

Drugs Which Can Affect Near Vision: A Useful List

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ABSTRACT

This paper documents a list of drugs that cause problems with near vision, by virtue of effects on accommodation, occasionally refractive error and diplopia. It is meant as a reference aid to the clinician when confronted with problems of focusing on near objects or print.

There are many drugs that have been reported to interfere with near or reading vision, producing blurring, decreased accommodation and diplopia. This paper lists the drugs that have been reported in the literature to produce symptoms which interfere with near vision. Case reports for the listed drugs vary greatly from many to few. The drugs have been divided into the following categories: those causing (A) blurring at near, (B) diplopia and (C) induced myopia. Those drugs which only rarely cause these symptoms have been omitted.

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TABLE 1
DRUGS COMMONLY CAUSING DIFFICULTY WITH FOCUSING AT NEAR OR BLURRED VISION.

DRUG	INCIDENCE	REFERENCE
<i>Antipsychotics</i>		
Chlorpromazine	14-23	8
Clozapine	5	8,14
Fluphenazine	1.2-4.3	8
Haloperidol	6.8-16	8
Loxapine		12,14
Perphenazine	7.4-17.8	8
Pimozide	20	8
Risperidone	1-2%, >= 10%	11
Thioridazine	0.6-18	8
Thiothixene	20	8
Trifluoperazine	4-10	8
<i>Antidepressants</i>		
Bupropion	5.3-15%	11
Doxepin	20	8
MAOIs, for example:		
Phenelzine	1.5-17%	8
Tranlycypromine	9%(2-10%)	8
Maprotiline	4%	11
Nefazodone	9%	11
SSRIs, for example:		
Fluoxetine	3-4.5%	8,11
Fluvoxamine	6.3%	14
Paroxetine	4%	11
Sertraline	4%	11
Tricyclic Antidepressants,		
for example:		
Amitriptyline	7.5-35%	8
Clomipramine	18-20% adults	8
Desipramine	2-6	8
Imipramine	1.2-17%	8
Nortriptyline	5.5%	8
Trimipramine	6%	8

Venlafaxine	6%	11
<i>Anticholinergics</i>		
Atropine		12
Belladonna		12
Benzotropine	20%	8
Dicyclomine		12
Donepezil	1-2%	14
Hyoscyamine		14
Propantheline		12
Scopolamine		12,14
Trihexyphenidyl	12	
<i>Other Drugs</i>		
Amiodarone	(high doses)	6
Buspirone	2%	11
Calcium channel blockers		10
Carbamazepine	(high doses)	10,12
Chloroquine		12
Chlorpheniramine	-1%	10
Clomiphene	-5-10%	6,10
Cyclophosphamide		6
Cytarabine		10
Digoxin		6,10
Fludarabine		14
Gabapentin	4.2% (amblyopia)	14
Guanethedine	17%	10
Hydroxychloroquine		12
Indinavir	<2%	14
Lamotrigine	15.5%	11
Lithium		6
Mexilitine		6
Piroxicam	<1%	14
Quinidine		6
Ritonavir	<2%	14
Trimethadione		6
Zidovudine	<2%	14

TABLE 2
DRUGS WHICH LESS COMMONLY CAUSE DIFFICULTY WITH
FOCUSING AT NEAR AND BLURRED VISION.

DRUG	INCIDENCE	REFERENCE
Acetazolamide		12
Acetylcholine		12
Alprazolam		12
Amantadine	0.1-1% "visual disturbances"	6
Ambutonium		12
Amodiaquine		12
Amoxapine		12
Amphetamine		12
Amphotericin		14
Antazoline		12
Baclofen		12
Bendroflumethiazide		12
Betamethasone		12
Bethanechol		12
Biperiden		12
Captopril		13
Carbachol		12
Carisoprodol		12
Cetirizine		13
Chloramphenicol		12
Chlordiazepoxide	0.1%	8
Chlorothiazide,		12
Chlorthalidone		12
Cinchocaine (dibucaine)		12
Cimetidine		12
Clemastine		12
Clonazepam		12
Clonidine	rare	14
Clorazepate		12
Cocaine		12
Cortisone		12

TABLE 2 CONT.
DRUGS WHICH LESS COMMONLY CAUSE DIFFICULTY WITH
FOCUSING AT NEAR AND BLURRED VISION.

