

Skin Profile and Search for Professional Guidance on Skin Care Among Sports Participants

Perfil Cutâneo e Busca por Orientação Profissional de Cuidados Com a Pele Em Esportistas

Perfil Cutâneo y Búsqueda de Orientación Profesional Sobre el Cuidado de la Piel en Deportistas

RESUMO

Objetivo: Traçar o perfil cutâneo de esportistas e relacionar com a sua busca por orientação de profissionais da área da saúde a respeito dos cuidados com a pele. **Métodos:** Trata-se de um estudo transversal, quantitativo. **Resultados:** Dos esportistas que receberam orientação apenas 16% utilizam protetor solar com fator de proteção solar igual ou superior a 30, enquanto 80% dos que não receberam orientação não utilizam protetor solar na prática do seu esporte ($p < 0,001$). **Conclusão:** A orientação profissional sobre cuidados com a pele pode promover uma maior adesão a práticas de fotoproteção, frisando a importância do protetor solar e não apenas roupas com proteção solar.

DESCRIPTORIOS: Pele; Exercício físico; Raios ultravioleta; Protetores solares; Esportes.

ABSTRACT

Objective: To outline the skin profile of sports participants and assess their search for guidance from healthcare professionals regarding skin care. **Methods:** This was a cross-sectional, quantitative study. **Results:** Among the sports participants who received guidance, only 16% used sunscreen with a sun protection factor of 30 or higher, whereas 80% of those who did not receive guidance did not use sunscreen during sports practice ($p < 0,001$). **Conclusion:** Professional guidance on skin care may promote greater adherence to photoprotection practices, emphasizing the importance of sunscreen rather than relying solely on sun-protective clothing.

DESCRIPTORS: Skin; Physical Exercise; Ultraviolet Rays; Sunscreens; Sports.

RESUMEN

Objetivo: Definir el perfil cutáneo de los deportistas y evaluar su búsqueda de orientación de profesionales de la salud sobre el cuidado de la piel. **Métodos:** Se trata de un estudio transversal y cuantitativo. **Resultados:** Entre los deportistas que recibieron orientación, solo 16% utilizaban protector solar con un factor de protección solar igual o superior a 30, mientras que 80% de aquellos que no recibieron orientación no usaban protector solar durante la práctica deportiva ($p < 0,001$). **Conclusión:** La orientación profesional sobre el cuidado de la piel puede fomentar una mayor adhesión a las prácticas de fotoprotección, destacando la importancia del protector solar y no solo el uso de ropa con protección solar.

DESCRIPTORAS: Piel; Ejercicio físico; Rayos ultravioleta; Protectores solares; Deportes.

RECEIVED: 02/07/2025 APPROVED: 02/19/2025

How to cite this article: Corrêa BG, Aliende IG, Meyer LF, Furtado JF, Amaral CC, Corrêa GP, Dode MTB. Skin Profile and Search for Professional Guidance on Skin Care Among Sports Participants. *Saúde Coletiva* (Edição Brasileira) [Internet]. 2025 [acesso ano mês dia];15(93):14823-14828. Disponível em: DOI: 10.36489/saudecoletiva.2025v15i93p14823-14828

Bruna Godinho Corrêa:
Physiotherapist. Catholic University of Pelotas.
ORCID: <https://orcid.org/0000-0002-3946-0632>

Isadora Gomes Aliende
Physiotherapist. Catholic University of Pelotas.
ORCID: <https://orcid.org/0000-0003-2084-5476>

Laura Freitas Meyer
Bachelor's Degree in Physiotherapy. Catholic University of Pelotas
ORCID: <https://orcid.org/0009-0003-9880-441X>

Julia Fassbender Furtado
Bachelor's Degree in Physiotherapy. Catholic University of Pelotas.
ORCID: <https://orcid.org/0009-0009-4417-3716>

Cainá Corrêa do Amaral
Doctor in Health and Behavior. Catholic University of Pelotas.
ORCID: <https://orcid.org/0000-0002-5603-5734>

Geovanna Peter Corrêa
Master in Health and Behavior. Federal University of Pelotas.
ORCID: <https://orcid.org/0000-0002-6397-9127>

