

An Ecofriendly Approach of Using Fruit and Vegetable Peels and its Various Uses or Benefits.

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Abstract - In this comprehensive review paper we focus on finding practical ways to use the peels of fruits and vegetables making the most out of discarded waste peels. The aim of this review paper is to provide clear and easy to follow guidance and instructions especially to those people who don't know how to use them effectively in their day to day life. We will explain about the various benefits of fruits and vegetables peels and highlight their nutritional values and how they can play an important role in reducing the waste and instead of throwing away the peels how we can make the most out of them. The paper represent simple DIY techniques and recipes that anyone can follow from turning citrus peels into natural cleaners to using potato peels as a natural coloring agent. By following easy step by step methods anyone can create useful items at home making daily life more convenient and affordable. We all know how fruits and vegetables can help to increase our immunity because of the antioxidants and useful nutrients present in them but a very few of us know about the advantages of nutrients present in fruits and vegetables peels and they are not just healthy for a body but if we use them effectively they can be used as Room fresheners, Beauty products and shoe cleaners. By using peels productively we are not only just saving money but also contributing to a healthier and more sustainable planet.

KEYWORDS : Discarded, cleaners, Sustainability, Immunity, Beauty, fresheners, antioxidants

INTRODUCTION : Fruits and vegetable peels are a storehouse of nutrients.

They are enriched with plenty of antioxidants and active biochemical compounds. They are also a good source of fiber, vitamins and minerals.

Consuming peeled fruits and vegetables help in preventing free radical damage which helps to reduce risk of certain diseases like heart diseases, Alzheimer's disease and certain types of cancers.

They can make you feel fuller for longer periods and eventually help in reducing weight and weight related problems like obesity.

Fiber present in peels of Fruit and Vegetables acts as a prebiotic which is beneficial for our gut bacteria.

Quercetin, a flavonoid found in citrus peels, has anti-inflammatory and anti-viral effects which help the body to fight from infections.

Potatoes and carrots peels contain beta Glucan which are polysaccharides which help improve our immunity by fighting against bacteria and viruses.

Peels are filled with Vitamin C, vitamin E, and various vitamin B. Vitamin C is known for its immune boosting properties and increases the production of white blood cells in the body. Vitamin A improves the skin texture and acts as the body's first line of Defence against pathogens.

Potassium found in peels helps in balancing the sodium levels in our body. This balance is crucial for maintaining healthy blood pressure, reducing hypertension and helps in regulating hypercholesterolemia.

Fruits and vegetable peels are the outer layers that we mostly throw away but they are full of nutrition. Instead of throwing the peels away, they can be used in various ways.

Advantages of peels doesn't stop at nutrition. They can also be used in practical purposes like as a manure and fertilizer in the field to increase crop yield. Composting is a beneficial and eco-friendly way to turn organic waste into nutrient-rich soil for the plants. It not only reduces the waste but makes soil more fertile and promotes plant growth.

Certain peels have surprising results in the beauty industry. Banana peels have skin soothing properties. Cucumber peels have a cooling effect which is a very common ingredient in various face masks.

1 :Unlocking the Power of Orange Peels

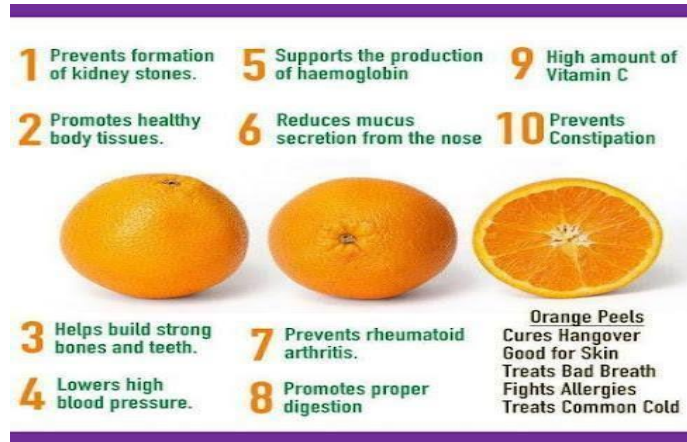


Fig : 1

Orange peels are high in vitamin C, which helps to strengthen the immune system. To boost your immunity, dry the peels and create an orange peel tea.

Orange peel fiber improves digestion. To aid digestion, dried and crushed orange peels are added to herbal drinks.

