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## COSMETICS: AN ASSESSMENT OF ITS HEALTH IMPLICATIONS TO HUMAN BODY

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**Abstract:** Severe stomach irritation, vomiting and diarrhoea, while exposure to lower levels for a long time can lead to kidney damage, bone deformity, and the ability of bones to break easily, miscarriage, hormonal changes, reduced fertility in men and women, menstrual irregularities, delays in puberty onset in girls, contact dermatitis, neuro-developmental deficits in the children, cancer, mild to moderate skin and eye irritation, reduced sperm count in men and reproductive defects in the developing male foetus; liver and kidney failure in young children, increased skin aging and DNA damage, allergies, severe headache and asthma symptoms, skin irritation and systemic toxicity, allergies and skin irritation, endocrine disruption, possible reproductive toxicant, may impair human fertility, hormones disrupters, sneezing, runny nose, cough and shortness of breath, headaches, dizziness, fatigue, irritation, allergic contact reactions, severe contact dermatitis, skin rashes, skin discoloration and scarring, as well as a reduction in the skin's resistance to bacterial and fungal infection. The study further shows that about sixteen (DEA Cocamide DEA and Lauramide DEA, Coal Tar Dyes, Lead, Cadmium, Dibutyl Phthalate (DBP), Parabens, Fragrance, Polyethylene Glycols (PEGs), Petrolatum, Siloxanes, Phthalates, Henna dyes, Coumarin and Phthaloleugenol, Hydrogen peroxide solutions, and Ammonium persulfate, Nickel and Mercury minerals found in cosmetics have one effects or the other in human body. It was also found that these adverse implications can be avoided by reducing the rate of using these cosmetic products. It was further recommended that since there is little direct protection, consumers should read labels, understand what they are buying and focus on companies with established reputations for quality products, the agencies that control the safety of cosmetic products should work hard to ensure safety of the consumers of these products; the manufacturers of these products on their part to ensure the clinical safety of their products, parents and teens should limit the amount of makeup worn on their faces to avoid skin rashes and the effects attach to it therein and individuals should limit the use of cosmetics such as powders, cleansers, eye shadows, shampoo, dyes, lipsticks, foundation, mascara, tattooing, nails decorations etc. on their body.

**Keywords:** Cosmetics, Health, Chemicals, Minerals, Substance, Body, Skin, Makeup, Skin Care

## INTRODUCTION

Cosmetics are substances or products used to enhance or alter the appearance or fragrance of the body. Many cosmetics are designed for use of applying to the face and hair. They are generally mixtures of chemical compounds; some being derived from natural sources (such as coconut oil), and some being synthetics (Singh, 2010). Common cosmetics include lipstick, mascara, eye shadow, foundation, rouge, skin cleansers and skin lotions, shampoo, hairstyling products (gel, hair spray, etc.), perfume and cologne. Cosmetics applied to the face to enhance its appearance are often called make-up or makeup. Cosmetics are products applied to the body for the purpose of beautifying, cleansing or improving appearance and enhancing attractive features (Singh, 2010). They include a range of products such as tooth paste, shampoo, conditioners, mascara, after shave lotion, styling gel, creams, lotions, powders, perfumes, lipsticks, fingernail and toenail polish, eye and facial make-ups, permanent waves, hair colours, hair sprays and deodorants. According to Claeysens (2009) 'make up' is classified as subset of cosmetics that has to do with beautifying of the face. Schneider *et al.*, (2001) defined skincare products or cosmetics as mixtures of synthetic or natural chemical compounds used to improve the appearance or smell of the body. They are articles intended to be rubbed, poured, sprinkled or sprayed on, introduced into, or otherwise applied to the human body or any part thereof for promoting attractiveness, cleansing, beautifying or altering the appearance without affecting the body structure or functions. There are chemical ingredients that the FDA has determined, due to concerns about consumer safety, should not be used in cosmetic products. Such restricted ingredients include bithionol, which was restricted from use over 35 years ago (due to photosensitization potential); mercury (neurotoxicity concerns); vinyl chloride (because of central nervous system effects and carcinogenicity concerns); certain halogenated salicylanilides used as antimicrobial agents (owing to dermal effects including photosensitization); zirconium-containing complexes (due to respiratory concerns); chloroform (because of liver tumors in rodents following lifetime oral ingestion); and methylene chloride (because of tumorigenicity in laboratory animals following lifetime inhalation exposure) (Gilbert, 2006).