Maria Teresa Bicca Dode
Doctor in Cellular and Molecular Biology Applied to Health. Federal University of Pelotas.
ORCID: <https://orcid.org/0000-0002-8168-5771>

INTRODUCTION

It is consolidated in scientific literature that the practice of regular physical activities provides numerous benefits for the overall health of individuals, such as cardiovascular and respiratory improvements. However, there are few studies that portray the environmental conditions to which athletes are exposed, especially in relation to their skin, which is unprotected in a large part of the individual's body area, especially in cases where they do not use solar photoprotection, increasing the risk of developing lesions and dermatological damage.⁽¹⁾

Among the aggressions caused to the skin, irregular exposure to solar radiation has been portrayed as the main causal factor of these skin conditions, as it increases the risk of erythema, burns, dyschromia, photoaging and, in more severe cases, skin cancer. It is worth mentioning that most studies and guidelines involving the prevention of these pathologies are carried out in the United States and Europe, and therefore are inadequate for the ultraviolet (UV) radiation levels of other countries, such as Brazil, whose climatic characteristics are different. In addition, the onset of these pathologies is related to the duration of sun exposure, geographic

and seasonal differences in the incidence of solar rays, and the general characteristics of individuals, such as their age, body type, phototype, behavioral factors, among others.⁽²⁾

In general, the most recommended way to prevent these skin pathologies is through the use of photoprotection appropriate to the skin type and correctly guided by a professional in the area, ensuring the absorption, dispersion or reflection of UVA and UVB radiation.⁽³⁾ Professional guidance ensures that individuals do not make mistakes in their use, such as applying too little or not reapplying it, noting that these mistakes can lead to damage, such as burns, and the false belief that sunscreens do not work, which means they should not be used. Furthermore, in addition to taking care of sun exposure, general skin care is also important, with the use of moisturizers that allow the skin barrier function to be maintained, water consumption to maintain texture and appearance, as well as helping with the barrier function, and the general relationship between skin hydration and collagen fibers. Skin hygiene is also important, removing infectious agents and the accumulation of substances that clog pores, such as product residues, pollutants and dust, which can contribute to the appearance of premature skin aging.⁽⁴⁾

Therefore, it is important to outline the skin profile of athletes and relate it to their search for guidance from health professionals regarding skin care, mainly due to the scarcity of recent studies on this topic, and how much this knowledge contributes to providing preventive information to this population.

METHODS

This is a cross-sectional, quantitative study, with data collected from a self-administered, semi-structured questionnaire through the Google Forms platform, which addressed questions about sociodemographic data, self-assessment of biotype, phototype, sensitivity and photoaging, as well as questions about photoprotection habits. Participants from a sports club and event who were approached by the researchers with the QR Code that redirected to the questionnaire between August and September 2022 were included in the study. The initial page of the questionnaire was the Free and Informed Consent Form (FICF), and participants could only progress to filling it out after agreeing to participate in the study.

Aiming for a representative sample of athletes, a sample size calculation was performed with a 95% confidence level, 80% sampling power

and a prevalence hypothesis based on previous prevalences, considering increases of 20% for possible refusals, totaling a sample size of approximately 170 participants.

The research involved minimal risks to the participants, such as reflection on sun exposure, skin care and possible discomfort when answering some question in the study. In this case, the option “I prefer not to answer” could be selected by the participant. On the other hand, the study provides benefits such as increasing knowledge about skin care habits among athletes, which benefits athletes in general.

To collect the skin profile, the Fitzpatrick Scale was used, created in Germany in 1976, aiming to classify the skin according to its sensitivity to solar radiation, subdividing it into tones ranging from Type 1 (white or albino color, always burns, never tans) to Type 6 (black color, never burns, tans very easily, highly pigmented), in addition to the aid of images showing the tones and detailed description of each subtype. Although this scale was developed based on a standard of European white skins, it has proven to be an effective instrument for evaluating skin in general around the world.⁽⁵⁾

In the present study, the question was applied: “Compare your skin with the photos below, and select the one that most resembles you” with response options: Type 1: white or albino color, always gets sunburns, never tans; Type 2: white color, usually gets sunburns, tans with difficulty; Type 3: light brown color, sometimes gets sunburns, tans little; Type 4: moderate brown color, rarely gets sunburns, tans easily; Type 5: dark brown color, gets sunburns very rarely, tans very easily; Type 6: black color, never gets sunburns, tans very easily, quite pigmented.

