

The Ins and Outs of PD Meds

Johanna Hartlein, APRN, MSN

Family Nurse Practitioner and Great Hugger

Washington University School of Medicine

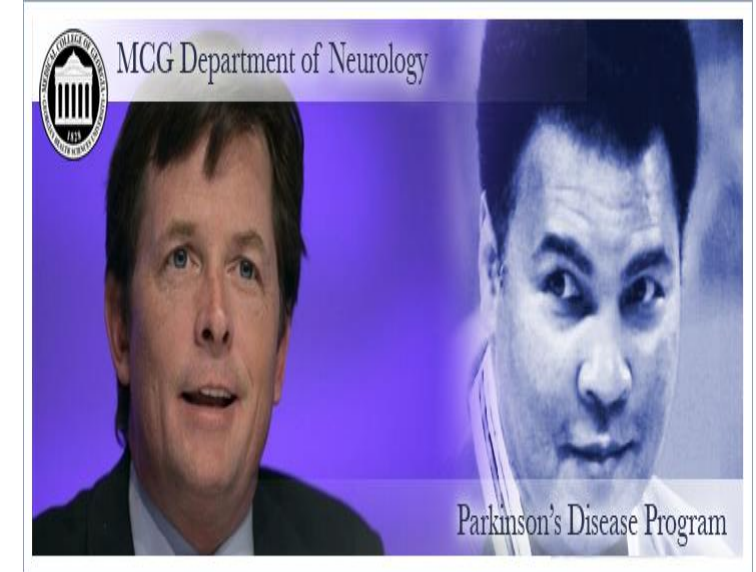
Words of Caution

- ▶ Just because I list a possible side effect, it does not mean that it will happen to you
- ▶ I am not covering every single side effect of every drug, just the most commonly seen
- ▶ Just because I say a drug is not my favorite for some patients, it doesn't mean it shouldn't EVER be used (with some exceptions).
- ▶ You will never be able to keep up trying to take notes. Debbie will add this slide show onto the STL APDA youtube channel



Common Meds for Motor Treatment of PD

- ▶ Carbidopa/levodopa (Sinemet, Sinemet CR, Stalevo, Rytary, Duopa, Inbreja)
 - ▶ Gold standard of treatment
- ▶ Dopamine Agonists: Pramipexole (Mirapex), Ropinirole (Requip), Rotigotine (Neupro) and Apomorphine (Apokyn)
- ▶ Dopamine Extenders: Rasagiline (Azilect), Safinimide (Xadago), Selegiline (Eldepryl), Entacapone (Comtan) and Tolcapone (Tasmar)
- ▶ Dyskinesia Meds: Amantadine (Symmetrel) and Amantadine ER (Gocovri)
- ▶ Anticholinergics: Benztropine (Cogentin) and trihexyphenidyl (Artane)
 - ▶ Throw them in the trash can



Levodopa explanation

- ▶ Carbidopa/levodopa (Sinemet, Sinemet CR, Stalevo, Rytary, Duopa, Inbreja)
- ▶ Carbidopa is the car, Levodopa is the passenger
- ▶ When levodopa gets to the brain, it converts to dopamine
- ▶ Dopamine causes possibly good and possibly bad things to happen
 - ▶ Nausea,
 - ▶ Lightheadedness,
 - ▶ Sleepiness,
 - ▶ Wearing off,
 - ▶ Dyskinesia,
 - ▶ Hallucinations

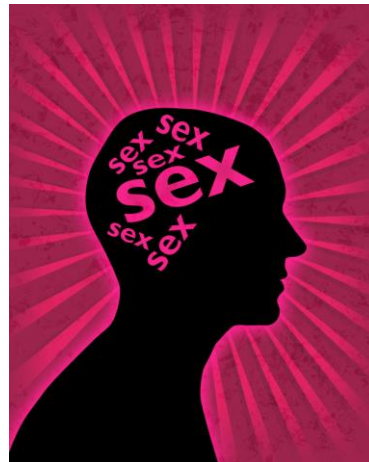


Important Tips For Taking Levodopa

- ▶ Take it on time
- ▶ Work with your doc to find the “Goldilocks dose”
- ▶ Take on an empty stomach unless nauseated
- ▶ Dissolve or chew pills for faster kick in
- ▶ Report side effects to neurologist for tweaking
- ▶ How to treat common side effects
 - ▶ Nausea
 - ▶ Wearing off
 - ▶ Sleepiness
 - ▶ Dyskinesia
 - ▶ Hallucinations
 - ▶ Lightheadedness

Why doesn't Johanna like dopamine agonists?

