LYCOPENE- A HERBAL SKINCARE MASSAGE OIL FOR PHYSICAL AND MENTAL GROWTH OF BABY

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Abstract

Skin of the newborn babies differs from that of an adult in several ways. Baby's skin is more susceptible to trauma and infection and requires special care. As a parent, everyone wants best products for their child. That includes giving them the best skin care routine to keep baby skin soft and healthy. Some ingredients of baby products can cause sensitive skin to become irritated, and certain others can even be absorbed into little one's body. For this reason, it's important to know what ingredients are in the products you use on baby's skin. Selecting safe and effective skin care products for your baby can be overwhelming, but it's not impossible. Now a days, parents not easily pick up labels with trendy claims, such as "hypoallergenic," "gentle," or "organic," try learning about ingredients that can cause skin irritation if baby shows signs of a rash or reaction.

Children are especially vulnerable to chemicals in baby shampoos, lotions, powders, ointments, baby wipes and many other products. Children's brains, nervous systems and other body organs are still developing, and so these chemical substances that have a small effect on adults can contribute to developmental problems in children. Babies also ingest products that are meant for external use only by putting their fingers, hands, toes, toys and other objects into their mouths. Many personal care baby products contain "penetration enhancers" which further increase the absorption of chemicals through the skin. Some of the known health effects of the more harmful ingredients include developmental problems, cancer, reproductive problems, mutations, nervous system disorders, inflammation, allergy and even death. Other harmful ingredients may irritate the baby's skin, eyes, respiratory tract or digestive tract. [13] So my aim to prepare a herbal oil formulation as baby product which may produce less or no harm on to the baby's skin & help them to grow mentally and physically well & healthy.

Keywords: Oil formulation, Baby product, Baby's health, Lycopene, Tomato, Child immunity, Physical & mental growth of baby.

Introduction

A **newborn baby** is born with wrinkly **skin** and a protective covering that naturally peels off during the first week. There's no need to rush it, rub it, or treat it with any lotions or creams. Due to the characteristics of the skin of newborn babies and children, cosmetic products intended

for their care and protection require special attention in the formulation. Many products designed for use by babies and children have potentially toxic substances that are harmful to their skin. An essential condition is that all the ingredients that may be potentially aggressive to the skin be excluded. This is obviously true to all cosmetic products, but it is certainly more difficult to implement in products for use on the fragile skin of babies and children. [1]

The acidic pH of skin surface seen in adults and adolescents (pH <5) has a protective effect against microorganisms. In Newborns, especially in premature ones, skin surface pH tends to be neutral, which significantly reduces protection against excessive microbial growth. This may also promote increased transepidermal water loss, signaling an alteration of epidermal barrier function.[2]

Compound	Product	Risk
Triclosan	Soap, deodorants, antiseptics	Same risk of toxicity of other phenolic compounds
Propylene glycol	Emollients, cleaning agents	Skin irritation and burning Excessive enteral and parenteral use: risk of hyperosmolality and seizures.
Benzethonium chloride	Cleaning Agents	Poisoning by ingestion, carcinogenesis
Glycerin	Emollients, cleaning agents	Hyperosmolality and seizures
Ammonium lactate	Exfoliating, emollient	Possible lactic acidosis
Coal tar	Shampoos, keratolytic products	Cancer risk due to excessive use of aromatic hydrocarbons
Tetracaine	Topical anesthetic	Contact Dermatitis
Ethanol	Oral cleaning solutions	Oral carcinogenesis
Methylisothiazolinone	Shampoos	Neurological defects
Sodium lauryl sulfate	Soap, shampoos	Skin irritation / contact dermatitis
Sodium laureth sulfate	Toothpaste, soap, shower gel, bath foam	Skin irritation / contact dermatitis

Soaps are obtained by the reaction of a base with a mixture of fatty acid esters. Traditional bar soaps have good detergency, emulsifying power and produce enough lather, but they have an irritant action and their alkaline pH can destroy the superficial lipid layer of the skin of the baby, leading to excessive skin dryness. Therefore, they should be avoided. Glycerin soaps, due to the excessive content of glycerin, which is potent humectants, can absorb excess water out of the skin, potentially causing more dryness and irritation. [1]

it is critical that infant cleansers and moisturizers be well tolerated and not disrupt the stratum corneum. Infant skin is also exposed to other factors, such as saliva, nasal secretions, urine, feces (including fecal enzymes), and dirt, which can be irritants and result in disruption of the skin barrier. As a result of normal daily exposure to these external factors, proper skin cleansing and protection of the infant skin barrier are essential to the maintenance of skin-barrier function. [3]

Formulation application by massage

An innovative cosmetic formula with natural for baby's skin which may be more effective when applied by massage process to the baby. Baby massages have a variety of benefits. With each gentle stroke, baby will feel nurtured and loved. Massages will also allow baby to feel

more relaxed, which may improve the sleep. Some research suggests baby massage might even promote healthy growth, although further research is needed. According to the International Association of Infant Massage (IAIM), baby massage may help to stimulate the circulatory and digestive systems. This might, in turn, help some babies with conditions such as: gas, cramps, colic & constipation. Massages may also help ease muscular tension, growing pains, and teething discomfort, as well as stimulate growth in preterm infants. However, a Cochrane systematic review found little evidence for these reported benefits. More research is needed to support these claims. [6][7]

As per one research, infant massage is an effective way to improve baby's physical profiles and suckling quality. The development and growth of baby are closely related to the baby's relationship with the people around him. This study indicates that as the closest person to her baby, a mother plays a very important role in ensuring the life quality of her baby in the future. [8][9][10]

