Pharmacogenomics Gene – Drug Associations

IMPORTANT

Do not start, stop, or change any of your child's medicines without talking to your healthcare team.

The table below includes a list of genes that may be used to guide decisions on how to use certain medicines. The genes are listed in alphabetical order. Based on the results of PGx testing, the medicine or medicines listed with each gene may be used at normal doses, higher doses, lower doses, or avoided. If your child is currently taking any of the medicines on the list, please check with your healthcare team before making any changes to your child's medicines. This test report should be shared with your child's healthcare team before starting any new medicines.

Not every medicine is listed in the table because research is ongoing. PGx is a new and growing field within medicine!

Gene	Medicine(s) Affected		
ABCG2	Rosuvastatin		
CYP2B6	Efavirenz	Sertraline	
CYP2C	Warfarin		
CYP2C19	Amitriptyline Citalopram Clomipramine Clopidogrel Escitalopram	Dexlansoprazole Doxepin Imipramine Lansoprazole Omeprazole	Pantoprazole Rabeprazole Sertraline Trimipramine Voriconazole
CYP2C9	Celecoxib Flurbiprofen Fluvastatin Fosphenytoin	Ibuprofen Lornoxicam Meloxicam Phenytoin	Piroxicam Tenoxicam Warfarin
CYP2D6	Amitriptyline Atomoxetine Aripiprazole* Codeine Clomipramine Desipramine Doxepin	Haloperidol* Fluvoxamine Imipramine Metoprolol Nortriptyline Ondansetron Paroxetine	Risperidone* Tamoxifen Tramadol Trimipramine Tropisetron Venlafaxine Vortioxetine
CYP3A5	Tacrolimus		
CYP4F2	Warfarin		
DPYD	Capecitabine	Fluorouracil	

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Please note - this table is continued on the next page.

Gene	Medicine(s) Affected		
G6PD	People with reduced G6PD function should discuss medications with their Hematology Team.	G6PD helps protect red blood cells from damage. Reduced function in G6PD can increase the risk for red blood cell damage from medicines. Other things in your diet and environment can also increase the risk of cell damage with G6PD deficiency. People with reduced G6PD function will be followed by a blood doctor.	
HLA-A*31:01	Carbamazepine		
HLA-B*15:02	Carbamazepine Fosphenytoin	Oxcarbazepine Phenytoin	
HLA-B*57:01	Abacavir		
HLA-B*58:01	Allopurinol		
IFNL3/IFNL 4	Peginterferon alfa-2a		
NAT2	Hydralazine		
NUDT15	Azathioprine	Mercaptopurine	Thioguanine
SLCO1B1	Atorvastatin Fluvastatin Lovastatin	Pitavastatin Pravastatin	Rosuvastatin Simvastatin
TPMT	Azathioprine	Mercaptopurine	Thioguanine
UGT1A1	Atazanavir		
VKORC1	Warfarin		

"Medications Affected" are based on Clinical Pharmacogenetics Implementation Consortium (CPIC®) Guidelines at the date of publication of this document.
* Medication based on Dutch Pharmacogenomics Working Group (DPWG) guidelines

The information included in this document is for informational purposes only and is not intended to substitute in any way for medical education, training, treatment, advice, or diagnosis by a healthcare professional. A qualified healthcare professional should always be consulted before making any healthcare-related decision.

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