DRUG	INCIDENCE	REFERENCE
Cyclopentolate		12
Dapsone		11
Dexamethasone		12
Dextramphetamine		12
Diazepam	0.14%	8
Diethylpropion		12
Diflunisal	<1%	14
Dimenhydrinate		11
Diphenhydramine		12
Diphtheria Polio Tetanus Vaccine		12
Diphtheria Tetanus Vaccine		12
Diphtheria Vaccine		12
Disopyramide		12
Dronabinol		12
Droperidol		12
Echothiophate		12
Emetine		12
Ergot		12
Ethanol		12
Ethopropazine		12
Fenfluramine		12
Fluorometholone		12
Fluorouracil		12
Flurazepam		12
Ganciclovir	<1% (amblyopia)	14
Gentamicin		11
Hashish		12
Heroin		12
Homatropine		12
Hydrochlorothiazide	(transient)	14
Hydromorphone		12
Indapamide	<1%	14
Iodine, Iodine Compounds		12
Isoniazid		12
Isopropamide		12
Levodopa		11
Lorazepam		12
LSD		12
Marijuana		12
Medrysone		12
Meprobamate		12
Mesalamine (5-ASA)	?	11
Mescaline		12
Methamphetamine		12
Methazolamide		12
Methotrimeprazine		12
Methylene blue		12
Methysergide		12
Metolazone,		12
Midazolam		12
Morphine		12
Nalidixic acid		12
Naproxen		12
Neostigmine		12
Netilmicin	<0.1%	11
Nitrazepam		12
NSAIDs		6
Olanzapine	rare	11
Olsalazine	?	11
Opium		12
Orphenadrine		12
Oxazepam		12
Oxymorphone		12
Penicillins		12
Pentamidine (aerosol)	<1%	14
Pentazocine		12
Periciazine		12

Phentermine,		12
Phenytoin		12
Physostigmine,		12
Pilocarpine		12
Piperazine		12
Pralidoxime		12
Prednisolone		12
Primidone,		12
Procarbazine		12
Prochlorperazine		12
Procyclidine		12
Promethazine		12
Propranolol		12
Psilocybin		12
Pyrilamine		12
Selegeline		14
Streptomycin		12
Temazepam		12
Tetanus Immune Globulin, Toxoid		12
Tetracaine		12
THC		12
Thiabendazole	rare	14
Trazodone		14
Triazolam		12
Trimeprazine		12
Tripelennamine		12
Tropicamide		12
Vinblastine		12
Vincristine		12
Zalcitabine	<3%	11

?-Causal relationship not established

TABLE 3
DIPLOPIA: MORE COMMON DRUG CAUSES.

DRUG	INCIDENCE	REFERENCE
Felbamate	3.4-6.1%	11
Fluoxetine	0.1-1%	14
Gabapentin	5.9%	14
Isotretinoin/oral retinoids		6
Lamotrigine	27.6%	11
Pergolide	2.1%	11
Procarbazine		6
Topiramate	6.3%	it

TABLE 4
DIPLOPIA: LESS COMMON DRUG CAUSES.

DRUG	REFERENCE
Streptomycin	12
allopurinol	12
amantadine	1
ambenonium	1,12
amphotericin	2
anagrelide (>5%)	11
antazoline	12
Antidepressants, MAOIs e.g. phenelzine	12
Antidepressants, tricyclics e.g. amitriptyline	12
Antidepressants, SSRIs e.g. sertraline (0.1-1%)	11
Antidiabetic agents, oral e.g. glyburide	1,12
Antihistamines (most) e.g. chlorpheniramine, diphenhydramine	1,12
aztreonam (??1%)	11

