Welcome to Yale Cancer Answers with your host, doctor Anees Chagpar. Yale Cancer Answers features the latest information on cancer care by welcoming oncologists and specialists who are on the forefront of the battle to fight cancer. This week it’s a conversation about skin cancer and sun safety with Doctor Kathleen Suozzi. Doctor Suozzi is an assistant professor of dermatology and dermatologic surgery at the Yale School of Medicine, where Doctor Chagpar is a professor of surgical oncology.

We’ve been waiting for this for a long time. Tell us what we should know in order to keep ourselves safe during the summer. Yes, I think as we’re emerging after this difficult COVID year, people are really looking forward to spending the summer outdoors and doing activities that have been really limited over the past year. And I fully encourage that, but we want to do it safely and there’s a few tips I think that will help people be sun safe during their outdoor activities this summer.

The first thing to talk about is
Sun protection comes in a couple forms. So when we think about sun protection, most people think about sunscreen and this really is the main first line of defense. But the key for sunscreen is using it properly and what I think people misuse is in terms of the amount of sunscreen they use and the frequency in which they apply it. So in general, when we’re recommending appropriate sunscreen use, people want to look for an SPF. This is sun protective factor and is the amount of increased protection the sunscreen is giving you to prevent sunburns. So, for example, if you’re using an SPF of 15, that means it’s going to take 15 times longer then it would without any sunscreen, and so in general I recommend that patients or people look for SPF of 30 or above. This is going to be giving you coverage for about 98% of UV rays, so with application number one you have to apply enough and so the general recommendation is about 1 to 2 ounces.
So this is about a shot glass size or a golf ball sized amount of sunscreen to cover exposed skin and this sunscreen needs to be reapplied every two hours. And so Katie, just a couple of questions on that. The first is, is the bigger the number for the SPF better? So if you have a choice between 30 and 50 and maybe even 70 that you should pick the higher number. No, that’s really not always the case. So as I mentioned at an SPF of 30, you’re blocking approximately 98% of the ultraviolet radiation, and so at increasing numbers, there’s diminishing return. And in order to achieve higher sun protective factor, say your SPF is 100 or 70 or greater, the consistency of the product changes. It becomes more tacky, more opaque. It’s not as wearable, and so in my experience my patients aren’t as likely to use it as a more wearable, say SPF 30, which goes on easier, is more sheer, and they’re more likely to keep it on every day and reapply.
every two hours as recommended. So the next question I have is when we're looking at the sunscreen bottle, some of them will say broad spectrum. Some of them will say UVA and UVB. What do all of those terms mean and how important or not are they? Broad spectrum is not just a marketing label, it actually is really important and what broad spectrum means is that the sunscreen is blocking both UVA and UVB rays. So UV radiation comes in a few forms. The main ones that reach the Earth are UVA and UVB. UVB radiation is what causes sunburn and is also associated with skin cancer. UVA is the ultraviolet radiation that is associated with sun damage in the skin, so the development of wrinkles, sunspots, and is also associated with skin cancer. UVC really doesn’t penetrate to the earth's surface, so really talking about UVA and UVB and so broad spectrum means that sunscreen product is going to protect you from both UVB and UVA rays. And so this is really important and the type of sunscreen you will also find on your sunscreen label and in general sunscreens come in two forms so
we have our chemical based sunscreens and our physical based sunscreens. The physical base are also referred to as mineral based sunscreens. Mineral based sunscreens are the ones that contain zinc or titanium. That’s why they get their name of mineral based and the way mineral based sunscreens work is they are literally just reflecting the UV radiation off the skin and this is why you think about the traditional zinc based sunscreens that were very white and opaque because they would go on and just reflect off the light. Now we have a lot more elegant formulations where the minerals are micronized and they go on much more shear on the skin and these are in general my preferred forms of sunscreen because they are not just reflecting UV, they are by nature broad spectrum. The main reason why I prefer the mineral based to the chemical based is that chemical based sunscreens can cause skin irritation, both irritant and allergic types of reactions. Recently there has been some controversies about some sunscreens. The chemical variety causing cancer. Is that true? And how much
stock should we put into that? So we have a lot more research needed into that to really determine if there is any inherent harm in these chemical based sunscreens. So the initial concern came out when it was found that the chemical based sunscreens could be detected at very low levels in the bloodstream and what does this mean? Does this pose any health risk is still very, very unknown. It's very unlikely that these chemical sunscreens pose any real risks to human health because we would have seen a signal come up over all of these years of use and so the next question has to do with sunscreens being waterproof. Are sunscreens waterproof? And if they say so on the label, does that mean that you don’t need to reapply them necessarily after you get out of the water? Sunscreens can label themselves as water resistant, but it’s not perfect and certainly it will wash off and in general those water resistant formulations tend to have a thicker, more tacky feel to them, so they’re harder to apply, so you know if someone is a
swimmer and going to be in water for long periods of time, I will say seek out these water resistant formulations, but in general I still recommend that once you come out of the water dry off and reapply.