For self-assessment of skin photoaging, the Glogau scale was used,

created as a way to assess the individual's level of photoaging by analyzing the presence of wrinkles and pigmentation changes, considering both intrinsic (physiological) and extrinsic aging (through sun exposure) and classifying them into 4 stages, including considering the appropriate age for the appearance of each skin change following intrinsic aging.⁽⁶⁾ In this study, participants were assessed using the following question, with the help of pictures: “Among the images below, which one most resembles your skin?”, with the options: Type I (absence of wrinkles, few pigmentary changes, absence of keratotic lesions), Type II (dynamic wrinkles, early senile lentiginos, palpable keratoses), Type III (static wrinkles, melanosis and telangiectasias, visible keratoses), Type IV (only wrinkles, yellow-gray coloration, may have malignant lesions, actinic skin).

In addition, the sensitivity classification was used for the self-assessment of sensitivity, which defines the skin as: sensitive, dehydrated or mature according to Ifould, Forsythe-Conroy and Whittaker, and is considered a universal classification.⁽⁷⁾ Therefore, participants were asked the following questions: “Regarding sensitivity, do you consider yourself to have skin that is:” with the following response options: sensitive (skin with a fine texture, easily irritated, usually pinkish in color and high temperature), dehydrated (skin with a dull, lackluster appearance, which may be associated with itching and a feeling of tightness), mature (skin with a dull, dull, dry appearance, with wrinkles, blemishes and little fat or even sagging skin) and “I do not identify with any of the options”.

Finally, the data were imported from Google Forms to Google Sheets for double coding of the variables to be exported to the Statistical Package for the Social Sciences (SPSS) version 26.0 for statistical analysis of the data.

The analysis was performed using relative and absolute frequencies, and for the age variable, it was distributed into tertiles, which were adopted for categorization. For bivariate analysis, the chi-square test and Fisher's exact test were used when necessary, where p -values ≤ 0.05 were considered statistically significant. It is important to emphasize that the research only began after approval by the Research Ethics Committee under opinion no. 5,480,242, ensuring compliance with the provisions of the Declaration of Helsinki and resolution no. 196/96 and 466/12 of the National Health Council.

RESULTS

The final sample consisted of 227 athletes, most of whom were men (58.6%), aged between 18 and 32 years (36.1%), with a mean age of 37.25 ± 10.17 years. Regarding education, there was a prevalence of athletes with postgraduate degrees (48.9%), of whom 37.7% were students or professionals in the health area (Table 1).

Table 1 - Univariate analysis of the profile of the sample of athletes (relative and absolute frequency) from the city of Pelotas, RS, 2022 (N=227).

Variables	% (N)
Sex	
Male	58,6 (133)
Female	41,4 (94)
Age (in years)	
18 - 32	36,1 (82)
33 - 40	30,8 (70)
41 or older	33,0 (75)
Education	
Up to High School	9,3 (21)
Higher education	41,9 (95)
Post-graduation	48,9 (111)
Total	100,0 (227)

Regarding variables related to skin profile and skin care, most athletes had light skin tones according to the Fitzpatrick Scale, with a prevalence of 51.8% with skin tones 1 and 2. In addition, they self-assessed photoaging grade 2.0 (65.2%), and did not identify with the self-assessment of skin sensitivity (39.4%). Most reported not using sunscreen (64.3%), but rather using other forms of sun protection such as hats and sunglasses (65.0%). Regarding skin care, 49.3% reported using facial moisturizer, 45.3% using body moisturizer and the majority drink at least 2 liters of water daily (71.7%). When asked if they had ever sought or received any guidance from health professionals regarding skin care, 55.6% had received or sought

such guidance (Table 2).

