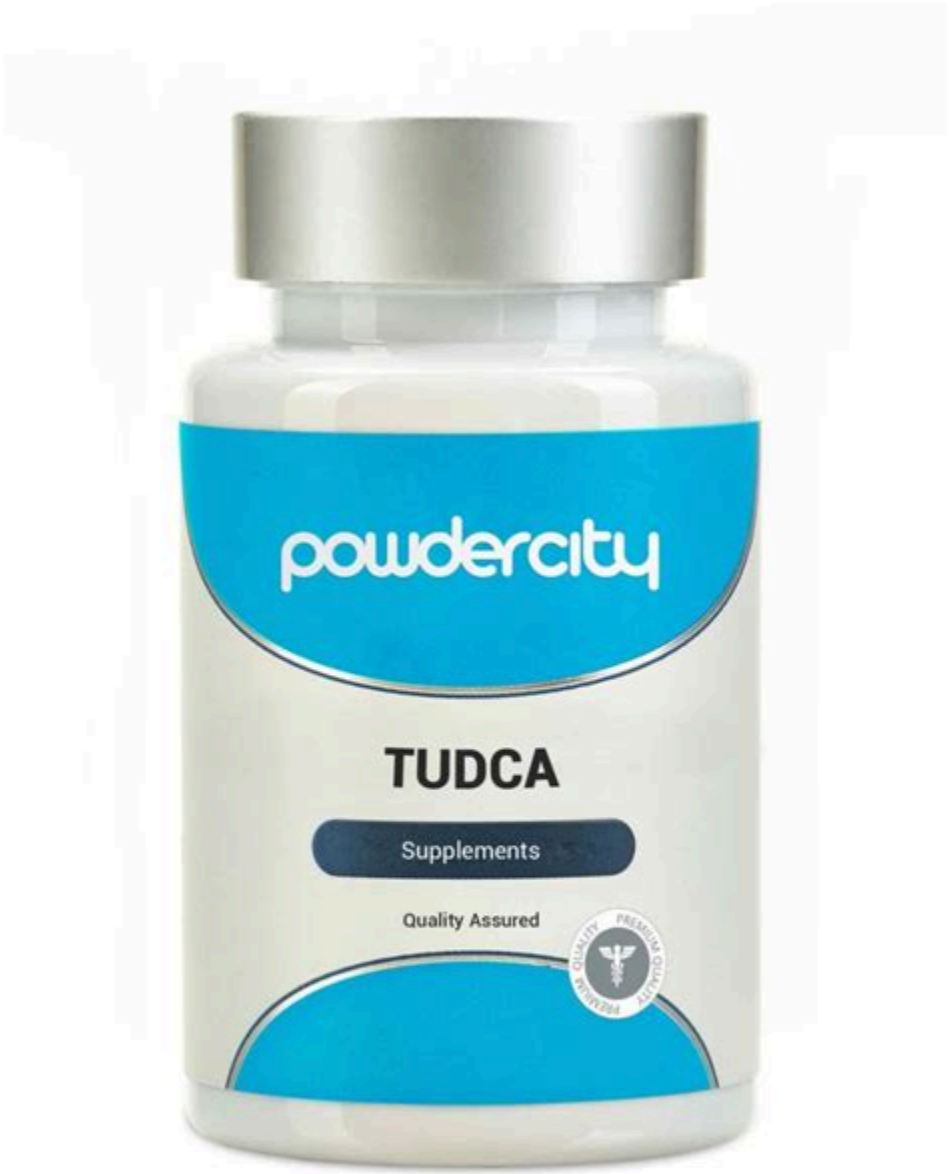
TUDCA vs UDCA Although UDCA is also an amphipathic bile acid used to treat cholestasis, TUDCA has superior bioavailability and absorption due to the attached taurine molecule. . TUDCA is the taurine conjugated bile salt of the bile acid UDCA, with unique properties, mainly in reducing ER stress by protein unfolding due to its 7-beta hydroxyl .

TUDCA for Gallstones | Is TUDCA Therapy Effective? | BodyBio



Open the capsule and taste it. If it doesn't taste bad, then it isn't a quality TUDCA supplement. Propriety blend: Some brands mix their TUDCA with herbs to support liver health. This is fine so long as they list the exact amount of each ingredient.

