

# Diseases SUMMARY

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10:42 PM

- \*Ab-mediated autoimmunity can be transferred to baby
- \*T-mediated autoimmunity cannot be transferred to baby

## Outline:

- intro
- classifications
- examples & treatments

\*almost all rheumatic diseases are caused by autoimmunity

## Learning Objectives:

- autoimmune disease
- classifications
- mechanisms
- examples
- immunomodulatory drugs

- CORTICOSTEROIDS - suppresses inflammation
- CYCLOSPORINE - ↓ T-cell activity
- RITUXIMAB - α-CD20mAb
- CYCLOPHOSPHAMIDE - alkylating agent

PYRIDOSTIGMINE - prevents ACh degradation

## Type 2

Disease	Ag	Result	Tx
Hemolytic Anemia	Rh	hemolysis by complement & phagocytosis	- transfusion - plasmapheresis - <u>Immune Suppressors</u> : - corticosteroids - cyclosporine - rituximab
Autoimmune Thrombocytopenia / Purpura	GP11b/IIIa	bleeding	
Goodpasture's	basement membrane collagen IV	glomerulonephritis, pulmonary hemorrhage	- plasmapheresis - <u>Immune Suppressors</u> : - cyclophosphamide - prednisone - rituximab
Pemphigus Vulgaris	epidermal cadherin	blisters	
Acute Rheumatoid Fever	streptococcal cell wall Ag causes Ab cross-rxn with cardiac muscle	arthritis, myocarditis, valve scarring	
Graves'	TSH-R (agonist)	<u>hyper</u> thyroidism	- propylthiouracil/methimazole - radioactive therapy (years): (can cause hypothyroidism) (on synthroid for life)
Hashimoto's	Thyroid	Inflammation (goiter), <u>hypo</u> thyroidism	- synthroid
Myasthenia Gravis	ACh-R (antagonist)	weakness	- plasmapheresis - pyridostigmine - <u>Immune Suppressors</u> : - azathioprine - prednisone - thymectomy
DM2	Insulin receptor (antagonist)	<u>hyper</u> glycemia, ketoacidosis	
Hypoglycemia	Insulin receptor (agonist)	<u>hypo</u> glycemia	

## Type 3 (Systemic)

Disease	Ag	Result	Tx
Subacute Bacterial Endocarditis	bacteria	glomerulonephritis	
Mixed Essential Cryoglobulinemia	rheumatoid Factor IgG complexes	systemic vasculitis	
Systemic Lupus Erythematosus	DNA, histones, ribosomes, snRNP/sRNP	glomerulonephritis, vasculitis, arthritis	- <u>Immune Suppressors</u> : - NSAIDs - corticosteroids - hydroxychloroquine - azathioprine - belimumab

## Type 4

Disease	Ag	Result	Tx
DM1	β-cell	β-cell destruction	- insulin (inject, pump, inhale)
Rheumatoid Arthritis	unknown joint Ag	joint inflammation	- <u>Immune Suppressors</u> : - NSAIDs - corticosteroids - hydroxychloroquine - methotrexate - abatacept (Orencia) - tocilizumab (Actemra) - infliximab (Remicade) - adalimumab (Humira) - etanercept (Enbrel) - certolizumab pegol (Cimzia)
MS	myelin protein, proteolipid protein	brain damage, paralysis	- plasmapheresis - Type 1 IFN - glatiramer acetate (Copaxone) - dimethyl fumarate (Tecfidera) - fingolimod (Gilenya) - natalizumab (Tysabri) - <u>Immune Suppressors</u> : - prednisone

## Drugs that cause Autoimmunity (Lupus)

- hydralazine
- procinamide
- quinidine
- minocycline
- TNF-inhibitors\*\*