What about if you are going outside but you’re going to be indoors for part of the time? Do you still need to wear sunscreen, or is that only when you’re going outside to the beach you’re going to be exposed to the sun for a prolonged period of time? So interestingly, you can even have UV exposure indoors, and that is because UVA radiation can penetrate through windows, so our car windshields by law have to have filters to protect against UVA, but the side windows, sunroofs, back windows, generally don’t have UV protection. Same goes in office buildings.

So if you’re working next to a window every day, you have significant UVA exposure and I do recommend to all of my patients that they wear a daily facial sunscreen this is applied in the morning. And you could have it in your office to reapply.
Sometimes this becomes problematic, especially for women who wear makeup and just the practicality of reapplying a cream based sunscreen multiple times through the day is just not feasible. So we do have some newer formulations that help mitigate that problem.

For example, there are powder based sunscreens that can be used for reapplication during the day. But if you’re using a mineral based sunscreen on your face in the morning, that mineral composition is really going to stay there until you wash it off your face. So it’s better than nothing if you’re at least applying it every morning.

What about you know the reapplication part seems to be one of the issues that many people face. I know that when I go out into the sun I may start out the day with all of the best intentions. Put my sunscreen on, but when you’re outside and you’re having a good time, you often forget to reapply it every two hours. How critical is it that you reapply every two hours? Can you up the SPF and then not reapply?
So upping the SPF and not reapplying isn’t going to be helpful, because what is causing the sunscreen to need reapplication is related to what activities you’re doing. For example, if you’re sweating, if you’re swimming, which we already mentioned, these are things that are going to lead to the SPF either washing off or breaking down. Wiping down with a towel, for example, and so yes, it can be really hard to continuously reapply while you’re outdoors, but I typically recommend that before your outdoor activity, give yourself a head to toe cover in a broad spectrum, cream based SPF, preferably a mineral, but chemical is fine as well, and then when you’re out we have to take a little bit more care about convenience and so the spray based sunscreens, the aerosolized sunscreens, which aren’t perfect for initial application because they don’t always go on fully evenly, they’re really easy to reapply to spray it on your exposed skin,
and so those are a great option to have in your purse or bag so that when you’re out and about you can easily reapply without having to strip down. The other thing which we haven’t touched on yet is protective clothing, and so this is a great way to minimize the need for reapplication because if you have the clothing on it will stay with you during your activity.

So all great tips and we’re going to pick up that conversation right after we take a short break for medical minute. Please stay tuned to learn more about skin cancer and sun safety with my guest doctor Kathleen Suozzi. Funding for Yale Cancer Answers comes from Smilow Cancer Hospital promoting sun safety and skin cancer screening in honor of UV Safety Month. For information and to learn if you should be screened, visit yalecancercenter.org/screening.