TUDCA benefits, dosage, and side effects - Examine

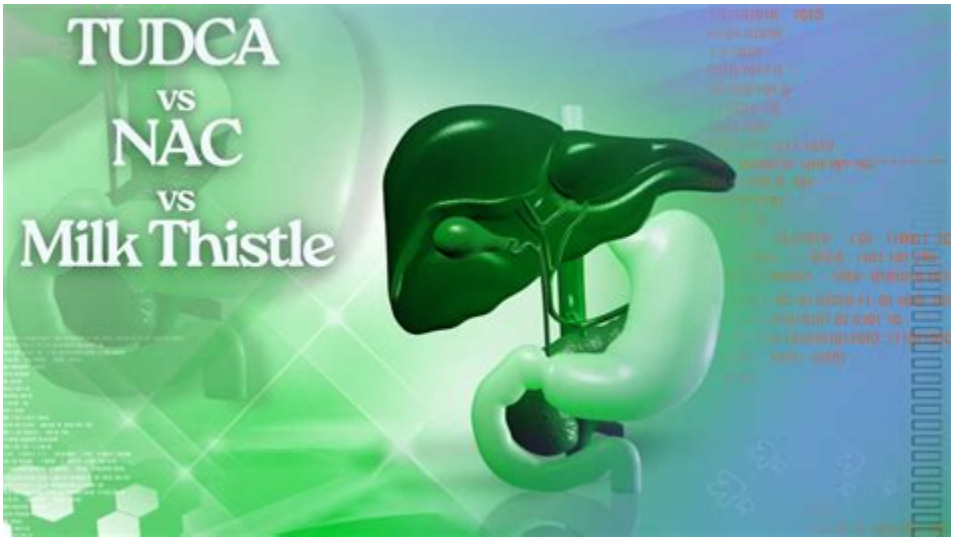


The liver releases bile salts into the intestines via the bile duct from there the bile salts are then metabolized into ursodeoxycholic acid (UDCA) by microbes in the large intestine. To create TUDCA, the UDCA is conjugated with a taurine molecule. Being a bile acid TUDCA supports digestion and in particular the utilisation of fats and oils.

How to Use Ox Bile and TUDCA the Right Way - YouTube

Dr. Eric Berg 08/31/2023 The benefits of TUDCA (tauroursodeoxycholic acid) are numerous it is a potent bile salt that's naturally found in the body. As a supplement, it has a wide range of health benefits, from improving digestion to reducing inflammation. Find out why TUDCA is so powerful and learn the best ways to use it. What is TUDCA?

TUDCA vs NAC vs Milk Thistle - Holistic Lifestyler



Tauroursodeoxycholic Acid (TUDCA): A Promising Neuroprotective Agent Derived from Bile Salts. Tauroursodeoxycholic acid (TUDCA) is a hydrophilic bile acid synthesized in hepatocytes by the conjugation of ursodeoxycholic acid (UDCA) with the amino acid taurine. UDCA, which is made by gut bacteria, is FDA-approved in the United States for the .

The 11 Potential TUDCA Benefits That Are Powerful

Key Points: Gut dysbiosis and inflammation are common symptoms in people with chronic illness, whether you have a gut-related diagnosis or not. If you experience either of these, it might be worthwhile to investigate gallbladder health and liver support as a treatment option.

TUDCA: Benefits, Side Effects, and Safety - HealthPlugged

TUDCA (tauroursodeoxycholic acid) is a natural type of bile salt made by the liver and the gut. Every day, the body makes around 4 cups (1 liter) of bile containing TUDCA. It is a water-soluble bile acid.

Very similar to UDCA (ursodeoxycholic acid), TUDCA contains the amino acid taurine that helps to stabilize it.

What Is TUDCA: Benefits & Supplementation | BodyBio

Results: At week 24, 75. 97% of patients in the TUDCA group and 80. 88% of patients in the UDCA group achieved a serum ALP reduction of more than 25% from baseline (P = 0. 453). The percentage of patients with serum ALP levels declined more than 40% following 24 weeks of treatment was 55. 81% in the TUDCA group and 52. 94% in the UDCA group (P = 0. 699).

TUDCA and Ox Bile Benefits: What the Science Says

Research breakdown TUDCA is linked to 6 conditions and outcomes. Get Examine+ to unlock these insights and the details of over 50,000 other studies. Summary Tauroursodeoxycholic acid, more commonly referred to as TUDCA, is a bile salt that is found naturally occurring in the body.

