



INDO AMERICAN JOURNAL OF PHARMACEUTICAL RESEARCH



REVIEW ON EPSOM SALT & ITS APPLICATIONS

Pinki Jaiswal^{*}, Suvarna Patil, Sangeeta Jaiswal, Pooja Kakade, Shweta Pal, Kajal Rane.

Ideal College of Pharmacy & Research Institute, Kalyan, Mumbai, India.

(Affiliated to UNIVERSITY OF MUMBAI).

ARTICLE INFO

Article history

Received 16/07/2021

Available online

31/08/2021

Keywords

Epsom Salt,
Bath Salt,
Heptahydrated Form,
Muscle Soreness,
Premature Aging,
Colitis And Megacolon.

ABSTRACT

Epsom salt is a crystallized form of magnesium, unlike sodium table salt. It is also known as heptahydrated Magnesium sulphate. It is commonly consists of magnesium, Sulphate and oxygen. We had mainly focused on its Properties, importance, adverse effect, contraindication, uses, Different classes, application based formulation and its Pharmacological properties. Based on properties it is non-toxic, odour-less, neutral in pH, bitter in taste and soluble in water. Where as it has Vast field in uses such as relieving body stress, reducing muscle Soreness and relieving muscle cramps, it improve blood circulation, Used in treating constipation and also used in cosmetic purposes such as for detoxifying the skin and providing nourishment to the skin. It Cleans the pores and control the body acne. In these we had covered its adverse effect due to overdose consumption such as nausea, Vomiting, diarrhoea, colitis and toxic megacolon. This salt is effective for all types of skin. Thereby we also mentioned its Formulation which is mainly used in the market as a bath salt along with its benefits, direction of use and safety.

Corresponding author

Pinki Jaiswal

Ideal College of Pharmacy & Research Institute,
Kalyan, Mumbai, India.

(Affiliated to UNIVERSITY OF MUMBAI).

Please cite this article in press as **Pinki Jaiswal** et al. Review on Epsom Salt & its Applications. Indo American Journal of Pharmaceutical Research.2021;11(08).

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INTRODUCTION

The heptahydrated form of magnesium sulfate is known as Epsom salt (heptahydrated: a compound which contain 7 water molecule). Epsom salt is also called as magnesium sulfate. Which consist of magnesium, Sulfur, oxygen. It is household chemical with many traditional uses, which include Bath salt.[1] Magnesium is naturally occurring mineral that is important for many system in the Body especially the muscle and nerves. Epsom salt also increase water in the Intestine. Epsom salt is used as a laxative to relieve occasional constipation. Not all external Uses for epsom salt have been approved by FDA. Epsom salt may also be used for purposes not listed in the medication guide. Hydrated magnesium sulphate better known as epsom salt was discovered in 1618 by a farmer in epsom, England. When his cows refused to drink the water from a Certain mineral well he tasted the water and found that it tasted very bitter. He also Noticed that it helped heal scratches and rashes on his skin[2]. Epsom salt Is bitter in taste that's why it is also called as bitter salt. Crystals of hydrated magnesium sulphate used as a Purgative or for the other medicinal use. Magnesium Sulphate is known as epsom salt because it was Originally extracted from the mineral rich water of (England). Epsom salt is quickly dissolved in water and releasing Mg^{+2} cation (which is positively charge ion) and SO_4^{2-} anions (Which is Negatively charge ion).It is inexpensive, non-toxic salt that is readily AvailableIn pharmacies for bath salt and agriculture stores as a Soil treatment. Epsom salt for monoclinic crystal that can assume a variety of shapes, but most of them look Like crystal shards Or needles [3] Epsom salt is commonly found in geological Environments including salt deposits and burning coal Dumps.[4]

Properties-

- Molar mass 246.48g/mol[5].
- Monoisotopic mass– 246.010724g/mol.
- Density 1.68g/cm3.[6]
- Melting point 150°C.
- Refractive index– 1.433 .
- Odor –odorless.
- Taste –bitter.
- Appearance –white crystalline solid.
- PH –neutral.
- Solubility –soluble in water

APPLICATION OF EPSOM SALT:-

Main Application

Muscle pain reliever and relieve cramps:-If the body is magnesium–deficient, than it can causes spasm tightness And tension in your skeletal muscle and joints[7]. Since the magnesium Plays a role in neuromuscular transmission and muscle contraction[8].So if We taking bath with epsom salt may have to reduce muscle soreness and Relieve muscle cramp. It may also has ease pain and relieve inflammation in the muscle. So that epsom salt act as a muscle pain reliever.

