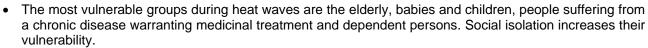


Clarification regarding the correct use of medicinal products in the event of a heat wave

THE KEY MESSAGES



The elderly are particularly at risk because of: deterioration in their ability to recognise thirst, diminished homeostatic regulation of water and sodium, and reduced thermoregulatory capacity through perspiration.

- In the event of a heat wave, some medicinal products are likely to exacerbate the exhaustion-dehydration syndrome or heat stroke. These are essentially:
 - Medicinal products causing hydration and/or electrolyte disorders,
 - Medicinal products likely to alter kidney function,
 - Medicinal products, the kinetic profile of which may be affected by dehydration,
 - Medicinal products that may disrupt central or peripheral thermoregulation.

Medicinal products that might cause hyperthermia and those that may indirectly exacerbate the effects of heat must also be taken into account when analysing risk factors in subjects likely to experience problems adapting to the heat (see summary table).

- The adaptation of current medicinal treatment must be considered individually. There is no justification for an immediate and systematic decrease or stopping of medicinal products likely to interact with the body's ability to adapt to heat.
- Health care professionals are advised to:
 - 1. carry out a full evaluation of the state of hydration (clinical evaluation, evaluation of water intake, recording of weight, heart rate, blood pressure and a full electrolytogram with blood creatinine levels and evaluation of creatinine clearance) before making any decision regarding treatment;
 - 2. regularly check hydration level if the heat wave persists;
 - 3. draw up a list of medicinal products, either prescribed or available over-the-counter, taken by the patient and to identify those that could alter the body's ability to adapt to heat (see summary table);
 - 4. reassess the benefit of each of these medicinal products and withdraw any medication that seems inappropriate or not essential. Pay particular attention to the combination of nephrotoxic medicinal products in the elderly;
 - 5. avoid the prescription of non-steroidal anti-inflammatory drugs, particularly nephrotoxic in case of dehydration;
 - 6. in the event of fever, also avoid the prescription of acetaminophen, due to its inefficacy to treat heat stroke and the risk of aggravating a pre-existing liver impairment;
 - 7. If diuretics are prescribed, check that water and sodium intakes are appropriate;
 - 8. advise the patient to seek medical advice before taking any medicinal products including over-thecounter medication.

Summary Table

ME DICINAL PRODUCTS LIKELY TO EXACERBATE EXHAUSTION-DEHYDRATION SYNDROME AND HEAT STROKE				
Medicinal products causing electrolyte imbalance	hydration disorders and/or			
Medicinal products likely to alter kidney function		NSAIDs (including salicylates > 500 mg/d, classic NSAIDs and COX-2 selective inhibitors) Angiotensin converting enzyme (ACE) inhibitors Angiotensin II receptor antagonists Aliskiren Sulfamides Indinavir Gliptins and GLP-1 receptor agonists As a general rule, all medicinal products known for their nephrotoxic effects (e.g. aminoglycosides, cyclosporine, tacrolimus, iodine contrast products, etc.)		
dehydration		Lithium Anti-arrhythmics Digoxin Anti-epileptics Biguanides and hypoglycaemic sulfonamides Statins and fibrates		
Medicinal products that can prevent heat loss	At central level	Neuroleptics Serotoninergic medicinal products [imipramine antidepressants, serotonin reuptake inhibitor antidepressants(SRI), serotonin and norepinephrine reuptake inhibitor antidepressants (SNRI), triptans, certain opiates (dextrometorphan, tramadol)]		
	At peripheral level	Medicinal products with atropinic properties	- imipramine antidepressants - first generation antihistamines - atropinic anti-Parkinson's drugs - certain antispasmodics, especially those used in the treatment of urinary disorders - antipsychotics - disopyramide - pizotifen - some bronchodilators (tiotropium, etc.) - atropine – atropine eye drops - nefopam - memantine - scopolamine	
		Vasoconstrictors Medicinal products limiting the	- agonists and sympathomimetic amines - certain antimigraine preparations (ergot derivatives, triptans) - beta-blockers	
	By altering basal metabolism	increase in cardiac output Thyroid hormones	- diuretics	
MEDICINAL PRODUCTS LIKELY TO TRIGGER HYPERTHERMIA (under normal temperature conditions or in the event of a heat wave)				
	·	Antipsychotics Serotoninergic agonists	Ż /	
MEDICINAL PRODUCTS LIKELY TO EXACERBATE THE EFFECTS OF HEAT				
Medicinal products likely to lower blood pressure		All antihypertensive drugs Anti-anginal drugs		
Medicinal products altering vigilance				