This is a medical minute about smoking cessation. There are many obstacles to face when quitting smoking as smoking involves the potent drug nicotine. But it’s a very important lifestyle change, especially for patients undergoing cancer treatment. Quitting smoking has been shown to
positively impact response to treatments, decrease the likelihood that patients will develop second malignancies, and increase rates of survival. Tobacco treatment programs are currently being offered at federally designated Comprehensive Cancer Centers and operate on the principles of the US Public Health service clinical practice guidelines. All treatment components are evidence based and therefore all patients are treated with FDA approved first line medications for smoking cessation as well as smoking cessation counseling that stresses appropriate coping skills. More information is available at yalecancercenter.org. You’re listening to Connecticut Public Radio. Welcome back to Yale Cancer Answers. This is doctor Anees Chagpar and I’m joined tonight by my guest doctor Kathleen Suozzi. We’re talking about skin cancer and sun safety and right before the break, Katie you were starting to talk about protective clothing. So when I think about going outside, you know part of the reason is that it’s warm and it’s beautiful.
and nobody really wants to wear a long sleeve shirt and full length pants and a hat. How important is it to keep really covered up? Well, the great thing about protective clothing is the convenience factor that you put it on and don’t need to reapply. And so for example, a regular white T shirt. So when we talk about protective clothing instead of SPF, we talk about UPF. UPF measures the transmission of ultraviolet, so it’s ultraviolet protective factor and so a regular white T shirt has a UPF somewhere on the order of five to seven, whereas the Sun protective clothing, the UPF factor is around 50, so it doesn’t mean that you don’t need sunscreen in the areas of exposed skin, but by choosing that specific sun protective clothing instead of the normal clothing you would wear, you’re better protected in the areas that are covered. So tell us more about Sun Protective clothing because I think a lot of people, when they think about wearing protective clothing from the sun are thinking well instead of a T shirt,
I'll grab a long sleeve shirt.
Or instead of short shorts,
I will grab cotton pants,
but I think what you are talking about
is really clothing that is specially
designed to protect against UV rays.
Can you tell us more
about where we find that?
How are they labeled?
Can we see how much protective
factor we're getting and what
should we be aiming for?
Yeah, so the market for some protective
clothing has really grown in recent years.
There used to be limited brands that
had this technology that has to do
with the weaving and the material,
but now even more mainstream brands
are carrying clothing that are
specifically UPF rated and that
is what you want to look for.
So on the label it will say
that garment
is UPF X and usually they'll carry
around a UPF of 30 to 50 and
that's corresponding to
blocking 98% of UV transmission,
which is about equal to what
I said at SPF 30 is doing,
so that's what you want to look for
When you’re looking for clothing.

So the next question I have, Katie is with regards to when you say covering up and applying sunscreen head to toe.

Let’s talk about toes.

You know we generally speaking do not wear socks, and you know covered shoes when we go to the beach.

And yet we know that some skin cancers can occur on peoples feet and peoples toes.

Can you talk about how we protect our feet?

Yeah, so this is actually an interesting discussion.

So when we think about skin cancers that occur on the feet, there are the non Melanoma type of skin cancers which we could get into a little more detail.

but these are the basal cell and squamous cell type of skin cancers and as a skin cancer surgeon often I’m treating these types of skin cancers on the back of a person’s foot and just as you said, I think that’s related to the increased sun exposure that these areas are getting.
And probably many people could remember getting a bad sunburn on their feet at one point in the summer months. But then there’s also the type of skin cancers that occur in and around the nail, and these include both Melanoma and squamous cell type of skin cancers and the ones that occur around the nail have drivers that aren’t just sun related and this might be outside of the scope of our talk today, but they have different genetic causes for the squamous cell type. They can be virally related and for the Melanoma type these are the type of melanomas that we see in increased frequency in African American patients, Bob Marley is the famous person who died from a subungal Melanoma, and so these are not necessarily sun related. But one thing that is interesting and an area of active research is if UV light that is used in nail salons to harden, particularly for these longer wear, nail polishes might have any meaningful increased risk for skin cancers in and around the toes and hands so
does that mean that we should be wearing sunscreen on our hands before we go to a nail salon?

I think we need some more data, but there are these great gloves that you can get that cover the skin on the hands while your hands are under those light beds, but again, that’s not protecting the nail unit.

So in general, what I recommend is if patients are getting these type of manicures rarely or infrequently, it’s probably not increasing their risk, but for those people who get these type of manicures every single month, we may find that their risk of skin cancer in and around the nail is increased.

My next question has to do with hats. Back in the day when we used to talk about slap on some sunscreen and slap on a shirt and slap on a hat. How much benefit do we get from a wide brimmed hat when we go outside. Clearly, unless we don’t have hair we can’t use sunscreen there. And certainly skin cancers can occur on the scalp.
does a hat really help us?