- ▶ Dopamine Agonists: Pramipexole (Mirapex), Ropinirole (Requip), Rotigotine (Neupro) and Apomorphine (Apokyn)
- ▶ I do just not in certain patients
- ▶ Great that they don't cause dyskinesia
- ▶ Fair treatment for restless legs
- ▶ Side effects
 - ▶ Lightheadedness
 - ▶ Hallucinations
 - ▶ Nausea
 - ▶ Sleepiness
 - ▶ Impulse control problems
 - ▶ Swelling of Ankles
 - ▶ Confusion



Meds for wearing off

▶ COMT inhibitors (Entacapone, Tolcapone)

▶ Side Effects

▶ Entacapone

- ▶ Orange pee, diarrhea, anything levodopa could cause

▶ Tolcapone

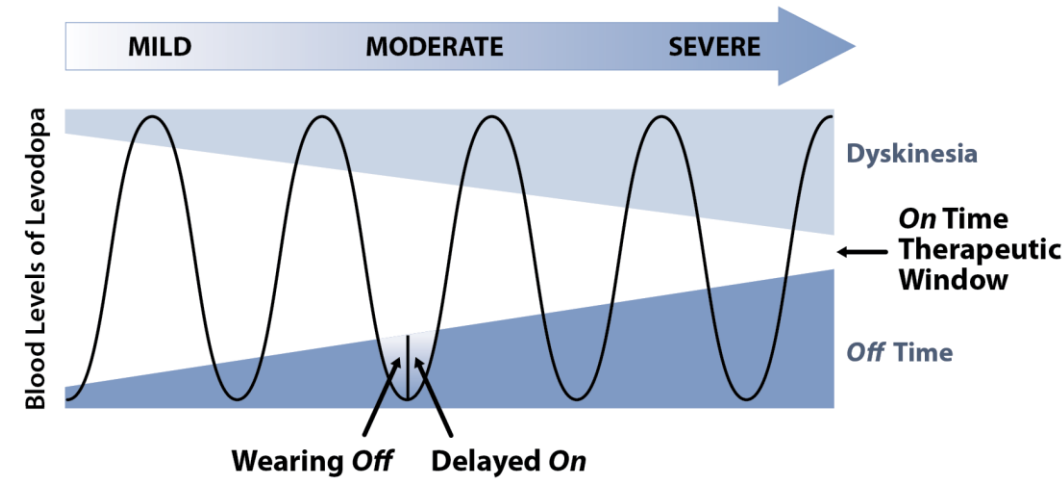
- ▶ Increase in liver enzymes, requires frequent blood monitoring. Super expensive

▶ MAO-B inhibitors (Rasagiline, Selegiline, Safinimide)

▶ Side Effects

- ▶ Strange dreams, indigestion, nausea, dry mouth, anything levodopa could cause