Food and Drug Administration (FDA), which regulates cosmetics, defines cosmetics as "intended to be applied to the human body for cleansing, beautifying, promoting attractiveness, or altering the appearance without affecting the body's structure or functions". This broad definition includes any material intended for use as a component of a cosmetic product. The FDA specifically excludes soap from this category (Claeysens, 2009). Skincare products such as perfumes, make up, nail polish, etc, can cause allergic reactions and skin irritation; these products can remain on the body for a long period of time and cause significant adverse reactions (Rinaldi, 2008). Moisturizers increase the hygroscopic properties of the

skin particularly when the concentration of these substances is high in the body. It can cause irritation and exfoliation. Skin lightening agents such as hydroquinone (HQ) is one of the most harmful chemicals. However, there have been reports of ochronosis and potential mutagenicity. Ochronosis is an uncommon adverse effect of HQ, characterised by progressive darkening of the area to which the cream containing high concentrations of HQ is applied for many years (19). Black henna tattoo is a chemical stain due to pphenylenediamine (PPD), in the form of commercial hair dye mixed into the henna paste. Negative effect of PPD may include, blisters and surface oozing, swelling, erythematous rash. Studies have been made and reports given about the immediate allergic reactions on using henna dyes. Most cases involve sneezing, runny nose, cough and shortness of breath instead of skin reaction. Sun-screening agents can cause irritant, allergic, phototoxic or photo-allergic reactions. Benzophenones are the most common sensitizers, while debenzoylmethanes, para-aminobenzoic acid (PABA) and cinnamates may cause photo-allergic dermatitis (Johansen *et al.*, 1996). The allergic reactions associated with deodorant/anti perspirants and fragrances are mostly caused by the fragrance or other ingredients. Fragrances can enter the body through skin(adsorption), lungs, air ways, ingestion and through pathways from the nose directly to the brain and can cause headaches, dizziness, fatigue, irritation to eyes, nose and throat, forgetfulness and other symptoms. Fragrances sprayed in the air or found in air can cause air-borne contact dermatitis.

Chemicals like coumarin, phethleugenol found in fragrances are suspected carcinogens, while phthalates are suspected hormones disrupters. Shampoos and conditioners do not have much contact with the skin; they are only applicable to the hair and as such, cause less adverse effect. However, they can be a problem when they come in contact with the eyes during washing of the hair. The most common effect of using shampoo is the matting of the scalp hair (also referred to as tangling of hair). Active ingredients in hair bleaching product such as Hydrogen peroxide solutions, and Ammonium persulfate, may cause Types I and IV allergic contact reactions. Health and Environmental Hazards of Some Chemicals in Cosmetics BHA (butylatedhydroxyanisole) and BHT (butylatedhydroxytoluene) are closely related synthetic chemicals used as preservatives in moisturizers and lipsticks, among other cosmetics. BHA and BHT can cause allergic reactions in the skin. The International Agency for Research on Cancer has classified BHA as a possible human carcinogen (Bridges, 2002). According to Dana (2011), parabens are class of chemicals used as preservatives in many deodorants, moisturizers, shampoos, and body creams and are an integral component in preventing bacteria, fungi, and mold from growing in the product. Without it, users would run the risk of applying creams, deodorants, and foundations highly susceptible to *E. coli*, salmonella, and other contaminants that can cause serious infections or irritations. Used for decades in

foods, drugs, and hygiene products, parabens were first approved for cosmetics in 1984 by the Cosmetic Ingredient Review. Few other preservatives are as effective as parabens in keeping cosmetics free of bacteria and mold.

