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## Review on Self-protective Textiles for Day To Day Use in Summer Season

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### **Abstract:**

*Individuals wear pieces of attire which otherwise is called as Apparel, dress, articles of clothing or clothing on the body. The choice of an individual varies depending on his place, position, need and affordability. The term protective textiles, signifies different kinds of technical textile which provides protective functions like heat protection, ballistic protection, hazardous chemical protection, cold protection etc. for those working in adverse environment conditions rather than appearance. Protection against external atmospheric forces is needed also in daily life and not limited to adverse climatic or working conditions. Clothing is a need, not just for social reasons but also for the functional purpose. Various textile materials are preferred as protection in different seasons, locations and by different age group. The choice of these textile materials as protective element plays a vital role in human race and the selection of material is affected by the fibre type, weave, finish and appearance.*

**Key words:** *protective wear, textiles, daily clothing, seasons, location, age*

### **Introduction**

Human skin is sensitive and acts as an interface between the body and environment. The skin experiences various sensations including, tactile, moisture and temperature <sup>[1]</sup>. Clothing functions as a form of adornment and an expression of personal taste or style <sup>[2]</sup>. The clothes we wear can help to shield us from different sorts of climate, and can enhance security amid dangerous exercises, for example, during climbing, trekking and cooking <sup>[4]</sup>. It shields the wearer from unpleasant surfaces, rash-causing plants, bug chomps, chips, thistles and prickles by giving a hindrance between the skin and the earth. Garments can protect against cold or warmth. They can likewise give a clean boundary, repelling irresistible and dangerous materials from the body. Garments likewise gives insurance from unsafe UV radiation. The clearest capacity of costume is to enhance the solace of the wearer, by shielding the wearer from the components. In hot atmospheres, garments gives security from sunburn or wind harm, while in virus atmospheres its warm protection properties are commonly progressively vital. Asylum more often than not decreases the useful requirement for apparel.

### **Literature Study:**

#### **Temperature Condition in India during Summer Season**

India begins warming up from around the finish of February, first in the northern fields and after that the other part of the nation. By April, numerous spots experience every day temperatures surpassing 40° C (105 F). It remains cooler in the southern pieces of the nation, with temperatures stretching around 35 ° C (95 F), despite the fact that it's much progressively moist. In late May, indications of the moving toward rainstorm begin showing up. Dampness levels construct, and there are tempests and residue storms.

The most tiring thing about summer in India is that the warmth is so persistent. For quite a while the climate doesn't change. It is incredibly hot, bright, and dry.

Most regions of India is hottest between March to June with sweltering heat. During the later days of April and beginning of June the temperature crosses even 45°C in most part of the country.

Choice of appropriate clothing like long pants, full sleeved light weight garment with head gear, without missing on style statement should be the top priority in summer to beat the heat [5]. Style, along with health safety should go hand in hand [6].

## Complications allied with summer in tropical countries

### Sun burns

Sun burns are the common problem associated with the rise in temperature. Constant or repeated exposure to the sun rays not only causes sun burns but also increases the wrinkles, dark spots and skin cancer.

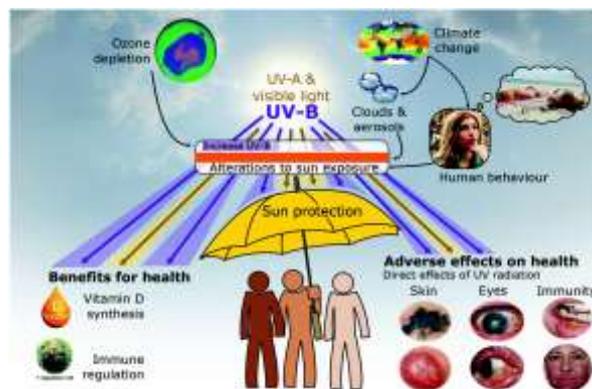


Figure 1: Effect of UV Radiation from Sun on Human Beings [7]

### Insect bites

Insects are ectothermic, i.e. Their body temperature relies upon the outer condition. Rise in temperature normally corresponds with an intensification in insect drive [8]. Damp climate enhances the growth of these deadly insects. The population of the mosquitoes, blood suckers, flies, ants and similar insects increases rapidly with the increase in heat in summer. Life threatening diseases like malaria, dengue are caused by mosquitoes [9]. A little level of individuals are oversensitive to creepy crawly nibbles themselves and may encounter serious manifestations including unsteadiness, shortness of breath, queasiness and an abrupt quick pulse. Diseases like typhoid fever, dysentery, cholera, leprosy and tuberculosis are suspected to be transmitted by house flies [10]. Ticks transmit deadly Lyme illness, which causes serious joint torment and shortcoming in the appendages.