Other applications

1) Relives Body stress:-

Magnesium play a key role in regulating the body's stress – response System[9]. As the stress increases the amount of magnesium we lose from Our body, leading to magnesium deficiency [10]. Once the Epsom salt dissolve in warm water, magnesium ion breaks apart from Epsom salt molecule and then it is absorbed through skin and level of magnesium in body gets Elevated. The magnesium helps by decreasing stress level through Promoting the production of serotonin, which in responsible for relaxation of Body.

2) Improve the blood circulation:-

The epsom salt improve the blood circulation. Hence it help in prevention of Heart disease lowering blood pressure, stroke, preventing blood clots, elasticity of Arteries. The magnesium has strong anti-inflammatory properties, may prevent blood Clotting and can help your blood vessels relax to lower your blood pressure. The Magnesium ion is important for treatment of blood clotting. In the other words, Magnesium has to prevent high blood pressure. The mineral have to prevent blood Vessels from constructing which can increase blood pressure and has been shown to improve blood flow[11].

3) Improve regular heart beat:-

Epsom salt bathing is improved circulating health. It can help to steady and Irregular Heartbeat, reduces the chance of forming blood clots, regulate blood Pressure and aid in heart health overall[12]. Magnesium is important for maintaining Healthy heart beat. The calcium stimulate the muscle fibre to contract other and Magnesium counter this effect, helping the cells to relax. This moment of calcium and Magnesium across your heart cells maintains healthy heart beat [13].

4) Relief migraine and treat bronchial asthma:-

Taking an Epsom salt bath is an effective way to get magnesium absorbed through the skin without ingesting it. Taking a hot epsom salt Bath can bring quick relief in Migraine pain. It can be used as a treatment for bronchial asthma also[14].

5) Used in constipation :-

Epsom salt is used in constipation due to its laxative effect .laxative can help a Person have a Bowel. Moment when they are temporarily constipated. They work to Loosen stools and speed the transition of content with the Bowel[15].

6) Detoxifies skin:-

Epsom salt draws out toxins and impurities from the skin, which helps detoxify skin and beautify it[16].

7) Exfoliate Dead Skin:-

Due to its crystalline structure, Epsom salt is a great exfoliant. Removing old, dead skin cells will leave you looking smooth and Feeling fresh.

8) Cleanse Pores:-

Dirt and bacteria clog up pores in the skin. But we can fight Blackheads and get a healthy glow, all may be with Epsom salt.

9) Reduce Cellulite:-

We know Epsom salt can detoxify the bloodstream and brighten Complexion. But they can also help reduce the appearance of cellulite. Epsom salt reduces water retention and breaks up the old fat cells that lead to cellulite.

10) Treat Cracked Heels:-

We may be use epsom salt to Relax and revive our feet with a Natural therapeutic Epsom salt foot bath.

11) Prevent Premature Ageing :-

Epsom salt is high in antioxidants that prevent premature aging.

IMPORTANT INSTRUCTIONS

Always use a recommended amount of Epsom salt as mentioned on the package label or as directed by the physician. Using too much epsom salt can cause a Serious, life-threatening side effect. Never use this salt as a laxative purposes Without physician advice if you have following symptoms:-

- Severe stomach pain
- Nausea
- Vomiting
- A perforated Bowel
- Bowel of Obstruction
- Sever constipation
- Colitis
- Toxic megacolon.
- If People suffering from intestinal rectal bleeding or getting constipational effect after using Epsom avoid using continued medication and consult your doctor [17].

