

Sun-Burned Potatoes

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Have you ever opened a bag of potatoes and discovered that some of them had a green tinge? I've also noticed potato chips with similar green spots on them. This begs the question as to what causes the colour to be there in the first place.

I've always been told that this was because the potatoes were "sun-burned", and that the green portions should not be eaten. There was never a really good answer as to why those parts shouldn't be eaten, other than they were just "bad for you". Later, someone informed me that the green colour was caused by the formation of alkaloids which were, once again, "bad for you". This helped explain things a bit, but it was only a partial answer to my question. Doing a little digging (pun intended), the reasons became more apparent and confirmed the warnings about not eating the green portions.

As potato plants grow, they undergo the natural process of photosynthesis where the energy of the sun is used to support their growth. If the potato tubers that you eat happen to be forming at or above ground level, they produce a bitter compound called "solanine". This compound acts as a natural defense mechanism to deter animals that would otherwise eat the exposed tuber. The green colour is from chlorophyll which is not harmful, but does serve as an added warning that can alert us to the presence of the solanine. Not only do the tubers contain solanine, but the leaves and stems do as well, which means that you should not be eating the actual potato greens.

Unfortunately, solanine is toxic and should not be ingested. According to some sources, it can cause headaches, nausea, vomiting, diarrhea, and possibly even convulsions. However, the concentration of solanine is quite low, and you need to eat a lot of affected potatoes for it to have any significant effects.

If you happen to have potatoes with green areas on them, you can simply cut that part away and use the remaining portion of the potato.

For those of you who grow your own potatoes, the key thing to do in avoiding solanine formation is to hill your potato plants. Keep checking the potato patch throughout the growing season to ensure that there is enough soil around the plants to prevent exposure of the tubers to the sun.

Storing potatoes after you harvest or purchase them is also important. Potatoes need to be kept in a relatively dark and cool area. If this is not done, they can develop the green colour due to photosynthesis, and produce the undesirable bitter solanine. Not only that, they can go soft as well.

I always worry when writing about anything with even the slightest negative connotation, in case someone over-reacts to the situation. Please keep things in perspective, and don't avoid eating potatoes simply because of the green solanine areas. That's totally unnecessary. All you need to do is cut out the effected parts and enjoy the rest!



The green colour that some potatoes develop is due to what we might think of as “sunburn”.