

BASIC GUIDANCE AND ROLE OF COMMUNITY PHARMACISTS IN MANAGING DRUG PHOTSENSITIVITY

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OBJECTIVES

To develop a practical care algorithm and educational guidance for community pharmacists on counseling patients regarding adapted photoprotection when using photosensitizing drugs, informed by a literature review, a multinational survey, and input from a global FIP expert panel.

BACKGROUND

Drug-induced photosensitivity is the development of cutaneous disease due to the interaction between a topical or systemic chemical agent and sunlight (mainly UVA). It represents up to 8% of reported cutaneous adverse events in clinical practice.^{1,2}

Photosensitive drugs act as exogenous chromophores, most commonly absorbing UVA radiation and triggering photochemical reactions in the skin.¹

Clinically, reactions are classified as phototoxic (exaggerated sunburn with rapid onset) or photoallergic (delayed, T-cell mediated reaction), although overlap can make this distinction challenging.^{1,2} Both may lead to post-inflammatory hyperpigmentation (PIH). Many drugs have been implicated in photosensitive reactions, as is shown in the following tables¹

TOPICAL DRUGS reported to cause photosensitive reactions				
CLASS	SUBCLASS	DRUG	PHOTOTOXIC REACTION	PHOTOALLERGIC REACTION
Aloes		Benzylamine, Piroxicam, Diclofenac		X
		Ketoprofen	X	X
Miscellaneous		Acyclovir		X
		Dibucan		X
		Hydrocortisone	X	X
		Fenofibrate		X
		Coal Tar	X	
		Benzoyl peroxide	X	
		Benzocaine	X	
		Erythromycin	X	
		Halogenated salicylanilides	X	X
		Chlorpromazine		X
		<i>Artemisia vulgaris</i> , <i>Artemisia graveolens</i> (celery), <i>Ratunagis catha</i> (parsnip), <i>Petroselinum crispum</i> (parsley), <i>Hedera helix</i> (ivy), <i>Hypericum perforatum</i> (St. John's wort)	X	X
		<i>Rutaceae</i>	X	X
Sunscreens	Benzophenones	Citrus spp., Citrus aurantifolia (bergamot), Citrus aurantifolia (lime), Citrus limon (lemon), Ruta graveolens (common rue), Styracis albus (burning bush)	X	X
		Ficus carica (fig)	X	X
Sunscreens	Others	Oxybenzone, Sulisobenzon, Mexenone		X
		Dibenzoylmethanes, Cinnamates, PABA, Salicylates, Octocrylene, Mexoryl SX		X

SYSTEMIC CARDIOVASCULAR DRUGS reported to cause photosensitive reactions				
CLASS	SUBCLASS	DRUG	PHOTOTOXIC REACTION	PHOTOALLERGIC REACTION
Anti-hypertensives	Diuretics	Hydrochlorothiazide	X	X
		Indapamide, Furosemide, Triamterene	X	X
		Captopril, Ramipril, Enalapril, Valsartan		X
	ACEI and ARB	Quinapril	ND*	ND*
		Enalapril		X
		Valsartan	ND*	ND*
	Calcium Channel Blockers	Amlodipine, Nifedipine	X	X
		Diltiazem	X	X
		Tiludol	ND*	ND*
	Others	Rilmenidine	X	
		Methyldopa		X
		Amilorone	X	X
Antiarrhythmics		Dronedron	X	X
		Simvastatin		X
		Atorvastatin	X	
		Pravastatin	ND*	ND*
		Fenofibrate		X

SYSTEMIC ANTIMICROBIALS reported to cause photosensitive reactions			
SUBCLASS	DRUG	PHOTOTOXIC REACTION	PHOTOALLERGIC REACTION
Tetracyclines	Doxycycline, Demeclocycline, Minocycline, Tetracycline, Lymecycline	X	
	Nalidixic acid, Piperimidic acid, Oxolinic, Rosazocin		
Fluoroquinolones	Norfloxacin, Lomefloxacin	X	X
	Enoxacin		X
	Ciprofloxacin, Levofloxacin, Sparfloxacin, Gatifloxacin, Crepofloxacin, Trovafloxacin, Clinafloxacin, Gemifloxacin, Fleroxacin, Perfloxacin, Ulfloxacin, Ofloxacin	X	
	Moxifloxacin		No
		No	No
3rd Generation Cephalosporins	Ceftriaxone, Cefazidime	X	
Antimicrobials	Quinine, Quinidine	X	X
Anti-tuberculosis medications	Isoniazid, Pyrazinamide	X	
Sulfonamides derivatives	Cotrimoxazole, Dapsone, Sulfasalazine	X	
Antifungals	Voriconazole, Itraconazole, Ketconazole, Griseofulvin	X	
	Fluconazole	No	No
AntiRetrovirals	Efavirenz	X	X

SYSTEMIC PSYCHOTROPIC DRUGS reported to cause photosensitive reactions			
SUBCLASS	DRUG	PHOTO TOXIC REACTION	PHOTO ALLERGY REACTION
Antipsychotics	Chlorpromazine, Thioridazine, Fluphenazine, Trifluoperazine, Perphenazine, Flupenthixol	X	X
	Olanzapine	ND*	ND*
	Clozapine	ND*	ND*
	Prothipryline	X	
Antidepressants	Amiriptryline		X
	Imipramine, Desipramine	ND*	ND*
	Clomipramine		X
	Escitalopram	X	
	Citalopram, Paroxetine, Fluvoxamine	X	X
	Fluoxetine	X	
	Sertraline		X
	Venlafaxine	X	
	Phenelzine	ND*	ND*
Anxiolytics	Alprazolam	X	
	Chlordiazepoxide		X