The broad objectives of this study are to assess the health implications of cosmetics; while its specific objectives are to;

- i. examine the different cosmetic products used by humans
- ii. examine its chemical compositions
- iii. examine how it affects human beings

## **TYPES OF COSMETIC PRODUCTS**

Cosmetics are intended to be applied externally. They include but are not limited to products that can be applied to the face: skin-care creams, lipsticks, eye and facial makeup, towelettes, and colored contact lenses; to the body: deodorants, lotions, powders, perfumes, baby products, bath oils, bubble baths, bath salts, and body butters; to the hands/nails: fingernail and toe nail polish, and hand sanitizer; to the hair: permanent chemicals, haircolors, hair sprays, and gels. A subset of cosmetics is called "make-up", refers primarily to products containing color pigments that are intended to alter the user's appearance. Manufacturers may distinguish between "decorative" and "care" cosmetics. Cosmetics that are meant to be used on the face and eye area are usually applied with a brush, a makeup sponge, or the fingertips. Most cosmetics are distinguished by the area of the body intended for application.

### **Primer**

Primer comes in formulas to suit individual skin conditions. Most are meant to reduce the appearance of pore size, prolong the wear of makeup, and allow for a smoother application of makeup. Primers are applied before foundation or eye shadows depending on where the primer is to be applied.

### **Lipstick**

Lipstick, lip gloss, lip liner, lip plumper, lip balm, lip stain, lip conditioner, lip primer, lip boosters, and lip butters: Lipsticks are intended to add color and texture to the lips and often come in a wide range of colors, as well as finishes such as matte, satin, and lustre. Lip stains have a water or gel base and may contain alcohol to help the product stay on leaving a matte look. They temporarily saturate the lips with a dye. Usually designed to be waterproof, the product may come with an applicator brush, roller ball, or could be applied with a finger. Lip glosses are intended to add shine to the lips and may add a tint of color, as well as being scented or flavored for a pop of fun. Lip balms are most often used to moisturize, tint, and protect the lips. Some brands contain sunscreen (Okereke *et al*, 2015).

### **Concealer**

Concealer makeup covers imperfections of the skin. Concealer is often used for any extra coverage needed to cover blemishes, under eye circles, and other imperfections. Concealer is often thicker and more solid than foundation, and provides longer lasting; more detailed coverage as well as creating a fresh clean base for all the rest of the makeup. Some formulations are intended only for the eye or only for the face. This product can also be used for contouring the face like ones nose, cheekbones, and jaw line to add a more defined look to the total face.

### **Foundation**

Foundation is used to smooth out the face and cover spots, acne, blemishes, or uneven skin coloration. These are sold in a liquid, cream, or powder, or most recently a mousse. Foundation provides coverage from sheer to matt to dewey or full. Foundation primer can be applied before or after foundation to obtain a smoother finish. Some primers come in powder or liquid form to be applied before foundation as a base, while other primers come as a spray to be applied after the foundation to set the make-up and help it last longer throughout the day.

### **Face Powder**

Face powder sets the foundation, giving it a matte finish, and to conceal small flaws or blemishes. It can also be used to bake the foundation, so that it stays on longer. Tinted face powders may be worn alone as a light foundation so that the full face does not look as caked-up as it could.

### **Rouge or Blusher**

Rouge, blush, or blusher is cheek coloring to bring out the color in the cheeks and make the cheekbones appear more defined. Rouge comes in powder, cream, and liquid forms. Different blush colors are used to compliment different skin tones.

### **Contour Powders**

Contour powders and creams are used to define the face. They can give the illusion of a slimmer face or to modify a face shape in other desired ways. Usually a few shades darker than the skin tone and matte in finish, contour products create the illusion of depth. A darker-toned foundation/concealer can be used instead of contour products for the same purpose.