Skin cancers on the scalp are actually quite frequent. You can imagine in patients like you said, who are bald, that’s going to be a very common site where we see skin cancers, but I treat many women with full heads of hair that developed skin cancers on the scalp and again this harkens back to childhood where you can probably remember getting a bad burn within the part of your scalp 'cause it wasn’t protected and so hats are actually very effective for this purpose and the type of hat you wear matters. So you mentioned a wide brim hat, so this is something that is different than just a baseball cap. A baseball cap, for example, doesn’t even give you full coverage down to the tip of your nose so it is effective for the top of the scalp but is not going to protect the lower face. And again, they’re now making hats that have UPF rated factors, so look for ones that have a UPF rating that was going to be better
than a white baseball cap, which is not going to give you full protection. So the other thing to know though, is that you can have reflected UV off the ground, particularly on the water. And I see this in boaters all the time that have a hat on, but they’re getting a lot of reflected UV that’s coming off the water. Or swimmers, etc. And also the other place is when you’re on the ski mountain, the UV reflection off the snow and even off concrete or different surfaces. There is reflected UV, so that’s going to come up and under your hat. But I am a big advocate for wide brim hats, we’re trying to make them cool and stylish again. And then finally the other question has to do with, you’ve talked a little bit about people getting sunburn and we know that sunburn, particularly in childhood, will increase your risk of skin cancer. But there are some people, particularly who are darker skinned who rather than burning, tan. So how important is it for them
also to engage in all of these

sun protective measures? Is it just as important,
or do they have some protection already?

Let’s go back to your point about sunburns.

I think that it’s really important to focus on this for a second.

If you have had more than five sunburns in your life,
your risk of Melanoma doubles.

If you have had more than one blistering sunburn,
your risk of Melanoma doubles.

So that’s really, really significant,
and these sunburns are most often in your youth.

We know that that damage occurs early,
and that’s why sun protection for our kids is so critically important.

So let’s talk about the other forms of skin cancer.

Basal cell carcinoma is also associated with intense intermittent sun exposure,
so the sun exposure you get on your summer holiday,
and this includes going back into your youth.