It is used as a Natural Air Freshener which adds a pleasant smell to our home and removes odor.

Combine vinegar and orange peels to make an all-purpose cleanser which can be used as a bathroom cleaner as well as fabric softener. This DIY cleaner is free of any harsh chemicals.

Orange peels contain natural oils that help brighten the skin. Make a DIY face mask by dried orange peel powder and combining it with yogurt or honey. This mask can help in the improvement of skin tone and texture.

Rub the inside layer of an orange peel against your teeth to naturally whiten them. The peel contains various components like Ascorbic acid, pectin and citric acid that is used in the removal of stains and brightening of smile.

Orange peels are natural insect repellent. Orange peels contain citrus oils like limonene, which have a strong citrus smell and Insects are often repelled by the strong aroma of citrus oils. Spread dried orange peels around plants in the garden to keep ants and aphids away.

Burying the peels of oranges in soil gives nitrogen, magnesium, potassium and Calcium to plants which helps in the blooming of flowers.

2:Discover the astonishing benefits of Potato peels

Potato peels help to brighten skin and reduce dark spots. Gently rub the inner side of the peel against your skin for a few minutes and rinse with warm water.

Minimize Under Eyes Puffiness. Apply cold potato peels to eyelids to minimize puffiness and soothe tired eyes.

Starch in potato peels helps in the treatment of SunBurn. Apply the peels directly to the affected area for relief.

Potato peel enzyme Catecholase, also known as polyphenol oxidase, has antioxidant properties that can help clear acne and helps in melanin formation. Rub the peels over the face or acne-prone regions for a few minutes everyday.

Potato peels contain oxalic acid which can help remove rust from metal surfaces. Rub the peel on the rusted area for a few hours before scrubbing.

Boil potato peels in water and use as an all-purpose cleanser. The starchy content helps in the cleaning surfaces such as glass and mirrors.

Potato peels act as a natural coloring agent. Starch present in potato peels helps in darkening of Grey hairs.

Potato peels are high in Insoluble dietary fiber, which improves digestion, prevents constipation, promotes a healthy digestive tract and makes you full sooner and eat less which leads to weight loss.

Carbohydrates present in peels of potato help in maintaining blood sugar levels by slowing the absorption of sugar in the bloodstream.

Potassium present in potato peels helps in lowering the risk of heart attack and stroke. Adequate amount of potassium can help in relaxing blood vessel walls which improves blood flow and helps in decreasing heart disease.

3: Surprising benefits of lemon peel:

Lemon peels are rich in vitamin C which helps the body to fight from infection. Ascorbic acid can help to prevent Scurvy, bleeding gums and gingivitis.

Pectin present in lemon peels is responsible for weight loss in the body.

Flavonoids such as limonene are helpful in maintaining the cholesterol level in our body. Vitamin P in lemon peels prevents internal hemorrhage which makes it useful for treating high blood pressure.

Lemon peels are very useful in fighting and preventing skin problems like acne, wrinkles, dark spots and pigmentations because of the antioxidants present in them which helps in detoxifying our skin.

The presence of dietary fibers in lemon peels promotes digestion by increasing the bowel movement and helps in strengthening our immunity.

lemon peels contain calcium which helps in preventing bone related diseases like inflammatory Polyarthritis, osteoporosis and rheumatoid arthritis.

Lemon peels are great for exfoliation of skin because they have Alpha hydroxy acid. Gently rub the lemon peel on your face after cleansing and leave them overnight for the best results.

Use lemon peels as a deodorizer because it can absorb unpleasant odors and makes you feel fresh for longer.

Homemade lemon oil can be made from lemon peels which can be used for aromatherapy or as a massage oil.

4:Banana Peels for Skin Care, Cleaning, First Aid, and More :



Fig : 2

Skincare –

Vitamins like A,B,C,E, Minerals like potassium, zinc, iron and antioxidants present in peels may help enhance skin tone, moisturize the skin, reduce inflammation and provide a healthy glow to the skin.

rubbing the inside of the peel against the skin can create a moderate exfoliating impact that can help remove dead skin cells and unclog pores.

Using a banana peel to relieve puffiness around the eyes and reducing Dark circles.

Psoriasis and Eczema can be treated by putting banana peel to the affected region to hydrate skin and get relief from itching, dryness and inflammation.