### **Highlight**

Highlight, used to draw attention to the high points of the face as well as to add glow, comes in liquid, cream, and powder forms. It often contains a substance to provide shimmer. Alternatively, a lighter-toned foundation/concealer can be used.

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### **Bronzer**

Bronzer gives skin a bit of color by adding a golden or bronze glow and highlighting the cheekbones, as well as being used for contouring. Bronzer is considered to be more of a natural look and can be used for an everyday wear. Bronzer enhances the color of the face while adding more of a shimmery look. It comes in either matte, semi matte/satin, or shimmer finishes.

### **Mascara**

Mascara is used to darken, lengthen, thicken, or draw attention to the eyelashes. It is available in various colors. Some mascaras include glitter flecks. There are many formulas, including waterproof versions for those prone to allergies or sudden tears. It is often used after an eyelash curler and mascara primer. Many mascaras have components to help lashes appear longer and thicker.

### **Eye shadow**

Eye shadow is a pigmented powder/cream or substance used to accentuate the eye area, traditionally on above and under the eyelids. Many colours may be used at once and blended together to create different effects. This is conventionally applied with a range of eye shadow brushes though it isn't uncommon for alternative methods of application to be used.

### **Eye Liner**

Eye liner is used to enhance and elongate the apparent size or depth of the eye. For example, white eyeliner on the waterline and inner corners of the eye makes the eyes look bigger and more awake. It can come in the form of a pencil, a gel, or a liquid and can be found in almost any color.

### **Eyebrow Pencils**

Eyebrow pencils, creams, waxes, gels, and powders are used to color, fill in, and define the brows.

### **Nail polish**

Nail polish is used to color the fingernails and toenails. Transparent, colorless versions may strengthen nails or as a top or base coat to protect the nail or polish.

### **Setting Spray**

Setting spray is used as the last step in the process of applying makeup. It keeps applied makeup intact for long periods. An alternative to setting spray is setting powder, which may be either pigmented or translucent. Both of these products are claimed to keep makeup from absorbing into the skin or melting off.

### **False Eyelashes**

False eyelashes are used when exaggerated eyelashes are desired. Their basic design usually consists of human hair or synthetic materials attached to a thin

cloth-like band, which is applied with glue to the lashline. Designs vary in length and color. Rhinestones, gems, and even feathers and lace occur on some false eyelash designs.

### **Contouring**

Contouring is designed to give shape to an area of the face. The aim is to enhance the natural shading on your face to give the illusion of a more defined facial structure which can be altered to preference. Brighter skin coloured makeup products are used to 'highlight' areas which we want to draw attention to or to be caught in the light, whereas darker shades are used to create a shadow. These light and dark tones are blended on the skin to create the illusion of a more definite face shape. It can be achieved using a "contour palette" - which can be either cream or powder (Tanaka, 2005).

### **INGREDIENTS**

A variety of organic compounds and inorganic compounds comprise typical cosmetics. Typical organic compounds are modified natural oils and fats as well as a variety of petrochemically derived agents. Inorganic compounds are processed minerals such as iron oxides, talc, and zinc oxide. The oxides of zinc and iron are classified as pigments, i.e. colorants that have no solubility in solvents. Handmade and certified organic products are becoming more mainstream, due to the fact that certain chemicals in some skincare products may be harmful if absorbed through the skin. Products claimed to be organic should, in the U.S., be certified "USDA Organic".