In the association of profile and skin care variables with the search for professional guidance, among the athletes who received guidance, only 16% used sunscreen with SPF equal to or greater than 30, while 80% of those who did not receive guidance did not use sunscreen when practicing their sport ($p < 0.001$). However, among those who received professional guidance, 38.9% used clothing with sun protection and other forms of protection, compared to athletes who did not receive guidance, of whom only 23.1% used it ($p = 0.038$). Regarding self-assessment of skin sensitivity, among the athletes who received some professional guidance, the majority self-assessed their

skin as sensitive (43.5%), compared to those who did not receive guidance, the majority, 44.2%, did not know how to self-assess themselves in any of the options ($p = 0.003$). Regarding skin phototype, among those who received professional guidance, 81.5% had light phototypes from 1 to 3, while of those who did not receive it, 33% had dark phototypes from 4 to 6 ($p = 0.020$). Furthermore, regarding the use of facial and body moisturizer, among the athletes who received professional guidance, respectively, 60.0% and 68.0% used moisturizers, compared to those who did not receive professional guidance, respectively, 73.7% and 75.0% did not use moisturizers ($p < 0.001$) (Table 2).

Tabela 2 - Análise univariada e bivariada do perfil e cuidados cutâneos em associação com o recebimento/procura de orientação de profissional da saúde pelos esportistas da cidade de Pelotas, RS, 2022 (N=227).

Variable	healthcare professional* % (N)			p-value
	% (N)	No	Yes	
Fitzpatrick*				0,020
1-3	75,2 (170)	67,0 (67)	81,5 (101)	
4-6	24,8 (56)	33,0 (33)	18,5 (23)	
Self-assessment Glogau Scale*				0,206
1,0	19,9 (44)	14,6 (14)	23,6 (29)	
2,0	65,2 (144)	67,7 (65)	63,4 (78)	
3,0 or more	14,9 (33)	17,7 (17)	13,0 (16)	
Sensitivity self-assessment*				0,003
Sensitive	34,4 (76)	22,1 (21)	43,5 (54)	
Dehydrated	11,8 (26)	12,6 (12)	11,3 (14)	
Mature	14,5 (32)	21,1 (20)	8,9 (11)	
I don't know how to self-assess	39,4 (87)	44,2(42)	36,3 (45)	
Uses another type of protection				0,038
Doesn't use	2,9 (6)	4,4 (4)	1,8 (2)	
Cap and/or sunglasses	65,0 (134)	72,5 (66)	59,3 (67)	
Clothing with sun protection and other	32,0 (66)	23,1 (21)	38,9 (44)	
SPF of Sun Protection				<0,001
≤30	12,8 (29)	7,0 (7)	16,0 (20)	
>30	22,9 (52)	13,0 (13)	31,2 (39)	
Doesn't use it	64,3 (146)	80,0 (80)	52,8 (66)	
Use body moisturizer*				<0,001
No	54,7 (23)	73,7 (73)	40,0 (50)	
Yes	45,3 (102)	26,3 (26)	60,0 (75)	
Use facial moisturizers				<0,001
No	50,7 (115)	75,0 (75)	32,0 (40)	
Yes	49,3 (112)	25,0 (25)	68,0 (85)	
Drink at least 2 liters of water a day				
No	28,3 (64)	31,0 (31)	26,6 (33)	
Yes	71,7 (162)	69,0 (69)	73,4 (91)	
Total	100,0 (227)	44,4 (100)	55,6 (125)	0,566

*Variables with missing.

DISCUSSION

The following findings were revealed in this study: athletes who received guidance from a health professional tended to have more appropriate skin care than those who did not receive guidance, such as a higher prevalence of sunscreen use, photoprotective clothing and skin hydration. Furthermore, it was noted that, although the sensitivity assessment is self-evaluated, participants who did not receive professional guidance were unable to self-evaluate.