But this doesn’t even need to necessarily be a sunburn,
0:23:19.13 → 0:23:20.578 just that intense intermittent
0:23:20.578 → 0:23:21.664 exposure squamous cell,
0:23:21.67 → 0:23:23.15 on the other hand,
0:23:23.15 → 0:23:25.37 is more associated with chronic lifetime
0:23:25.37 → 0:23:28.639 exposure and so that’s an exposure
0:23:28.639 → 0:23:31.58 that accumulates with time and leads to
0:23:31.58 → 0:23:34.484 increased risk of squamous cell carcinoma.
0:23:34.49 → 0:23:37.442 So patients who have higher endogenous
0:23:37.442 → 0:23:39.935 pigmentation, have darker skin types,
0:23:39.935 → 0:23:42.165 do have inherent UV protection,
0:23:42.17 → 0:23:44.302 but that doesn’t mean
0:23:44.302 → -0:00:00.001 that they’re fully immune,
0:23:46.44 → 0:23:48.59 so for example,
0:23:48.59 → 0:23:51.092 we see many Hispanic patients that
0:23:51.092 → 0:23:53.32 develop non Melanoma skin cancer.
0:23:53.32 → 0:23:54.262 In fact,
0:23:54.262 → 0:23:56.617 the statistics for Hispanic populations
0:23:56.617 → 0:23:59.77 are about four to 5% of all cancers
0:23:59.77 → 0:24:01.49 in the Hispanic population,
0:24:01.49 → 0:24:03.64 or skin cancers, that’s lower
0:24:03.64 → 0:24:05.36 for African American patients.
0:24:05.36 → 0:24:09.23 That’s somewhere on the order of 1 to 2%.
0:24:09.23 → 0:24:10.514 So you know,
0:24:10.514 → 0:24:12.654 while they do have protection
0:24:12.654 → 0:24:14.97 from their darker skin type,
0:24:14.97 → 0:24:17.091 It’s not perfect and we still see
0:24:17.091 → 0:24:19.18 skin cancers in these populations.
0:24:19.18 → 0:24:22.02 You had mentioned earlier
0:24:22.02 → 0:24:24.54 that African Americans going back to the
0:24:24.54 → 0:24:27.359 example of Bob Marley can get skin cancers
0:24:27.359 → 0:24:30.078 or melanomas in other places as well.
So under the nails and you had mentioned that some people can get even with a full head of hair, skin cancers on their scalp. So I want us to move a little bit from how do we protect ourselves from the sun? To how do we survey our skin and nail beds and other areas to try to find these skin cancers early? Because certainly, they may not cause problems in the sense of causing a lump or bleeding or things like that that we may notice with other cancers. And yet, early detection is probably still important. So how do we find them early? So early detection is critically important, and to date, the US preventative task force that gives us guidelines on cancer screening does not yet have a recommendation for skin cancer screening, and this is a little bit problematic because it’s hard for people to know if and when they need to see a dermatologist, and so there’s two parts of surveillance. So number one is self screening and we can talk about that in a minute. But #2 is screening by a dermatologist, and so what I recommend is that everyone have a baseline full body skin exam by
a board certified dermatologist after that exam and with a review of the patients background and other risk factors, the dermatologists can then recommend whether that patient needs annual exams, more frequent exams or needs less frequent exams. So that’s very important. Then in addition, self exam is also very important and what is probably the most important factor for detecting skin cancer is evolution of a lesion, and as a dermatologist when we’re doing skin exams, we’re only seeing any lesion on the skin at one point in time, so I put a lot of stock in when a patient tells me look this mole used to be pinpoint and now it’s the size of a pencil eraser. I know it’s worrying, and even if my exam does not elevate a lot of alarms, that history of evolution of the lesion is going to put me at a higher alert that it might need a biopsy. But in general, there’s different things to look for when we’re talking about non Melanoma type of skin cancers
0:27:02.848 -> 0:27:05.356 versus Melanoma type of skin cancers.
0:27:05.36 -> 0:27:08.32 So for non Melanoma type of skin cancers,
0:27:08.32 -> 0:27:10.84 again this is the basal cell and
0:27:10.84 -> 0:27:13.129 squamous cell type of skin cancers,
0:27:13.13 -> 0:27:15.35 these can present really with a
0:27:15.35 -> 0:27:16.83 variety of clinical presentations,
0:27:16.83 -> 0:27:19.358 but often what I tell patients is to
0:27:19.358 -> 0:27:21.638 report anything that bleeds spontaneously,
0:27:21.64 -> 0:27:24.344 so a lesion on the skin that keeps
0:27:24.344 -> 0:27:26.888 developing a scab and you can’t really
0:27:26.888 -> 0:27:29.57 point to any trauma that that lesion
0:27:29.57 -> 0:27:31.994 has had that should be evaluated.
0:27:32 -> 0:27:34.723 Also a lesion on the skin that’s
0:27:34.723 -> 0:27:35.89 tender to touch.
0:27:35.89 -> 0:27:39.096 Have that evaluated sooner rather than later.
0:27:39.1 -> 0:27:42.236 In terms of the Melanoma type of skin
0:27:42.236 -> 0:27:44.59 cancers, we have the mnemonic ABCDE,
0:27:44.59 -> 0:27:46.158 and this refers to
0:27:46.158 -> 0:27:48.51 when you’re evaluating moles at home,
0:27:48.51 -> 0:27:50.102 things to look for.
0:27:50.102 -> 0:27:53.489 So a stands for asymmetry of the lesion.
0:27:53.49 -> 0:27:55.842 You know if you were to cut the
0:27:55.842 -> 0:27:58.089 lesion in half in any direction,
0:27:58.09 -> 0:28:00.706 does it look the same on both sides?
0:28:00.71 -> 0:28:01.95 B is for border.
0:28:01.95 -> 0:28:04.231 Is it a smooth round lesion or
0:28:04.231 -> 0:28:06.289 does it have some jagged edges?
0:28:06.29 -> 0:28:08.906 C is for color. Is the color uniform?
0:28:08.91 -> 0:28:11.206 Are there different colors within the lesion,
0:28:11.21 -> 0:28:13.166 particularly are there areas of blue,
0:28:13.17 -> 0:28:15.606 red or white in addition to
different shades of brown?

D is for diameter.

When the lesion is greater than 5 millimeters or about the size of a pencil eraser

and E is what I already mentioned,

evolution, has this lesion been changing?

Doctor Kathleen Suozzi is an assistant professor of dermatology and dermatologic surgery at the Yale School of Medicine.

If you have questions the addresses cancer answers at yale.edu and past editions of the program are available in audio and written form at yalecancercenter.org.

We hope you’ll join us next week to learn more about the fight against cancer.

funding for Yale Cancer Answers is provided by Smilow Cancer Hospital and AstraZeneca.