



# National Society for the Prevention of Blindness-India

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## HOLI- A FESTIVAL OF COLOURS



Holi is a festival of joy and colours and it is celebrated in the entire country. It is customary that during Holi, we use different kinds of colours. These may be liquids of different colours, dry or in the form of paste. The dry colours are red (gulal), blue, yellow, green and purple. These are applied over the face and surrounding areas including scalp. Earlier most of the colors were made from natural and vegetable or fruit based. Now a days, these colours, which are available in the market or obtained from industries, involved in manufacturing of industrial dyes and therefore they have harmful effect on various parts of the body.

Our attempt should be to make Holi colourful, a festival of joy and avoid mishaps. Therefore, we should make all attempts to use safe colours because it is these colours, which can cause immense harm to all of us. These can vary from skin allergy to impairment of eyesight. These colour hazards can turn joyful Holi into a sordid affair.





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### TRAGEDY WHILE PLAYING HOLI IN A VILLAGE

11 year old Lalloo who woke up in bright sunny day with the aim of playing Holi to the fullest and putting Gulal on every ones face in his family especially his younger sister. The moment he came out with bucket full of coloured water, somebody threw a coloured water balloon with full force over him, he was unprepared and colour went directly into his eyes and caused mechanical injury. He washed his eyes but his eyes became red and swollen. His vision was blurred. His parents immediately intervened and washed his eyes thoroughly with cold water but all in vain. Then they took him to Eye Casualty nearby. The Ophthalmologists on emergency duty said that colour used in balloon water had sand, mica, lead oxide and starch. Besides since the balloon hit him on his face, there was also a physical impact on the cornea and the lens. Fortunately he received timely medical treatment by the Ophthalmologist and he has now recovered.

It took him several weeks to heal back. This could have been a fatal injury and little Lalloo could have lost his sight. But it is a message for all the children & parents to use herbal colours to protect their skin and eyes.



Then the doctor said that in our country variety of colours used during Holi festival but we are unaware that colours we used during Holi festival have dangerous following composition:-

1. **Gulal – contains lead chromate, which causes eye irritation.**
2. **Blue colour – contains cobalt nitrate which causes skin allergy.**
3. **Yellow colour – is metanil yellow and causes photosensitivity.**
4. **Green colour –is Metachile green or nickel sulphate, which causes dermatitis.**





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### 5. Purple colour- is Chromium Iodide, which is supposed to be a carcinogenic.



Besides the harmful effects of these chemicals e.g. these colours are often mixed with sand, mica, glass, talc and starch. These irritants can cause: -

1. Sand- can cause irritation and if rub vigorously can cause removal of superficial layers of cornea and foreign body sensation.
2. Mica – can also cause mechanical irritation and removal of superficial layers of cornea.
3. Glass-Powder – can cause laceration and conjunctiva and also of skin of the face.
4. Talc- it can cause allergy.
5. Starch- can offer a medium for bacterial growth.



At some places people use wet colours or colour pastes to apply on the face and other parts of the body. Most of these colour paste are mixture of industrial dyes with engine oil. These pastes cause deleterious effect on different parts of body because of the harmful effects of the main ingredients in these colours. The black colour is lead oxide and can cause renal failure.





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The green colour is copper sulphate and cause temporary blindness. The silver colour is aluminium bromide and is said to be carcinogenic. The blue colour can cause dermatitis. Red colour is mercury and is highly toxic.

The main intention of listing all these colours and their effects is to inform the citizens regarding the ill effects of these colours and, therefore, we should take preventive measures.

Damage to the different parts of the eyes has been reported in our Emergency Services. It has been observed that during Holi season, there is a significant rise in the number of eye injuries. Almost 7 out of 10 cases coming to our eye casualty are because of festival injuries.

As is said that prevention is better than cure, following are the preventive steps: -

1. **First of all it is better to use natural colours. There are several colours which can be made out of vegetable matters like Saffron from Kesar, Yellow from Turmeric, Green from Henna, Red from Beetroot and Blue from Indigo. The best colour for Holi can be obtained from Tesu flowers by soaking them in water. There is no chemical involved in these colours.**



2. If natural colours are not available, synthetic colours can be purchased from the market but one should go for the branded one. Normally these are little expensive but less toxic.
3. As far as possible don't allow children to throw water filled balloons on passersby and moving vehicles.
4. Don't use mud, cow-dung or muddy water as they contain germs and therefore are dangerous for the injured skin.





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5. As far as possible, dry colours should be used so that the toxic effect is minimal.
6. Don't apply the colour inside the eyes, nostril or the hair as this may damage the superficial layer of these areas.



### WHAT TO DO

1. If the colour goes inside the eyes, wash the eye with clean water immediately and cover the eye with clean cloth or eye pad and send the patient to an eye specialist as there is a possibility of injury to the cornea and conjunctiva also. Don't use any ointment/drops without consulting an eye specialist.
2. If there is any allergy in the skin then use some anti-allergy tablets for one or two day.
3. If there is an attack of asthma then you should contact a qualified physician.

This information and advisory is being disseminated by NSPB India as a part of its community ophthalmology program to prevent blindness, especially avoidable blindness. NSPB India strongly believes that advocacy on how to prevent blindness goes a long way in educating people and help them retain the Gift of Sight.

Sd/-

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