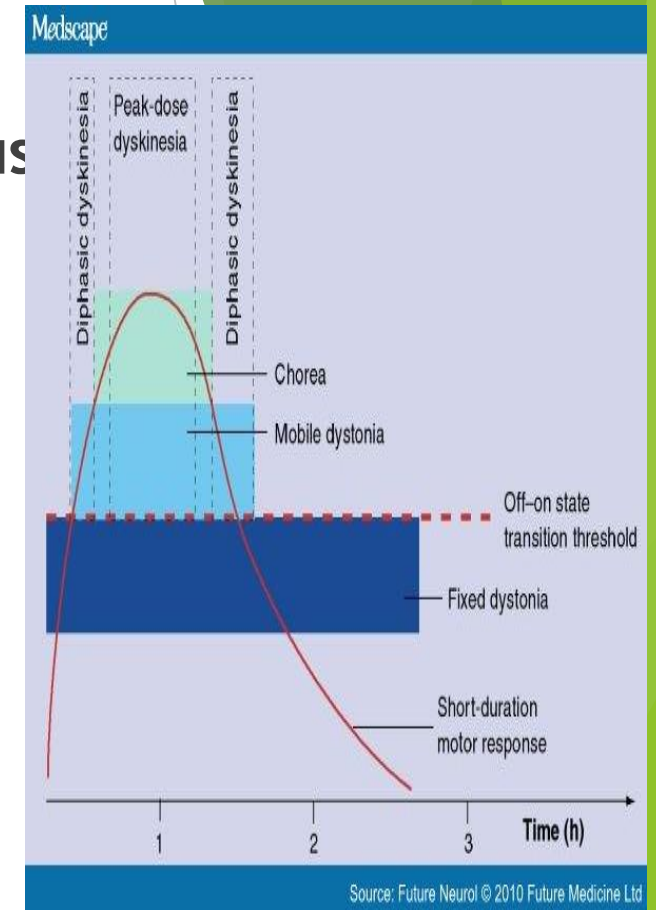
▶ Adding an agonist



Adapted from: J. Jankovic. Motor fluctuations and dyskinesias in Parkinson's disease: clinical manifestations. *Mov Disord*.2005;20(11):S11-S16.

Amantadine and GoCovri

- ▶ Amantadine and GoCovri are the same drug, one is just long acting
- ▶ Used for the treatment of dyskinesia
- ▶ Side effects
 - ▶ Lightheadedness
 - ▶ Hallucinations
 - ▶ Confusion
 - ▶ Insomnia
 - ▶ Swelling of the ankles



Meds for non-motor aspects of PD

- ▶ Meds for hallucinations: Quetiapine (Seroquel), Pimavanserin (Nuplazid) and Clozapine (Clozaril)
- ▶ Meds for thinking and memory: Donepezil (Aricept), Rivastigmine (Exelon), Galantamine (Razadyne), Memantine (Namenda), Donepezil/Memantine (Namzaric)
- ▶ Meds for raising blood pressures: Midodrine (ProAmatine), Fludrocortisone (Florinef) and droxidopa (Northera)
- ▶ Meds for muscle cramps: Baclofen, Cyclobenzaprine (Flexeril), Tizanidine (Zanaflex), Clonazepam, Botulinin (Botox)
- ▶ Meds for bladder: Tolterodine (Detrol), Oxybutynin (Ditropan), Trospium (Sanctura), Solifenacin (Vesicare), Darifenacin (Enablex), Mirabegron (MYRBETRIQ), alfuzosin (Uroxatral), doxazosin (Cardura), silodosin (Rapaflo), tamsulosin (Flomax), tadalafil (Cialis)
- ▶ Meds for sleep: Zolpidem (Ambien), Triazolam (Halcion), Eszopiclone (Lunesta), Temazepam (Restoril), Clonazepam, Diazepam, Lorazepam, Alprazolam
- ▶ Meds for constipation: Docusate Sodium (Colace), Senna Miralax, Senna-S, Milk of Magnesia, Metamucil, Lactulose, Linzess and Amitiza
- ▶ Meds for depression/anxiety: Sertraline, Paroxetine, Fluoxetine, Escitalopram, Citalopram, Venlafaxine, Duloxetine, Mirtazapine, Trazodone, Bupropion (Wellbutrin), Lamotrigine, Depakote, Clonazepam, Alprazolam, Diazepam
 - ▶ Lots of others but these are the most commonly used

Meds for hallucinations and possible SE's

▶ Quetiapine

- ▶ Lightheadedness, morning grogginess, weight gain, dry mouth, questionable efficacy
- ▶ Generally only take at bedtime unless for agitation

▶ Nuplazid

- ▶ May become expensive in the next few years
- ▶ Could take 6 weeks to note improvement
- ▶ Nausea, worsened constipation, ankle swelling