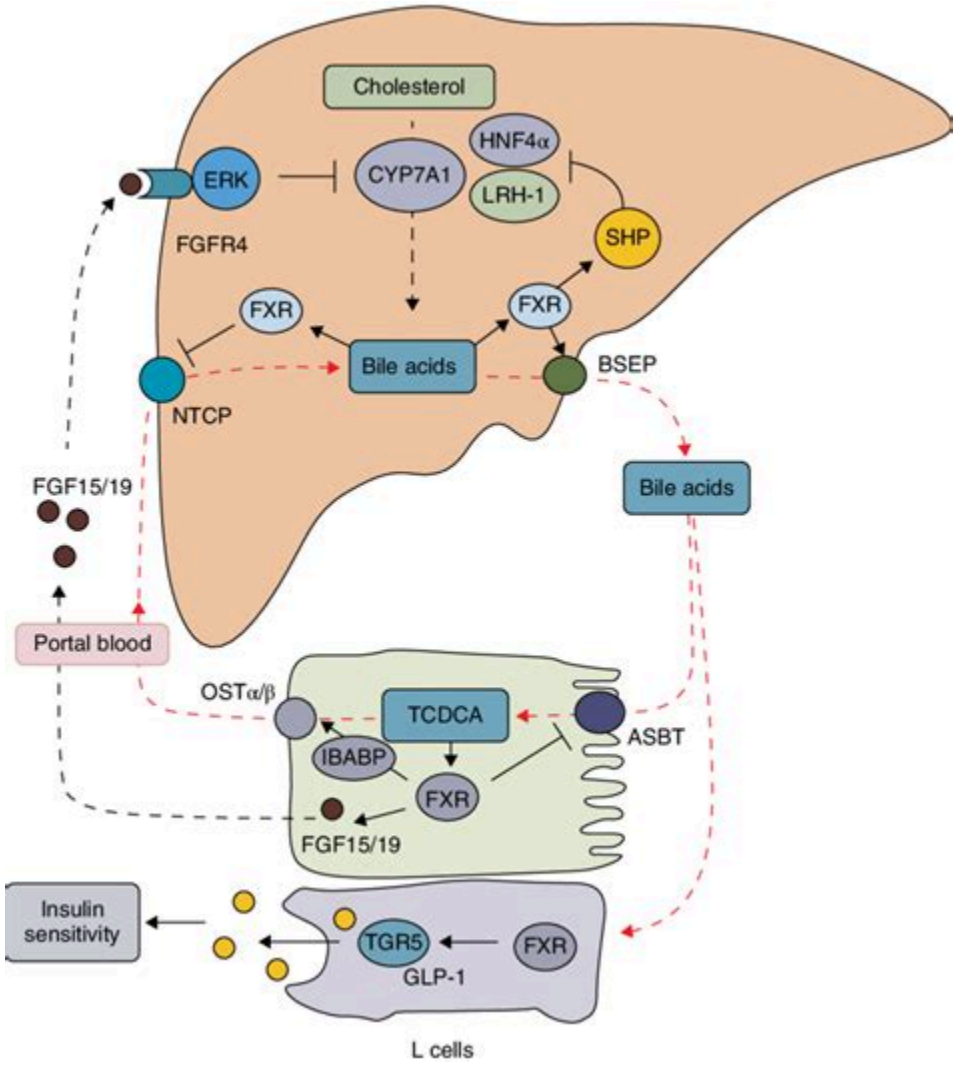
What is TUDCA? - LVLUP Health

The bile salt export pump protein ABCB11 on hepatocytes is mainly responsible for regulating the excretion of a variety of combined bile acids from hepatocytes to the bile duct. At present, many studies have shown that the expression defect of Abcb11 gene in hepatocytes will make the bile acids secreted by the liver cannot be excreted into the .

Best TUDCA Bile Supplements - Superfood Journal

TUDCA Human bile = 97-98% water + 0. 7% bile acid salts + . . some other things. "Bile salts" seems to typically be referring to animal produced bile - typically ox bile. TUDCA is, I believe, also a bile salt, but is synthetically derived. And I never quite understood why digestive enzymes are commonly recommended.

The bile acid TUDCA and neurodegenerative disorders: An overview



The tauroursodeoxycholic acid (TUDCA), one of the acids found in bear bile, is a hydrophilic bile acid and naturally produced in the liver by conjugation of taurine to ursodeoxycholic acid (UDCA).

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