

List of Medications Contraindicating Receipt of Smallpox Vaccine

The ACIP recommends that individuals taking medications in certain pharmacologic categories not be vaccinated with the smallpox vaccine. There is concern that enhanced vaccinia virus replication due to medication-induced immunosuppression may occur, leading to the possibility of untoward effects of the virus in the person taking these medications.

General categories of medications that are considered immunosuppressive

- Alkylating agents
- Antimetabolites, or
- High-dose corticosteroids (≥ 2 mg/kg body weight or 20 mg/day of prednisone for ≥ 2 weeks).
- Other immunosuppressive medications, immune suppressing antibodies and interferons

The categories of medications include those used to directly treat cancers and those that adversely affect the immune system (at recommended doses/duration or greater). Corticosteroids used in greater than physiologic doses may reduce the immune response to the vaccine. Persons being treated with or taking high dose corticosteroids should not be vaccinated with the smallpox vaccine within one month of completing corticosteroid therapy, and persons being treated with other immunosuppressive drugs within the prior 3 months should not be vaccinated.

The attached list is for general guidance about medications that if an individual is taking may contraindicate them from receiving the smallpox vaccine. This list is not meant to be exhaustive but to serve as a guide to clinicians seeking to assist patients decide if they should be vaccinated with the smallpox vaccine. One should note that certain other medications not listed, may idiosyncratically and in certain health conditions, be immunosuppressive. Therefore clinical judgment is needed to decide the impact of these medications for patients based on their health status.

The medications are listed in alphabetic order of their generic names.

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**POSSIBLE DRUG CONTRAINDICATIONS TO
ADMINISTRATION OF SMALLPOX (Vaccinia) VACCINE**

(Alphabetically sorted by Generic name)

GENERIC DRUG	BRAND NAME DRUG	CATEGORY	*EQUIVALENCY NUMBER TO PREDNISONE
Abacavir	Ziagen®	T	
Abciximab	ReoPro®	M	
Adalimumab	Humira	DMARD	
Aldesleukin	Interleukin 2®	A	
Altretamine	Hexalen	A	
Aminoglutethimide	Cytadren	A	
Amprenavir	Agenerase®	T	
Anakinra	Kineret®	D	
Anastrozole	Arimidex	A	
Asparaginase	Elspar®	A	
Azathioprine	Imuran®	I	
Basiliximab	Simulect®	M	
Betamethasone	Celestone®	C	0.12
Betamethasone	Valisone®	C	0.12
Bleomycin	Blenoxane®	A	
Busulfan	Myleran®	A	
Capecitabine	Xeloda	A	
Carboplatin	Paraplatin®	A	
Carmustine	BiCNU® (BCNU)	A	
Chlorambucil	Leukeran®	A	
Cidofovir	Vistide®	T	
Cisplatin	cis-diamminedichloroplatinum II [cDDP]	A	
Cisplatin	Platinol®	A	
Cladribine	Leustatin®	A	
Cortisone	Cortone®	C	5
Cyclophosphamide	CTX	A	
Cyclophosphamide	Cytoxan®	A	
Cyclophosphamide	Neosar	A	
Cyclosporine	Neoral®	I	
Cyclosporine	Sandimmune®	I	
Cytarabine	ara-C	A	
Cytarabine	Cytosar-U®	A	
Cytarabine	DepoCyt	A	
Dacarbazine	DTIC-Dome®	A	
Dacarbazine	Imidazole Carboxamide	A	
Daclizumab	Zenopax	M	
Dactinomycin	Cosmegen®	A	
Daunorubicin	Cerubidine®	A	
Daunorubicin	Daunomycin	A	
Daunorubicin	Daunoxome®	A	0.15
Daunorubicin	Rubidomycin	A	
Delavirdine	Rescriptor®	T	
Denileukin diftitox	Ontak	A	
Dexamethasone	Decadron®	C	
Didanosine	Videx®	T	
Docetaxel	Taxotere	A	

