

ATTACHMENT A**DRUGS ASSOCIATED WITH HEAT STRESS***

	Anhydrotic	Poikilothermic	Potentiator
Anticonvulsants Topiramate (Topamax®)**	+		
Anticholinergics** Benzotropine (Cogentin®) Biperiden (Akineton®) Hyoscyamine (Levbid®) Oxybutynin (Ditropan®) Trihexyphenidyl (Artane®)	+		
Antihistamines Cyproheptadine (Periactin®) Diphenhydramine (Benadryl®) Hydroxyzine (Atarax®) Promethazine (Phenergan®)		+	
Antipsychotics** ALL		+	
Antidepressants Clomipramine (Anafranil®) Desipramine (Norpramin®) Doxepin (Sinequan®) Imipramine (Tofranil®) Nortriptyline (Pamelor®) Amitriptyline (Elavil)		+	
Antimanic Lithium carbonate (Eskalith)***			
Beta Blockers Atenolol (Tenormin®) Metoprolol (Lopressor®) Propranolol (Inderal®) Carvedilol (Coreg)		+	+
Calcium Channel Blockers Amlodipine (Norvasc)		+	+
Diuretics Furosemide (Lasix®) Hydrochlorothiazide (Hydrodiuril®)		+	+

* This list only includes some of the more common medications associated with heat stress and is not all-inclusive. The recommendations in this policy are meant to serve as guidelines and are not intended to substitute for the judgment of a physician or mid-level provider in providing appropriate health care.

** These drugs have specific warnings from the manufacturer to avoid excessive heat and dehydration.

***Although Lithium does not disrupt or interfere with the body's ability to regulate temperature, if an offender treated with lithium becomes dehydrated they are at an increased risk of lithium toxicity.

In general, offenders on antipsychotic drugs should not be allowed to work or recreate in environments where the apparent air temperature is 95° F or higher. This restriction should also be considered for offenders who are on other drugs classified as anhydrotics or poikilothermics or potentiators if they are on more than one such drug or if they also have an underlying medical condition that places them at increased risk, particularly at higher dosage levels of the drugs. Decisions about suitability of work assignments and recreation areas for these offenders will be made by facility medical staff.

References:

1. Cuddy, MLS. The Effects of Drugs on Thermoregulation. *AACN Clinical Issues* 2005;15(2): 236-253.
2. Glazer JL. Management of Heatstroke and Heat Exhaustion. *American Family Physician* 2005;11(71): 2133-2140.
3. Kwok J and Chan T. Recurrent Heat Related Illnesses during Antipsychotic Treatment. *Ann of Pharmacotherapy* 2005;39:1940-1942.
4. Martinez M, Davenport L, Saussy J, Martinez J. Drug-Associated Heat Stroke. *Southern Medical Journal* 2002; 95(8):799-802.
5. OSHA Protecting workers in Hot Environments Fact Sheet 1995. Accessed via the internet at http://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=FACT_SHEETS&p_id=167.
6. Pluth PY. Heat Stroke: A Comprehensive Review. *AACN Clinical Issues* 2004;15(2): 280-293.
7. Prevention and Treatment of Sunburn. *Med Lett Drugs Ther* 2004;46:45-46.
8. Reily TH, Kirk MA. Atypical Antipsychotics and Newer Antidepressants. *Emerg Med Clin N Am* 2007:477-497.
9. Clinical Pharmacology. Accessed via internet www.clinicalpharmacology.com
10. Medication Package Inserts. Accessed via internet
11. Barrow MW, Clark KA. Heat-related illnesses. *American Family Physician* 1998;58(3):749-56.
12. Glazer JL. Management of heatstroke and heat exhaustion. *American Family Physician* 2005;71(11):2133-40.
13. Hassanein T, Razack A, Gavalier JS, Van Thiel DH. Heatstroke: its clinical and pathological presentation, with particular attention to the liver. *The American Journal of Gastroenterology* 1992;87(10):1382-9.
14. Lee-Chiong T, Stitt JT. Heatstroke and other heat-related illnesses: the maladies of summer. *Postgraduate Medicine* 1995;98(1):26-36.
15. Pluth Yeo T. Heat stroke: a comprehensive review. *AACN Clinical Issues* 2004;15(2):280-93.
16. Sandor RP. Heat illness: on-site diagnosis and cooling. *The Physician and Sports medicine* 1997;25(6):35-40.
17. Simon HB. Hyperthermia. *New England Journal of Medicine* 1993;329(7):483-7.
18. Simpson GM, Davis J, Jefferson JW, Perez-Cruet JF. Sudden death in psychiatric patients: the role of neuroleptic drugs. An American Psychiatric Association task force report. *American Psychiatric Association* 1987.
19. Squire DL. Heat illness: fluid and electrolyte issues for pediatric and adolescent athletes. *Sports Medicine* 1990;37(5):1085-1109.
20. Stotter Cuddy ML. The effects of drugs on thermoregulation. *AACN Clinical Issues* 2004;15(2):238-53.
21. Sucholeiki R. Heatstroke. *Seminars in neurology* 2005;25(3):307-14.
22. Tek D, Olshaker JS. Heat illness. *Environmental Emergencies* 1992;10(2):299-310.
23. Wexler RK. Evaluation and treatment of heat-related illnesses. *American Family Physician* 2002;65(11):2307-2314.
24. American Heart Association. Protect your heart in the heat. Available at http://www.heart.org/HEARTORG/Conditions/More/MyHeartandStrokeNews/Protect-Your-Heart-in-the-Heat_UCM_423817_Article.jsp. Revised Dec 21, 2011.
25. Cheshire WP, Fealey RD. Drug-induced hyperhidrosis and hypohidrosis: incidence, prevention and management. *Drug Safety* 2008;31(2):109-26.
26. Fox C, Richardson K, Maidment ID, et al. Anticholinergic medication use and cognitive impairment in the older population: the medical research council cognitive function and ageing study. *Journal of the American Geriatric Society* 2011;59:1477-83.

D-27.2 Attachment A

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27. Nordon C, Martin-Latry K, Roquefeuil L, et al. Risk of death related to psychotropic drug use in older people during the European 2003 heatwave: a population-based case-control study. *American Journal of Geriatric Psychiatry* 2009;17(12):1059-67.
28. Epstein Y, Albukrek D, Kalmovitch B, Moran DS, Shapiro Y. Heat intolerance induced by antidepressants. *Annals of the New York Academy of Sciences* 1997;813:553-8.
29. Delaney KA. Heat stroke: underlying processes and lifesaving management. *Postgraduate Medicine* 1992;91(4):379-81.
30. Gordon NF, Kruger PE, Van Rensburg JP, Van der Linge A, Kielblock AJ, Cilliers JF. Effect of beta-adrenoreceptor blockade on thermoregulation during prolonged exercise. *Journal of Applied Physiology* 1985;58(3):899-906.