### Body Rashes:

Prickly heat is a bothersome and excruciating mix of body rashes is created because of perspiring and blockage of perspiration organs. This phenomenon occurs in every individual irrespective of gender and age and is more regular among individuals who sweat a ton and in youngsters whose sweat organs are not yet grown legitimately. It can meddle with the body's warmth directing system and cause extreme weariness. Depending upon the sensitivity of the skin and immune system, the repercussions vary from person to person.

### Heat Stroke

Heat stroke is an extreme type of hyperthermia and is caused because of unnecessary retention of warmth by the body. A very normal marvel amid the summers, heat stroke can expand the body temperature to 40°C. With ascend in body temperature, sickness, heaving and cerebral pains happen as often as possible. All these are conceivable indications of an individual experiencing a heat stroke. This is mainly seen in the older people above 40 years than youngsters [11].

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### **Foot Fungal Infection**

The other unfriendly impact of summer on people is the foot parasitic contamination. These are caused on account of sweat or organisms storing up in the feet, especially close toenails, in summer. Foot life form looks revolting, yet at whatever point left untreated, may cause sickness. Foot living being moreover will all in all impact one toenail after another, and consequently should be dealt with when the vital reactions are seen. The issue is more serious in case of diabetic patients

### **Protective Clothing and Styles for summer**

Choosing the appropriate material and right style is most essential to be more comfortable in any season. We don't need wool or thick clothing in summer, which is otherwise very much essential in winter depending on the cold. The knowledge of textiles and styles is inherent in individuals. Precise materials in accurate climatic conditions enhances the positive feel and protects the human race from unassuming but adverse health issues.

### **Choose the right clothing styles**

Summer is undistinguishable with shorts, dresses and sleeveless garments. These are not actually the perfect pieces of clothing for this season. Individual with such choice are vulnerable to UV harm and warmth rashes. The warmth likewise dries out skin, making it become solid and progressively inclined to maturing and wrinkles. Things being what they are, the general population who live in the deserts of the Middle East wear free apparel that spreads them from head to toe, fundamentally to shield them from the searing warmth. The perfect dress decisions for summer are free jeans or long skirts with tops. Free salwar kameezes are additionally a decent choice.

### **Cotton**

Cotton is king of fibres and king of summer. The moisture absorption capacity of provides comfort properties to the wearer and also gives inhibits the growth of microorganisms. This is an added advantage as it protects the individual from all kind of allergies, which is inherent in synthetic fabrics. The breathability of the cotton fabric is remarkable, hence the wearer feels cooler. Loose cotton clothes are boon in summer.

### **Light weight Apparels**

Light weight, thin Cotton or linen garments not only reduces the prickly heat rashes, but also avoids heat stroke when supplemented with plenty of oral fluids.

Foot infections during summer can be reduced by using, clean, dry cotton socks. Use of fresh/washed socks every day improves the comfort level of the wearer.

### **Light colours:**

Light colour clothing is most preferable during summer. Most of the light from source (Sun) will be reflected and hence the wearer can relax. On the other hand dark clothes will absorb more heat, which raises the temperature and discomfort levels to the person.

### **Loose clothes:**

Loose clothes increases the flow of air which is directly proportional to the comfort level. Skin fit garments effects the blood circulation. Loose fitted garments during summer increases the circulation of blood.

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### Conclusion:

The rising temperature during summer ranging between 21° C to nearly 45° C with variations in day and night temperatures have had an adverse effect on the human and animal health. Clothing is a wrap worn above the skin in various styles and is made of different materials based on the choice of the wearer, occasion, need and representation. This upper cover not only is a style statement but also a protective wear during summer. Redesigning the present style with new added components like hoods to protect head, flowy sleeves for aeration and skin protection of hands, face masks are some variation without compromising the style component [3]. Choosing an appropriate material as the need demands will protect the individuals from adverse climatic effects. Cotton and other natural fibres from plant source, which are light in weight and have high moisture absorbency are no doubt a great choice, irrespective of age, region and season.

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