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GENERIC DRUG	BRAND NAME DRUG	CATEGORY	*EQUIVALENCY NUMBER TO PREDNISONE
Doxorubicin	Adriamycin	A	
Doxorubicin	Doxil®	A	
Doxorubicin	Hydroxydaunorubicin	A	
Doxorubicin	Rubex	A	
Efavirenz	Sustiva®	T	
Epirubicin	Ellence	A	
Estramustine	Emcyt	A	
Etanercept	Enbrel®	D	
Etoposide	Etopophos®	A	
Etoposide	VePesid®	A	
Exemestane	Aromasin	A	
Floxuridine	Fluorodeoxyuridine	A	
Floxuridine	FUDR®	A	4
Fludarabine	FAMP	A	4
Fludarabine	Fludara®	A	4
Fluorouracil	5-FU®	A	
Fluorouracil	Adrucil	A/Derm	4
Fluorouracil	Efudex®	A/Derm	
Flutamide	Eulexin®	A	
Gemcitabine	Gemzar	A	
Gemtuzumab ozogamicin	Mylotarg	AI	
Hydrocortisone	Cortef®	C	
Hydrocortisone	Hydrocortone®	C	
Hydroxychloroquine	Plaquenil®	T	
Hydroxyurea	Hydrea®	A	
Idarubicin	Idamycin	A	
Ifosphamide	Ifex®	A	
Indinavir	Crixivan®	T	
Infliximab	Remicade®	M	
Interferon alfa-2a	Roferon-A®	A	
Interferon alfa-2b	Intron-A®	A	
Interferon beta-1a	Avonex®	AV	
Interferon beta-1b	Betaseron®	AV	
Interferon gamma-1b	Actimmune®	A	
Interleukin-2	Aldesleukin	AI	
Interleukin-2	Proleukin	AI	
Irinotecan	Camptosar	A	
Isotretinoin	Accutane	Aderm	
Lamivudine	Epivir®	T	
Lamivudine & Zidovudine	Combivir®	T	
Leflunomide	Arava®	D	
Letrozole	Femara	A	
Leuprolide	Lupron®	A	
Lomustine	CeeNu® (CCNU)	A	
Mechlorethamine HCl	Mustargen®	A	
Mechlorethamine HCl	Nitrogen Mustard	A	
Megestrol	Megace®	A	

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GENERIC DRUG	BRAND NAME DRUG	CATEGORY	*EQUIVALENCY NUMBER TO PREDNISONE
Melphalan	Alkeran®	A	0.8
Melphalan	L-Phenylalanine Mustard	A	
Melphalan	L-Sarcosine	A	
Mercaptopurine	Purinethol®	A	
Methotrexate	Amethopterin	A	
Methotrexate	Mexate	A	
Methotrexate	Rheumatrex®	D	
Methotrexate	Trexall™	D	
Methylprednisolone	Medrol®	C	
Mitomycin	Mutamycin®	A	
Mitotane	Lysodren®	A	
Mitoxantrone	Dihydroxyanthracenedione	A	
Mitoxantrone	Novantrone	A	
Muromonab-CD3	Orthoclone-OKT3	M	
Mycophenolate	Cellsept®	I	
Nelfinavir	Viracept®	T	
Nevirapine	Viramune®	T	
Paclitaxel	Taxol®	A	
Pegaspargase	Oncaspar®	A	1
Penicillamine	Cuprimine®	D	1
Pentostatin	Nipent®	A	1
Pimecrolimus	Elidel	Derm	
Pipobroman	Verocyte®	A	1
Plicamycin	Mithracin®	A	1
Prednisolone	Pediapred®	C	1
Prednisolone	Prelone®	C	
Prednisone	DeltaCortef®	C	
Prednisone	Deltasone®	C	
Prednisone	Meticorten®	C	
Prednisone	Sterapred®	C	
Priliximab	Centara	M	
Procarbazine	Matulane®	A	
Procarbazine	Natulanar	A	
Procarbazine	N-Methylhydrazine	A	
Ritonavir	Norvir®	T	
Rituximab	Rituxan	AI	
Saquinavir	Fortovase®	T	
Saquinavir	Invirase®	T	
Sargramostim	Leukine	I	
Sargramostim	Leukomax	I	
Stavudine	Zerit®	T	
Streptozocin	Zanosar®	A	
Tacrolimus	Prograf®	I	
Temozolomide	Temodar	A	
Teniposide	VM-26®	A	
Teniposide	Vumon®	A	
Testolactone	Teslac®	A	

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Thioguanine	6-TG®	A	
Thioguanine	Aminopurine-6-Thiol-Hemihydrate	A	
Thioguanine	Lavis	A	0.8
Thioguanine	Tabloid	A	
Thiotepa	TESPA (TSPA)	A	
Thiotepa	Thioplex®	A	
Thiotepa	Triethylenethiophosphoramidate	A	
Trastuzumab	Herceptin	AI	
Tretinoin	All-Trans Retinoic Acid	A	
Tretinoin	Vesanoid	A	
Triamcinolone	Kenalog®	C	
Uracil mustard	Uracil Mustard	A	
Valrubicin	Valstar®	A	
Vinblastine	Velban®	A	
Vinblastine	Velsar	A	
Vincristine	Oncovin®	A	
Vinorelbine	Navelbine®	A	
Zalcitabine	Hivid®	T	
Zidovudine	AZT®	T	
Zidovudine	Retrovir®	T	

KEY

A = Antineoplastic Agent

AV = Antiviral Agent

C = Corticosteroid

D = DMARD (Disease Modifying Anti-Rheumatic Drug)

I = Immunosuppressive

M = Monoclonal Antibody Drug

T = treats immunosuppressive diseases or used for them prophylactically

Derm = Dermatologic use

*Equivalency Number To Prednisone = represents a number which when divided into the dose of a similar drug will yield a dose that is approximately equal to the prednisone dosage.

Sources:

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