Lycopene- A constituent of tomato for herbal oil formulation as baby care product

Lycopene is dominant acyclic carotenoid pigment (chemically) found in tomato, watermelon, papaya, and red pepper. It is powerful antioxidant that may help protect cells from damage. [17] The most important sources of lycopene are tomatoes (Lycopersicon esculentum L.) although it can also be synthesized by the fermentation of fungi or by using bacteria‟s. [18]

- **High in vitamin C.** Tomatoes are a great source of vitamin C. At 16.9 milligrams (mg) Trusted Source, one medium fruit knocks out 34 percent of the daily vitamin C requirement for babies 7 to 12 months. "Vitamin C can help with iron absorption when consumed with a source of iron," says Chow. Plus, this micronutrient boosts immunity and helps wound healing. [4]
- **High in provitamin A.** Add provitamin A to tomatoes' impressive micronutrient mix. (The body converts provitamin a carotenoids to vitamin A.) A medium fresh tomato contains 51 micrograms (mcg)Trusted Source, or about 10 percent of 7- to 12 month-olds' daily needs. This nutrient promotes cellular communication and growth, vision development, and immune function. [4]
- **Packed with antioxidants.** Lycopene, tomatoes' power-player antioxidant. Lycopene helps protect against the damage created by free radicals, reducing oxidative stress in the body. [4]
- **Helpful for hydration.** The average tomato contains 94 percent water. If baby is struggling with constipation or jaundice, extra fluids from tomatoes can help. [4]

Lycopene is slightly acidic in nature, tomatoes contain high contents of potassium and vitamin C; this transforms the dullest of skins and restores glow to the skin. Lycopene, which is an antioxidant that helps fight free radicals in the body. Apart from this, it helps treat skin problems related to ageing and sun damage therefore making it a great skin rejuvenator. Due to their astringent properties, tomatoes help reduce excess sebum on the skin's surface preventing build up, which further reduces the chances of blackheads and whiteheads. Since they have pore-shrinking properties and help tighten the skin, chances of acne and pimples are also greatly reduced. This makes tomato a versatile and popular ingredient for problematic skin conditions. [5]

- **Reduces iness-**Not only are tomatoes excellent to reduce iness, they also help keep the skin cleaner and tighter. [5]
- **Reduces Open Pores**-Tomatoes help reduce open pores and blackheads. [5]
- **Acts as a Skin Lightener**- Not only do tomato act as an astringent but also help wake up the dullest of skins. [5]
- **Detan With Tomatoes**-Tomatoes are great for reducing summer tanning. Not only will this help reduce tan but also naturally reduce dryness caused by the strong UV rays of the sun. [5]
- **Reduces Effects Of Sunburn**-Loaded with Vitamin C and A, not only does tomato give the skin a fresher and fairer look, but it helps reduce effects of sunburn as well. It will soothe the skin, reduce heat on the skin's surface and also even out the redness caused by sunburn. [5]
- **Tomato Skin Toner**- When it comes to skin care, most people do not realize the importance of a toner. [5]

Benefits of mustard oil (as vehicle & Emollient) for babies:

An emollient in as agent that softens and smoothens the skin. They are also referred to as “moisturizers” and “lubricants”. They are essentially composed of lipids which may be animal or vegetable derived for example mustard oil, or obtained from mineral oils or alternatively, may be synthetic. [16] In the Indian scenario, vegetable oils are used extensively for baby massage and as moisturizers. Mustard oil is preferable for oil massage in newborn as it is time-tested and owing to its small molecular structure, allows easy use and is ideal for dry skin. Mustard oil contains allylisothiocyanate, an antigen, which is a volatile chemical capable of causing contact dermatitis. [15]

Mustard has been used to massage babies for a long time, and many mothers swear by its immense benefits for babies and young children. Following are some amazing benefits of mustard for massaging babies: [6]

- Mustard works wonders in improving blood circulation and the overall health of baby. Regular massages with mustard will make baby healthy and strong.

- Mustard is very effective in keeping the body warm and helps it's retain heat. For this very reason, mustard is highly popular in colder regions to keep babies warm and cozy.

- Mustard works as a decongestant for babies. It can ward off a cough and cold in babies to a certain extent.

- Mustard has anti-fungal and anti-bacterial properties, and massaging baby with this wondrous reduces baby's chances of having any skin infections. Babies have sensitive skin and, thus, are more prone to skin infections, and mustard massage helps in warding off many kinds of skin infections in babies.
- Mustard is very effective in improving baby's hair growth. Babies have very scanty hair on their scalp, and regular head massages with mustard ensure good hair growth.
- Babies are at the constant threat of being bitten by insects and mosquitoes, especially during summer and rainy seasons. A massage with mustard may help in keeping the insects and mosquitoes away from baby because of its strong and pungent smell.
- Mustard is loaded with anti-bacterial properties and, thus, is very beneficial in reducing skin infections in babies.
- Fungal infections of any kind can be the cause of serious complications in babies. Massaging baby with mustard helps in protecting baby against various fungal infections.

Mustard is very thick and sticky as compared to other s and massaging your baby with may lead to clogged skin pores. Therefore, do not use too much for massaging your baby. Also, it is recommended to give your baby a nice warm bath after massaging him with mustard to get rid of all the stickiness.

Conclusion

If we apply many more different formulations having different chemicals on baby's skin they may get resist for that particular product which will not show pharmacological activity after application in future. We have to nourish baby's skin very carefully not by using any chemicals, we should apply them herbal formulated products which has not much side effects & capable to provide them proper & accurate immune strength and healthy skin while growing.

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