OVERDOSE OF EPSOM SALT MAY CAUSE :-

- Vomiting and diarrhoea
- drowsiness
- warmth, redness or tingly feeling
- Nausea
- Feeling hot
- Slow heart rate

STORAGE:-

Keep at normal room temperature and avoid moisture and Heat.

SIDE EFFECTS :-

Common side effect may include :-
diarrhoea or upset stomach
skin irritation after soaking.

DRUG CLASS :-

- Laxative
- Anti-inflammatory
- Minerals and electrolyte.

Application Based Formulation Of Epsom salt:-**EPSOM BATH SALT :-**

Epsom bath salt is a good product with calming magnesium And detoxifying sulfate. It removes all the impurities and Dead skin cells which helps to detoxify and beautify the skin. beside it also helps to reduce muscle pain, relieve Aching feet, cleans pores

KEY INGREDIENTS :-

- Magnesium sulfate (dried epsom salt)
- Glycerine
- Sweet almond oil
- Potassium sorbate
- Lavender Essential oil
- Colour C.I.42090 and C.I.17200.

KEY BENEFITS:-

- Removes impurities and dead cells from the skin
- Reduced and relax the muscle pain
- Manages aging and soothing of skin
- Relieve itching feet
- Controls acne and moisturizes the skin
- It helps in treating all types skin problems
- Nourishes the skin
- Cleans pores.

DIRECTIONS FOR USE :-

- For a relaxing soak:- Add 2 cups of epsom salt to a warm bath. Soak for at least 12 minutes.
- Relieving tired Feet:- Soak tired, aching feet in a warm water to which a handful Of epsom salt has been added and rinse with cool water.
- For backache:- Pour 1 glass of water into a bowl and stir in 3 tablespoon epsom Salt until all the salt is dissolved. soak a washcloth in the Epsom salt and water solutions. sqash out the extra water Of the cottoncloth and place it over the affected paining area. Allow It to remain in the the place for 20 minutes. Re-wet the cloth In the epsom salt solution if it begins to dry out. As a Alternative to dissolving epsom salt in water, you can also make a paste of Epsom salt with water and apply this to the Painful areas. Cover the paste with the lukewarm wet Wash cloth.

SAFETY INFORMATION :-

- For external use only
- Do not use for human consumption
- Avoid direct contact with eyes
- Store in cool and dry place
- Keep out of reach of children.

CONCLUSION

In this review we came to this conclusion that Epsom salt is an excellent muscle pain reliever and relive muscle cramp. when you soak in an Epsom salt bath, these minerals get absorbed into your body through the skin this may help relax muscles, reduce swelling and pain from arthritis, and relieve pain from fibromyalgia. Epsom salt bathing help to improve blood circulation therefore It can help to steady and Irregular Heartbeat, reduces the chance of forming blood clots, regulate blood Pressure and aid in heart health overall. Epsom salt is more effective in relieving itching feet and treat the cracked heels. It is also used as a laxative to treat constipation and also has more beneficial effect in cosmetics purposes such as It removes all the impurities and Dead skin cells which helps to detoxify and beautify the skin, manage the aging, It cleans the pore and control the acne and moisturizes the skin, and also give nourishment to the skin. As we have covered all aspects of epsom salt in this review so our motive is to put epsom salt forward as a muscle pain reliever, laxative, skin detoxifier, Improves blood circulation. This will be best beneficial to old people who are suffering from arthritis or joint pain.

ACKNOWLEDGEMENT

I am grateful to everyone with whom I have had the pleasure to work during this. Each of the members of my article groups member has provided me adequate guidance and taught me a great deal about both scientific and related knowledge for the same. I would especially like to thank Suvarna Patil mam, the teacher of my college. As a teacher, she always gave her full support in completion of my review. She has made me realize, by an example, what a good scientist (and person) should be. Throughout this my loving and supporting family members allowed and helped me to solve all the circumstances during this. They are the ultimate role models. Most importantly, I wish to thank my supportive friend Ganesh verma who provide unending inspiration.

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