Regarding the Fitzpatrick scale, in other studies with geographic and ethnic proximity to this one, a majority of phototypes II, III or IV were found, which demonstrates the wide variety of skin colors present in the local population.⁽⁸⁾ Furthermore, in the present study, the majority of athletes identified themselves with light skin tones according to the scale, which is in line with data from the state of Rio Grande do Sul (the same state where the study was conducted) where the population is predominantly white (79%).⁽⁹⁾ It should be added that, in the present sample, the prevalence of receiving guidance from a health professional regarding skin care was higher among individuals with lighter phototypes. And, the current literature shows that with regard to guidance on skin care, compared to black patients, white patients are 9 times more likely to receive recommendation for the use of sunscreen, while individuals with black skin have less recommendation because they have a lower risk of burns and a lower prevalence of skin cancer due to their skin tone. However, this generates a false belief that photoprotection is not essential.⁽¹⁰⁾

Still regarding photoprotection, among the photoprotection measures adhered to in the sample of the present study, of those who adhered to the use of sunscreen, few used the

appropriate SPF, while the majority used caps, glasses and clothing with sun protection as protective measures, which is in agreement with a study carried out with runners in the south of Brazil, where 86% of the sample used other protective measures such as clothing and accessories, and only 62% used sunscreen when practicing sports.⁽¹¹⁾ This fact shows that athletes prefer the protection provided by clothing and accessories over the application of sunscreen. In an attempt to understand this preference, some studies have cited forgetfulness, discomfort, oily sensation, burning eyes and consequent impaired performance as reasons for not using sunscreen.⁽¹²⁾

However, it is important to emphasize that just wearing clothing as a protective measure has the counterpoint that only the area covered by the fabric is protected, therefore, areas such as the face end up being more exposed and suffering burns, this in the places most affected by cancerous lesions, where small and commonly unprotected areas such as the ears, lower lip and periorbital region are among the most prevalent places affected by skin cancer.⁽¹³⁾

It is not only important to reflect on the risks of skin pathologies, but also on the risk related to photoaging, where it can be stated through the literature that the continuous and adequate use of sunscreen with protection factor 30 or higher promotes a reduction and improvement in the appearance of the skin. Regarding the current study that presents a low percentage of individuals who use sunscreen with adequate SPF, this risk becomes evident, therefore, it is important not only to emphasize the relevance of the use of sunscreen, but also to emphasize the relevance of the minimum SPF for the region, since some studies already show that the recommendation by health professionals of higher SPF arises as a

way to compensate for the inadequate application and in insufficient quantities by individuals. Also, it is a common mistake for the population to understand SPF values as multiplicative, however, a SPF 30 sunscreen absorbs 96.7% while a SPF 50 sunscreen absorbs approximately 98% of the radiation, therefore, the need to indicate sunscreens with higher SPFs is based on the assumption that individuals do not apply and reapply them correctly.⁽¹²⁾

Added to this are other skin care measures to be mentioned, such as water consumption and hydration, already consolidated as important in scientific literature.⁽¹⁴⁾ Regarding the intake of at least 2 liters of water per day, the majority of the sample complied with the expected, considering that they are athletes, but the minority reported using facial and body moisturizer. From this, it is important to highlight the ability of topical moisturizers to restore the barrier function of the epidermis as well as increase the amount of water in the epidermis, becoming an ally in sun protection since the degree of skin hydration is associated with the effect that UV radiation will have on the skin.⁽¹³⁾

Another pertinent topic is the assessment of sensitivity, which is considered a universal classification. However, the participants in this study had difficulty classifying themselves into one of the subtypes, even with the detailed description in the approach to the issue, with the exception of those who received professional guidance, who, it is understood, can know their skin sensitivity through the professional's assessment. However, in general, the variable results in a majority that did not identify with any of the alternatives. This finding suggests the need for a new approach to the assessment of skin sensitivity, encompassing new categories or explanations so that the

population can self-assess more easily. Furthermore, the literature is extremely scarce on the subject of skin sensitivity.⁽⁷⁾

Finally, concomitantly with this, in a study carried out with dermatologists, 78.8% responded that the recommendation of sunscreen was made to more than 80% of their patients, however, 99% of the dermatologists surveyed believe that their patients in general do not apply a sufficient amount of sunscreen, therefore the use of sunscreen is beyond medical recommendation since the majority of the present sample received professional guidance and do not protect themselves adequately, thus

determining the adherence and recognition of the importance by the individual.⁽¹⁵⁾