	bacitracin	12
	baclofen	1,12
	Barbiturates	1
	e.g. pentobarbital	
	Benzodiazepines	12
	e.g. diazepam	
	Beta-adrenergic blockers	12
	e.g. propranolol	
	bupropion (??0. 1%)	11
	carbamazepine (high doses)	12
	carisoprodol	12
	chlorthalixone	1, 12
	cisplatin	I
	clindamycin	12
	clomiphene	1,12
	colchicine	1,12
	colistin	12
	Corticosteroids	1
	e.g. betamethasone, prednisone	
	cytarabine (intrathecal route)	1
	danazol	1, 12
	dantrolene	1, 12
	diazoxide	12
	diethylpropion	12
	digoxin	12
	disopyramide	1
	dronabinol	12
	edrophonium	1,12
	ethanol	I
	ethchlorvynol	1,12
	ethionamide	12
	ethosuximide	12
	ethotoin	12
	fenfluramine	12
	flecainide	12
	floxuridine	12
	fluorouracil	12
	gold salts	1
	guanethidine	12
	hexachlorophene	1, 12
	insulin	1,12
	Iodide derivatives	1
	e.g. diatrizoate	
	iodoquinol	12
	isocarboxazid	12
	isoniazid	12
	ketamine	1,12
	labetalol	1
	levodopa	1,12
	lithium	I
	Local anaesthetics	1, 12
	e.g. bupivacaine, lidocaine	
	marijuana	12
	mephenytoin	12
	meprobamate	12
	methanol	1,12
	methocarbamol	1,12
	methsuximide	12
	methyl dopa	I
	metoclopramide	1, 12
	metocurine	1,12
	metronidazole	12
	methylene blue	12
	mexiletine	12
	mitotane	12
	neomycin	I
	nitrofurantoin	12
	Non-steroidal antiinflammatory drugs	1,12
	e.g. ASA, ibuprofen	
	norepinephrine	12
	olanzapine (51%)	11
	Opiate analgesics (withdrawal)	1,12
	e.g. morphine, Pentazocine	
	Oral antidiabetic agents	1

	e.g. glyburide	
Oral contraceptives		1,12
orphenadrine		1,12
pemoline		12
penicillamine		1,4
Penicillins		12
phencyclidine		1,12
polymyxin B		12
pralidoxime		1,12
primidone		12
procarbazine		12
pyridostigmine		1,12
quinidine		12
rabies vaccine, globulin		1, 12
retinol (Vitamin A)		1
risperidone		11
selegiline		11
succinylcholine		1, 12
tacrine (0.1-1%)		11
Tetracyclines		12
	e.g. tetracycline	
tetrahydrocannabinol (THC)		12
thiothixene		12
tocainide		12
tolazamide		1,12
trazodone		11, 12
trichloroethylene		12
trimethadione		1
tubocurarine		12
valproate/divalproex		13
vinblastine		12
Vincristine		12
Vitamin D		1

TABLE 5
DRUGS INDUCING MYOPIA THROUGH INCREASED
CILIARY BODY CONTRACTION OR LENS HYDRATION

DRUG	REFERENCE
Acetazolamide	1,5,6
Alcohol	12
ASA	1,5,12
Betaxolol	12
Bromocriptine	4,6
Carbachol	12
Clofibrate	12
Corticosteroids	1,6,12
Diuretics e.g. chlorthalidone, hydrochlorothiazide	1,5,6,12
Droperidol	1
Ethosuximide	12
Haloperidol	1
Hyaluronidase	1, 12
Ibuprofen	1,12
Isoniazid	5
Isosorbide dinitrate	12
Isotretinoin, etretinate	1, 12
Methacholine	12
Methazolamide	12
Methsuximide	12
Metronidazole	6
Neostigmine	12
Opioids e.g. codeine, morphine	1,12
Oral contraceptives	1,7,12

Penicillamine		1
Phenformin		5
Phenothiazines		7, 12
	e.g. chlorpromazine	
Phensuximide		12
Physostigmine		12
Pilocarpine		12
Prochlorperazine		1,5,7,12
Promethazine		1,5
Quinine		1
Spironolactone		1,5,12
Sulfonamides		1,5-7,10,12
Tetracyclines (rare)		1,5-7,12
Timolol		12
Trimeprazine		12

Note: These lists are not all inclusive. Some drugs which have been reported to cause blurred vision, myopia or diplopia were omitted because they are rarely used in clinical practice.

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