▶ Clozapine

- ▶ Could cause a dangerous drop in white cell count so frequent blood draws
- ▶ Lightheadedness, morning grogginess, weight gain, dry mouth
- ▶ Generally only take at bedtime

▶ AVOID ALL OTHERS



Meds for PD-thinking problems side effects

- ▶ **Cholinesterase Inhibitors: Donepezil (Aricept), Rivastigmine (Exelon), Galantamine (Razadyne)**
 - ▶ Nausea, diarrhea, insomnia, sleepiness, decreased appetite, confusion
 - ▶ May not work, data is mixed
 - ▶ If it does work, improvement will likely be minimal
- ▶ **NMDA receptor antagonist: Memantine (Namenda)**
 - ▶ No good data suggesting this would help PD dementia
 - ▶ Nausea, vomiting, diarrhea, constipation, dizziness, sleepiness
- ▶ **Mixed NMDA/Cholinesterase inhibitor: Donepezil/Memantine (Namzaric)**
 - ▶ No good evidence for using this



Meds for raising BP side effects

- ▶ Caffeine, salt, fluids
 - ▶ Swelling, anxiety
- ▶ Fludrocortisone
 - ▶ Swelling of ankles, low potassium, weak bones, easy bruising
 - ▶ Not a good choice for anyone with heart failure
- ▶ Midodrine
 - ▶ Itchy skin, worsened need to urinate, pressure in head
 - ▶ Not good for people with coronary artery disease (stents, heart attacks)
- ▶ Northera (Droxidopa)
 - ▶ Nausea, sleepiness, has become expensive
- ▶ All could cause sitting pressures to be high. That is not always bad



Low Blood Pressure		
Systolic pressure (When the heart contracts)	Diastolic pressure (When the heart relaxes)	Stages of Low Blood Pressure
90	60	Low Blood Pressure – Usual for athletes and children. Not of concern unless you experience dizziness, fainting or weakness – see a doctor
80	50	Very Low Blood Pressure- Possibly dangerous if symptoms exist – see a doctor
70	40	Extremely Low Blood Pressure-Dangerous- Definitely see a doctor

Meds for muscle cramps (dystonia) SE's

- ▶ Muscle relaxers: Baclofen, Cyclobenzaprine (Flexeril), Tizanidine (Zanaflex)
 - ▶ Sleepiness, confusion, hallucinations
- ▶ Botulinin
 - ▶ Weakness in the muscle, injection site reactions
- ▶ Clonazepam
 - ▶ Sleepiness, lightheadedness, imbalance, fatigue, confusion, hallucinations



Overactive Bladder Drugs Side Effects

- ▶ Overactive Bladder Drugs Tolterodine (Detrol), Oxybutynin (Ditropan), Trospium (Sanctura), Solifenacin (Vesicare), Darifenacin (Enablex)
 - ▶ Dry mouth, constipation, sleepiness, blurred vision, confusion, hallucinations, Trouble starting flow or emptying bladder fully
 - ▶ Of these Trospium is probably the safest
- ▶ The safest by far is Myrbetriq (Mirabegnon) but it might be pricey
 - ▶ Increased BP, dry mouth, constipation
- ▶ Botulinin and finasteride are fine



Urinary Retention Drugs Side Effects

- ▶ **Incomplete Emptying, Trouble Starting Flow:**
 - ▶ Alfuzosin (Uroxatral), doxazosin (Cardura), silodosin (Rapaflo), tamsulosin (Flomax), tadalafil (Cialis)
 - ▶ Lightheadedness, blurred vision, nausea, urgency



"I'm having trouble streaming."