CONCLUSION

Therefore, it is essential to encourage and expand the dissemination of photoeducation measures in Brazil, aiming at the prevention of acute sun damage, such as sunburn and erythema, and chronic damage, such as photoaging and skin cancer. The importance of this action is reinforced by the continuous increase in the incidence of skin cancer, as indicated by epidemiological data. Finally, it is worth emphasizing the

need for caution when generalizing and extrapolating the present results to the general population. However, it is also important to emphasize that the study highlights the self-perception of athletes regarding their choices of protection and skin care when exposed to the sun. And, in short, it concludes that there are still false beliefs and inappropriate behaviors regarding the use of sunscreen. Another finding was the preference for clothing as a measure of sun protection instead of photoprotection, which is related to the high number of burns in unprotected areas.

REFERENCES

1. Purim KSM, Leite N. Fotoproteção e exercício físico. *Rev Bras Med Esporte*. 2010 Jun;16(3):224–9.
2. Lionetti N, Rigano L. The new sunscreens among formulation strategy, stability issues, changing norms, safety and efficacy evaluations. *Cosmetics*. 2017 May 16;4(2):15.
3. Addor FAS, Barcaui CB, Gomes EE, Lupi O, Marçon CR, Miot HA. Protetor solar na prescrição dermatológica: revisão de conceitos e controvérsias. *An Bras Dermatol* [Internet]. 2022 Mar 1;97(2):204–22. Disponível em: <http://www.anaisdedermatologia.org.br/pt-protetor-solar-na-prescricao-dermatologica-articulo-S2666275222000030?referer=buscador>
4. Sociedade Brasileira de Dermatologia (SBD). Cuidados diários com a pele [Internet]. Disponível em: <https://www.sbd.org.br/cuidados/cuidados-diarios-com-a-pele/>
5. Fors M, González P, Viada C, Falcon K, Palacios S. Validity of the Fitzpatrick Skin Phototype Classification in Ecuador. *Adv Skin Wound Care*. 2020 Dec;33(12):1–5.
6. Matiello AA, Santana PC, Camargo BIA, et al. Fisioterapia Dermatofuncional. Porto Alegre: Grupo A; 2021.
7. Ifould J, Forsythe-Conroy D, Whittaker M. Técnicas em estética. 3ª ed. Porto Alegre: Artmed; 2015. Série Tekne.
8. Roberts WE. Skin type classification systems old and new. *Dermatol Clin*. 2009;27(4):529–viii. doi:10.1016/j.det.2009.08.006
9. Coutinho A, Daiane A, Menezes B, Luiz L, De Oliveira S, Agranonik M, et al. Panorama das desigualdades de raça/cor no Rio Grande do Sul: relatório técnico [Internet]. Disponível em: <https://dee.rs.gov.br/upload/arquivos/202111/18175612-relatorio-tecnico-dee-panorama-das-desigualdades-de-raca-cor-no-rio-grande-do-sul.pdf>
10. Cestari T, Buster K. Photoprotection in specific populations: children and people of color. *J Am Acad Dermatol*. 2017 Mar;76(3 Suppl):S110–21.
11. Purim KSM, Leite N. Sports-related dermatoses among road runners in Southern Brazil. *An Bras Dermatol* [Internet]. 2014 [citado 2020 Abr 25];89(4):587–92. Disponível em: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4148272/>
12. Gilaberte Y, Trullàs C, Granger C, de Troya-Martín M. Photoprotection in outdoor sports: a review of the literature and recommendations to reduce risk among athletes. *Dermatol Ther*. 2022 Jan 29;12(2):329–43.
13. Schalka S, Steiner D, Ravelli FN, Steiner T, Terena AC, Marçon CR, et al. Brazilian consensus on photoprotection. *An Bras Dermatol*. 2014 Dec;89(6 Suppl 1):1–74.
14. Guzmán-Alonso M, Cortazár TM. Water content at different skin depths and the influence of moisturizing formulations. *Household Personal Care Today*. 2016;11(1):35–40.
15. Farberg AS, Glazer AM, Rigel AC, White R, Rigel DS. Dermatologists' perceptions, recommendations, and use of sunscreen. *JAMA Dermatol*. 2017 Jan 1;153(1):99.