### **MINERAL CONTAINED IN COSMETICS**

The term "mineral makeup" applies to a category of face makeup, including foundation, eye shadow, blush, and bronzer, made with loose, dry mineral powders. These powders are often mixed with oil-water emulsions. Lipsticks, liquid foundations, and other liquid cosmetics, as well as compressed makeups such as eye shadow and blush in compacts, are often called mineral makeup if they have the same primary ingredients as dry mineral makeups. However, liquid makeups must contain preservatives and compressed makeups must contain binders, which dry mineral makeups do not. Mineral makeup usually does not contain synthetic fragrances, preservatives, parabens, mineral oil, and chemical dyes. For this reason, dermatologists may consider mineral makeup to be gentler to the skin than makeup that contains those ingredients (Okereke *et al.*, 2015). Some minerals are nacreous or pearlescent, giving the skin a shining or sparking appearance. One example is bismuth oxychloride. There are various mineral-based makeup brands, including: Bare Minerals, Tarte, Bobbi Brown, and Stila. *Phthalates* (pronounced thalates) are widely used in cosmetics and body care products. They have been linked in several studies to interfere with hormones in the body, with potential risks to reproductive and thyroid systems. Other

preliminary studies link phthalates to diabetes risk and asthma (Niha, 2014). Phthalates are used in fragrance, in skin care products and nail polish, just to name a few. EWG product testing in 2002 found phthalates in nearly three quarters of 72 name brand products. *Triclosan* is a common active or nonactive “antibacterial” ingredient found in liquid hand soaps, toothpastes, deodorants, acne treatments and increasingly in cosmetics. Over time, this ingredient can build up in the body and can potentially increase the effect of thyroid hormones. In one study (Fiss 2007) it was shown to also disrupt other critical hormone systems, such as both estrogenic and androgenic effects on human breast cancer cells (Gee, 2008). *Parabens* have been used since the 1920s as a preservative in many cosmetics and personal care products. They help prevent growth of bacteria and mold in cosmetics and increase its shelf life. EWG reports of several studies that suggest parabens can disrupt reproductive hormones (Routledge 1998; Inui 2003; Mikula 2006; Pugazhendhi 2007). There are several forms of parabens. The most common in cosmetics include: methyl-paraben, ethyl-paraben, propylparaben, isopropyl-paraben and butyl-paraben. Side effects reported in studies include irritation of the skin or causing allergic reactions (Schamberg 1967; Soni 2002; CIR 2006). Other studies suggest parabens are estrogenic, in that they mimic the hormone estrogen, therefore disrupting normal function of the hormone system (Gomez 2005; Mikula 2006; Pugazhendhi 2007). Cancer has also been linked to parabens in other lab studies and to reproductive health problems (Darbre and Harvey, 2014).

Gilbert Ross (2006) in his study found that when healthy volunteers applied the cream to their forearms daily for a period of four weeks, its thickness was reduced by more than ten percent. The outer layer of the skin has a protective barrier layer which is the thickness of a sheet of paper and helps keep moisture in. The offending ingredient in the cream was found to be sodium lauryl sulfate (SLS), which was found to increase the permeability of the skin barrier and cause irritation. *Salicylic acid* are found in natural form or synthetically made. The natural form is found in most plants, fruits or herbs in varying degrees. A common synthetic form is in aspirin. Most medical specialists do not test for salicylate allergy specifically, but increasingly many people are finding they do have salicylate sensitivity once they learn more about it. Salicylates are in many types of products including skin care, sports pain relief creams and cosmetics, as salicylic acid. It has anti-inflammatory properties and that is why it is in aspirin, pain relief medications, mouthwash, and toothpaste. Since salicylic acid is a natural part of herbs, botanicals and other natural ingredients, with constant application through creams and lotions with these types of ingredients, you could develop sensitivity as well (Coleman, 2003).