Hair mask made from banana peels provide nourishment to the hair and scalp, making the hair soft and shiny.

Cleaning - Banana peels can be used for Polishing shoes.Rub the inside of a banana peel on leather shoes. The natural oils in the peel will help to make the shoes shine.

Make a paste with the banana peels and water. Apply this paste to the dirty and old silverware and polish with a cloth after a few minutes. It removes tarnish and restores the color and shine of silver.

Can be used to remove ink stains from clothes by rubbing peels on fabric.

Rub the inside of a banana peel gently on leather furniture or accessories. After that, wipe with a clean cloth. It cleans the leather and adds a subtle gloss to it.

First Aid - For mild burns and bruising, apply the banana peel to the affected area. The coolness of the peel can soothe the skin and provide relief in pain and inflammation.

The natural sugars in the peel can be used in the neutralization of poisons from insect bites and attacks.

Some people get headache relief by placing a banana peel on their forehead for about 15-20 minutes. The cooling effect helps ease the pain.

The peel's enzymes and natural acids may help dissolve the wart. Replace the peel on a daily basis until the wart has gone.

High quantities of tryptophan and B6 in banana peels can help reduce some symptoms of depression and other mood disorders.

Banana peels are high in fiber and can help reduce constipation and diarrhea. This is an especially important advantage of banana peels for a person suffering from Crohn's disease or irritable bowel syndrome.

Vitamin A present in banana peels can help keeping eyes strong and healthy

Banana peels are high in polyphenols, carotenoids, and other antioxidants that help the body fight cancer-causing free radicals.

5:Make the Most of Potato Peels:

Precious things most often hide in plain sight and potato peels are one of them. Rich in nutrition, effective in topical application and approved for their disease-fighting abilities, potato peels are far more valuable in beauty and health than the vegetable itself. In addition to that, because potatoes are the most consumed vegetable in different countries, it is also effortless to cherish the value of peels habitually.

So instead of looking for ways to discard the peels, let's understand and utilize the peels.

For Beauty.

Dressing for Burn Wound

During the early phase in burns patients, infection of the burn wound area and, in some cases, septicemia (i.e., bacterial infection from any part of the body that enters the bloodstream) is a predominant cause of death. The lowered immunity of the patient in that phase contributes to the development and persistence of infection. For this reason, it is paramount to take preventive measures against the infection. Not to forget, prevention of infection also allows the new skin cells to develop sooner than otherwise.

So for the prevention of infection and rapid regeneration of skin cells, a moist environment is best suited. A naturally occurring, easy to apply, simple to manage and widely available option for this is potato peels. Potato peels can be used in the form of bandages or can be applied directly. For applying it as a bandage, the following is the procedure:

Potatoes are boiled in water, and after reducing the temperature, are peeled. The peeled potatoes are used to make potato starch. The peels, on the other hand, after washing, are pasted on a sterile gauze bandage with the help of potato starch. Once the peels get stuck, they are folded and prepared as a bandage.

For a direct application of peels on the burn wound, they can be washed with normal saltwater (if using tap water, boil it for at least 20 minutes to sterilize the water and then add salt to it) and spread on the wound.

These dressings are opened and checked the next day. On confirming that there is no infection, the wound is closed again and the dressing is repeated.

Natural Colouring agent.

Ageing comes to everyone differently and at a different pace. If your natural hair colour is not grey and you still find some grey hair strands, you might want to mask them. Using a hair dye can be expensive and can damage your hair. So, a natural solution to this can be our very own potato peels. Potato starches act as a natural colourant and can darken grey hair if used consistently.

Start by peeling about six potatoes and add the peels to a pot filled with approximately four cups of boiling water. Let the peels boil for 25 minutes. After boiling, let them sit for another 15 minutes. Now, strain the liquid and keep the peels aside. To the liquid, add one or two drops of any of the essential oils for a relaxing fragrance and let it continue to cool.

Meanwhile, you can shampoo your hair and part it. It is advised not to use a conditioner after shampoo. Now, massage the liquid mask onto your hair and rinse it with cold water. You can choose to leave the mask on for some time and then rinse your hair.

The number of grey strands and the intensity of darkening you want will determine the number of times you might have to apply this hair mask.

Lightens dark spots and deals with puffy eyes.

Potato peels are loaded with antioxidants and enzymes that exert a lightening effect on the skin. These compounds in the peels also reduce inflammation caused when the eyes become puffy.