OTHER SYSTEMIC DRUGS reported to cause photosensitive reactions			
CLASS	DRUG	PHOTO TOXIC REACTION	PHOTOALLERGY REACTION
Chemotherapeutic agents	Vandetanib	X	X
	Imatinib	X	
	Fluorouracil	ND*	ND*
	Capecitabine	ND*	ND*
	Tegafur	X	X
	Paclitaxel	ND*	ND*
	Hydroxyurea	X	
	Dacarbazine	X	
	Vinblastine	X	
	Epirubicin	ND*	ND*
	Vemurafenib	X	
Miscellaneous drugs	Retinoids	X	
	Ethinylestradiol	X	
	Ranitidine	X	
	Carbamazepine	ND*	ND*
	Clopidogrel	ND*	ND*
	Flutamide	ND*	ND*
	Sulfonamides	X	X
	Sulfonureas	X	X
		X	X
		X	X
		X	X

SYSTEMIC NONSTEROIDAL ANTI-INFLAMMATORY DRUGS reported to cause photosensitive reactions			
CLASS	DRUG	PHOTO TOXIC REACTION	PHOTOALLERGY REACTION
Nonsteroidal anti-inflammatory drugs (NSAIDs)	Benoxaprofen, Naproxen, Nabumetone, Ibuprofen	X	
	Suprofen, Oxyclozenone		X
	Ketoprofen, Tiaprofenic acid	X	X
	Piroxicam, Benzylamine, Etofenamate, Diclofenac		X
	Acetofenac	X	X
	Celecoxib	X	X
		X	X

*ND: Drug implicated as photosensitizer without pathophysiological mechanism defined
ACEI: Angiotensin-converting enzyme inhibitors
ARB: Angiotensin receptor blockers

Photoprotection should be an integral component of care for patients receiving photosensitizing medications, and pharmacists are well positioned to identify these agents and counsel on preventive measures.

However, qualitative studies report knowledge gaps among pharmacy staff regarding sunscreen use, skin type, interpretation of sun protection factor, and application of the UV index, highlighting the need for targeted education and impartial resources to strengthen counseling.³⁻⁵

METHODS

A literature review on the pharmacist's role in dermatological care was conducted in December 2025 using PubMed and AI-assisted research tools. Current dermatology guidelines were also identified.

An online survey was conducted among FIP members in March–April 2026 to assess current practices, knowledge, and perceived barriers to greater pharmacist involvement. A structured online questionnaire was distributed by FIP, and 142 completed responses from 51 countries were included in the final analysis.

Based on the review and survey findings, an expert FIP panel of 13 pharmacists from five continents recommended developing practical guidance on skin health to support pharmacy practice.

An algorithm illustrating the pharmacist's role across the patient journey was developed as basic guidance for counseling patients regarding adapted photoprotection when using photosensitizing drugs.

RECOMMENDATIONS DERMATOLOGY GUIDELINES^{2,6}

- Sun avoidance: especially direct sun at mid-day.
- Use protective clothing, sunglasses, and hats.
- Use broad-spectrum sunscreen with UVB/UVA (SPF50+) protection on all sun-exposed areas.
- Frequent applications (everyday, reapplication every 2h, including indoors near windows).
- Protection is necessary rain or shine, all year round.

RESULTS & DISCUSSION

PREVENTION

- Identify photosensitizing medications while dispensing and provide patient education on photoprotection to prevent drug-induced photosensitivity:
- Use readily available lists of potential photosensitizing drugs for consultation.^{6,7}
- Emphasize comprehensive photoprotection: sun avoidance throughout the day (UVA levels remain fairly constant); protective clothing; sunscreen.
- Tailor sunscreen to dermatoses, habits, and preference.
- Recommend broad spectrum sunscreens with strong protection against UVA, responsible for most photosensitive reactions, irrespective of skin phototype.¹
- Educate on correct use:
 - Adequate amount (1 teaspoon for the face)
 - Application 15 to 20 minutes before exposure
 - Reapplication every 2 hours.
- Recommend enhanced protection for patients at high risk of post-inflammatory hyperpigmentation (skin phototype > IV or significant sun exposure).

MANAGEMENT

In cases of drug-induced photosensitivity (phototoxic or photoallergic):

- Identify and avoid the causative agent.
- Record patient history, focusing on the timing of medication use relative to onset of cutaneous eruption.
- Refer in cases of severe photosensitivity.
- If discontinuation is not possible, implement secondary prevention measures such as sun avoidance and protective clothing.

POST-TREATMENT

- Persistent photosensitivity may last for several months after stopping the photosensitizing drug, so photoprotection should be continued.
- Encourage ongoing healthy sun habits and use of broad-spectrum sunscreen with SPF 30 or higher.

RED FLAGS

WHEN TO REFER:

Severe photosensitivity reaction: intense burns, swelling, blistering, etc.

CONCLUSION

Community pharmacists play a key role in prevention and management of drug-induced photosensitivity, including evaluation of photosensitizing medications, patient assessment and monitoring, education, promotion of sun-safe behaviors and sunscreen use.

Their interventions are guided by each patient's skin conditions, cutaneous phototype, habits, and preferences. Practical guidance and targeted training may help strengthening pharmacists' confidence and effectiveness in delivering personalized photoprotection counseling.

PATIENT JOURNEY – THE PHARMACIST ROLE