**Health Implications Associated with Heavy Metals in Cosmetics**

S/NO.	INGREDIENTS	COSMETIC FOUND	HEALTH IMPLICATIONS
1.	Cadmiun	Body and Hair Creams	Severe stomach irritation, vomiting and diarrhoea, while exposure to lower levels for a long time can lead to kidney damage, bone deformity, and the ability of bones to break easily.
2.	Lead	Lipstick	Miscarriage, hormonal changes, reduced fertility in men and women, menstrual irregularities, delays in puberty onset in girls.
3.	Coal Tar Dyes		Cancer
4.	DEA (Cocamide DEA and Lauramide DEA)	Shampoo, soaps and cleansers	Mild to moderate skin and eye irritation
5.	Dibutyl Phthalate (DBP)	Nail polishes and nail products	Reduced sperm count in men and reproductive defects in the developing male foetus; liver and kidney failure in young children
6.	Parabens	Barley, strawberries, carrots, onions currents, and vanilla,	Increased skin aging and DNA damage
7.	Fragrance	Fragrance	Allergies, severe headache and asthma symptoms.
8.	Polyethylene Glycols (PEGs)	Creams as thickeners, solvents, softeners and moisture-carriers.	Skin irritation and systemic toxicity
9.	Petrolatum	Mineral oil and jelly	Allergies and skin irritation
10.	Siloxanes	Moisturizers and facial treatments.	Endocrine disruption, possible reproductive toxicant, may impair human fertility
11.	Phthalates	Shampoos and cleansers	Hormones disrupters.
12.	Henna dyes	Dyes	Sneezing, runny nose, cough and shortness of breath.
13.	Coumarin and Phethleugenol	Performs and body sprays	Headaches, dizziness, fatigue, irritation
14.	Hydrogen peroxide solutions, and Ammonium persulfate,	Bleaching product	Allergic contact reactions.
15.	Nickel	Make up products	Severe contact dermatitis
16.	Mercury	Skin-lightening soaps and creams	Skin rashes, skin discoloration and scarring, as well as a reduction in the skin's resistance to bacterial and fungal infections

## **SIDE EFFECTS OF COSMETICS**

Lisa (2017) found that the side effects reported to the U.S Food and Drug Administration (FDA) from 2004 to 2016 for products like makeup, sunscreen, tattoos, hair color, perfume, shaving creams and baby care items. Overall on the there were a total of 5,144 adverse events, with an average of 396 a year, researchers report in all cosmetic enterprises. Side effect reports by Manny (2017) climbed 78 percent to 706% in 2015, followed by a 300 percent surge to 1,591 adverse events last year (2016), largely driven by complaints about hair care products and cosmetic products in general, the study found. "Adverse effects to cosmetics matter to patients mostly because nearly everyone uses a cosmetic or personal care product every single day - this includes newborns, infants and pregnant women,". "Unlike drugs and medical devices, cosmetics permeate daily life, Manny (2017) admits that people are exposed to hundreds of chemicals a day from cosmetic products. The three most commonly reported products were hair care, skin care and tattoos. Products that most often involved reports of serious health problems were baby items, which accounted for about half of these cases, followed by personal cleanliness supplies, hair care and hair color. Hair products, including shampoos, conditioners and styling aids, accounted for 35 percent of all adverse event reports, followed by skin care products, which made up 22 percent of the complaints. FDA (2016) in 2014, began investigating cleansing conditioners after directly receiving 127 consumer reports, researchers note. Later, the FDA learned that the manufacturer had already received 21,000 complaints of alopecia and scalp irritation. Hair loss was also reported by consumers. The product remains on the market with the FDA currently seeking additional consumer reports.

According to CSBS News (2016), hair care products received the most complaints in the database, followed by skin care products, the investigators found. Most health issues involved rashes, hair loss and other dermatological problems, although more serious illnesses -- such as cancer or severe allergic reactions -- also were reported. Sun-screening agents can cause irritant, allergic, phototoxic or photo-allergic reactions. Benzophenones are the most common sensitizers, while debenzoylmethanes, para-aminobenzoic acid (PABA) and cinnamates may cause photo-allergic dermatitis (Manny, 2017). The allergic reactions associated with deodorant/anti perspirants and fragrances are mostly caused by the fragrance or other ingredients. Fragrances can enter the body through skin(adsorption), lungs, air ways, ingestion and through pathways from the nose directly to the brain and can cause headaches, dizziness, fatigue, irritation to eyes, nose and throat, forgetfulness and other symptoms. Fragrances sprayed in the air or found in air can cause air-borne contact dermatitis. Chemicals like coumarin, phethleugenol found in fragrances are suspected carcinogens, while phthalates are suspected hormones disrupters (Manny, 2017).