To lighten the dark spots, you can massage the inner side of the potato peel over the affected areas regularly. For a visible difference, this must be done regularly for a considerable period.

To reduce the puffiness of the eyes, refrigerate a few potato peels, enough to cover the eye area, for 10 minutes and then place these peels around the eyes (with special attention to the areas under your eyes) for 20 minutes. You can enjoy fresher looking eyes after this.

For Health.

Helps in Weight Loss:

Weight loss is an issue that a lot of us face due to various reasons. If one of the reasons is our quantity of food consumed, potato peels can help keep an eye on it.

Potato peels are richer in dietary fibre content than the peeled potato. Dietary fibre that is majorly present in these peels is the insoluble fibre which provides early satiety and adds bulk to the diet. This property of the insoluble fibre in the peels to provide early satiety is nothing but making the food slow-moving in our digestive system. The slow movement of food makes us - feel full sooner and eat a lesser quantity of food. So, the inclusion of peels along with the potatoes while cooking various

delicacies, or a separate inclusion of just the potato peels in the different food items we cook, can help in reducing the quantity of food consumed. Eventually ameliorating our weight loss efforts.

Helps in Lowering Blood cholesterol levels.

Fibre present in the potato peels helps in lowering serum cholesterol levels. Studies show that fibre binds the cholesterol-derived bile acids and prevents their reabsorption from the intestines. This increases their excretion in the bowel and reduces the concentration in the body.

In addition to this, high cholesterol levels induce oxidative stress in the body. Potato peels which are bountiful in antioxidants, help in balancing out this oxidative stress as well.

So the inclusion of potato peels with the potatoes that one regularly consume can support one's cholesterol-lowering efforts.

Helps in maintaining Blood sugar levels.

Carbohydrates in the peeled potato can readily be broken down and absorbed in our body, creating spikes in blood sugar levels. However, consuming potato with the peel delays gastric emptying, controlling the rate at which the simple sugars of the potato get absorbed into the bloodstream preventing blood sugar spikes. To reap the full benefit, though, one must be aware of the cooking method used. Cold unpeeled potato offers the maximum benefit of controlling the blood sugar spikes rather than the cooked potato.

In addition, the prolific antioxidant profile of the potato peels helps in balancing out the oxidative stress that arises in long term diabetes.

Helps in boosting immunity.

Raw potato with the peel has a stronger nutritional profile than the unpeeled potato as most of the micronutrients are concentrated in the peel of the potato. When consumed with the peel, potato exerts a greater immuno-protective effect as it is loaded with a powerful antioxidant, Vitamin C. Along with Vitamin C, a few B group Vitamins contained in it also help in boosting the immune system.

Helps in Lowering Heart Disease.

Potassium is one of the minerals contained in potato peels. This mineral plays a key role in maintaining heart health. Apart from this, potato peels protect against heart diseases by regulating other factors like hypercholesterolemia.

Extra point.

Approximately 50% of the potato peel has Dietary Fibre which helps turn any simple carbohydrate-rich dish into a complex carbohydrate dish. These peels are also filled with powerful antioxidants i.e., phenolic compounds but contain a modest amount of vitamins like Vitamin B1, Vitamin B2, Vitamin B3, Vitamin B6, Vitamin B9 and Vitamin C.

CONCLUSION:

Utilizing fruit and vegetable peels is a huge step towards minimizing waste in today's world where environmental concern is one of the priorities for a better tomorrow. By including these peels into our diets and daily routines, we aim to reduce waste from landfills and protect our resources. Fruit and vegetable peels are nutritional gems with practical applications. They can help strengthen our immune systems, enhance digestion, and even aid with weight management as we have discussed above how to incorporate them in our diet and use them wisely. These peels are environmentally beneficial, having several applications in cleaning, first aid, and gardening. Incorporating them into our diets can boost our total nutritional intake without cost. It is obvious that these ignored peels of fruits and vegetables have the potential to transform our approach to nutrition, health, and environmental sustainability. Let us be careful of what we eat and appreciate it entirely, from flesh to peel. By figuring out new ways to include peels into our diets and daily life we go on a path towards a better, more sustainable future. By making these minor but significant changes, we not only improve our own well-being but also contribute to the well-being of our world. So, the next time you peel a fruit or vegetable, reconsider before throwing away the peel.

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