## **PREVENTING AND REVERSING HARMFUL EFFECTS**

Many of the side effects involved with teens and adults using makeup can be resolved. Rather than caking harmful makeup on their faces every day, parents and teens should limit the amount of makeup worn. Individuals should also focus on proper skin care, helping them have beautiful skin naturally. One should take care to use water-based makeup and apply it with a light touch and clean brushes. In addition, it should avoid makeup with harmful ingredients such as parabens and phthalates. When in doubt about an ingredient, individuals should do their research before applying it to their skin (WHO, 2007). Finally, makeup enthusiast should have a proper skin care routine, finding one best suited for their skin type. For oily skin, people will need to find a water-based cleanser and light moisturizer. For dry skin, the both teen and adults should focus on skin care to lock in more moisture. With any skin type, the user should find products free from harmful chemicals to support their healthy makeup collection. Makeup can have damaging effects on its users, especially for females. Females are already dealing with skin issues from hormones, genes, and the germs around them. Adding makeup to the mixture can lead to eye infections like pink eye, staph infections, acne cosmetica, and even health issues. Instead of using makeup regularly, individuals responsible should focus on a healthy skin care routine.

## **CONCLUSION AND RECOMMENDATIONS**

### **Conclusion**

Cosmetic is often associated with serious health hazards, meaning that it is always not safe to use, especially with regard to possible long-term effects as the products may be used extensively over a long period of time. Cosmetics contains minerals harmful to the. Health implications of cosmetics varies, thus covers all areas or types of human malfunctions among which are severe stomach irritation, vomiting and diarrhoea, while exposure to lower levels for a long time can lead to kidney damage, bone deformity, and the ability of bones to break easily, miscarriage, hormonal changes, reduced fertility in men and women, menstrual irregularities, delays in puberty onset in girls, contact dermatitis, neuro-developmental deficits in the children, cancer, mild to moderate skin and eye irritation, reduced sperm count in men and reproductive defects in the developing male foetus; liver and kidney failure in young children, increased skin aging and DNA damage, allergies, severe headache and asthma symptoms, skin irritation and systemic toxicity, allergies and skin irritation, endocrine disruption, possible reproductive toxicant, may impair human fertility, hormones disrupters, sneezing, runny nose, cough and shortness of breath, headaches, dizziness, fatigue, irritation, allergic contact reactions, severe contact dermatitis, skin rashes, skin discoloration and scarring, as well as a reduction in the skin's resistance to bacterial and fungal infection. The study further shows that about sixteen (DEA Cocamide DEA and Lauramide DEA, Coal Tar Dyes, Lead, Cadniun, Dibutyl Phthalate (DBP),

Parabens, Fragrance, Polyethylene Glycols (PEGs), Petrolatum, Siloxanes, Phthalates, Henna dyes, Coumarin and Phethleugenol, Hydrogen peroxide solutions, and Ammonium persulfate, Nickel and Mercury minerals found in cosmetics have one effects or the other in human body.

## RECOMMENDATIONS

Based on the findings of this study, the researcher recommends that

- i. Since there is little direct protection, consumers should read labels, understand what they are buying and focus on companies with established reputations for quality products
- ii. The agencies that control the safety of cosmetic products should work hard to ensure safety of the consumers of these products; the manufacturers of these products on their part to ensure the clinical safety of their products.
- iii. Parents and teens should limit the amount of makeup worn on their faces to avoid skin rashes and the effects attach to it therein
- iv. Individuals should limit the use of cosmetics such as powders, cleansers, eye shadows, shampoo, dyes, lipsticks, foundation, mascara, tattooing, nails decorations etc. on their body

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## BIOGRAPHY

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