Meds for sleep side effects

- ▶ Zolpidem (Ambien), Triazolam (Halcion), Eszopiclone (Lunesta), Temazepam (Restoril), Clonazepam, Diazepam, Lorazepam, Alprazolam, Anything that says “PM” and has Diphenhydramine
 - ▶ Morning grogginess, imbalance, confusion, hallucinations, dry mouth, addiction potential, sleep eating/walking/driving
- ▶ Clonazepam frequent used for REM sleep behavior disorder
- ▶ Safer choices for cognition and balance
 - ▶ Mirtazapine, Trazodone, Melatonin



Meds for constipation side effects

▶ Stool Softeners

- ▶ Docusate Sodium (Colace), Senna
 - ▶ Loose stools, diarrhea, bowel urgency

▶ OTC laxatives

- ▶ Miralax, Senna-S, Milk of Magnesia, Metamucil
 - ▶ Loose stools, diarrhea, bowel urgency, dehydration, bloating, cramping, gas

▶ Prescription laxatives

- ▶ Lactulose, Linzess and Amitiza: Pricey
 - ▶ Diarrhea, bloating, gas
 - ▶ Linzess: stuffiness, sneezing, sinus pain
 - ▶ Amitiza: Dry mouth, runny nose

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By Dan Gibson



What kind of laxative would you prefer...
Gentle over night relief, or instantly violent relief?

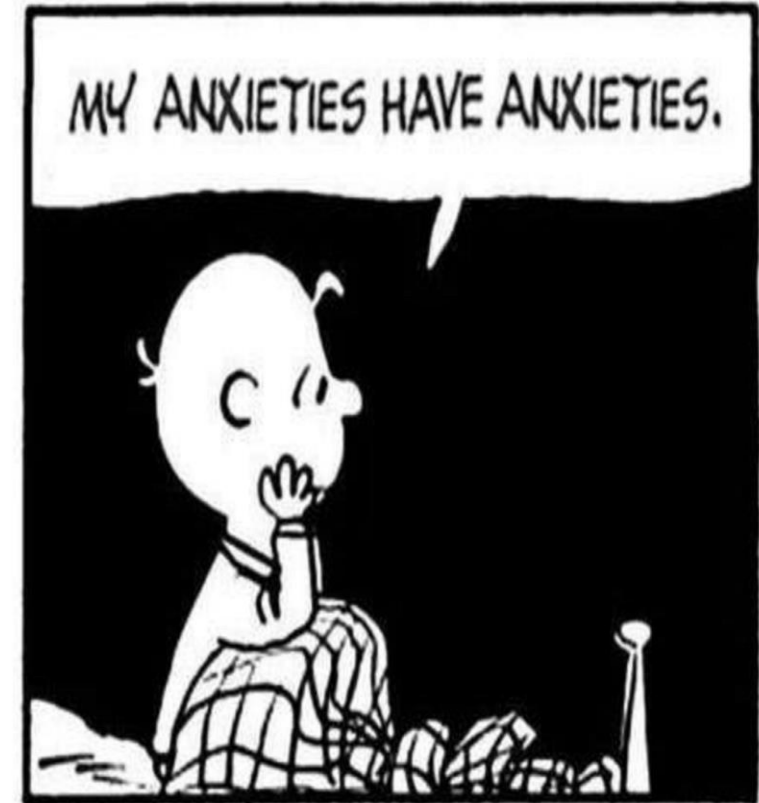
Meds for depression/anxiety SE's

- ▶ **SSRIs:** Sertraline (Zoloft), Paroxetine (Paxil), Fluoxetine (Prozac), Escitalopram (Lexapro), Citalopram (Celexa)
 - ▶ Nausea, Diarrhea, Sleepiness, Insomnia, Dizziness, Anorgasmia, Dry Mouth
- ▶ **SNRIs:** Venlafaxine (Effexor), Duloxetine (Cymbalta)
 - ▶ Nausea, Sweating, Anorgasmia, Sleepiness, Headache, Dizziness
- ▶ **Tetracyclics:** Mirtazapine (Remeron), Trazodone
 - ▶ Morning grogginess, increased appetite, weight gain, dry mouth, dizziness
- ▶ **Mood Stabilizers:** Lamotrigine (Lamictal), Depakote
 - ▶ Headache, blurred vision, tremor, dry mouth, GI upset, insomnia, drowsiness, weight gain. Depakote can cause hair loss



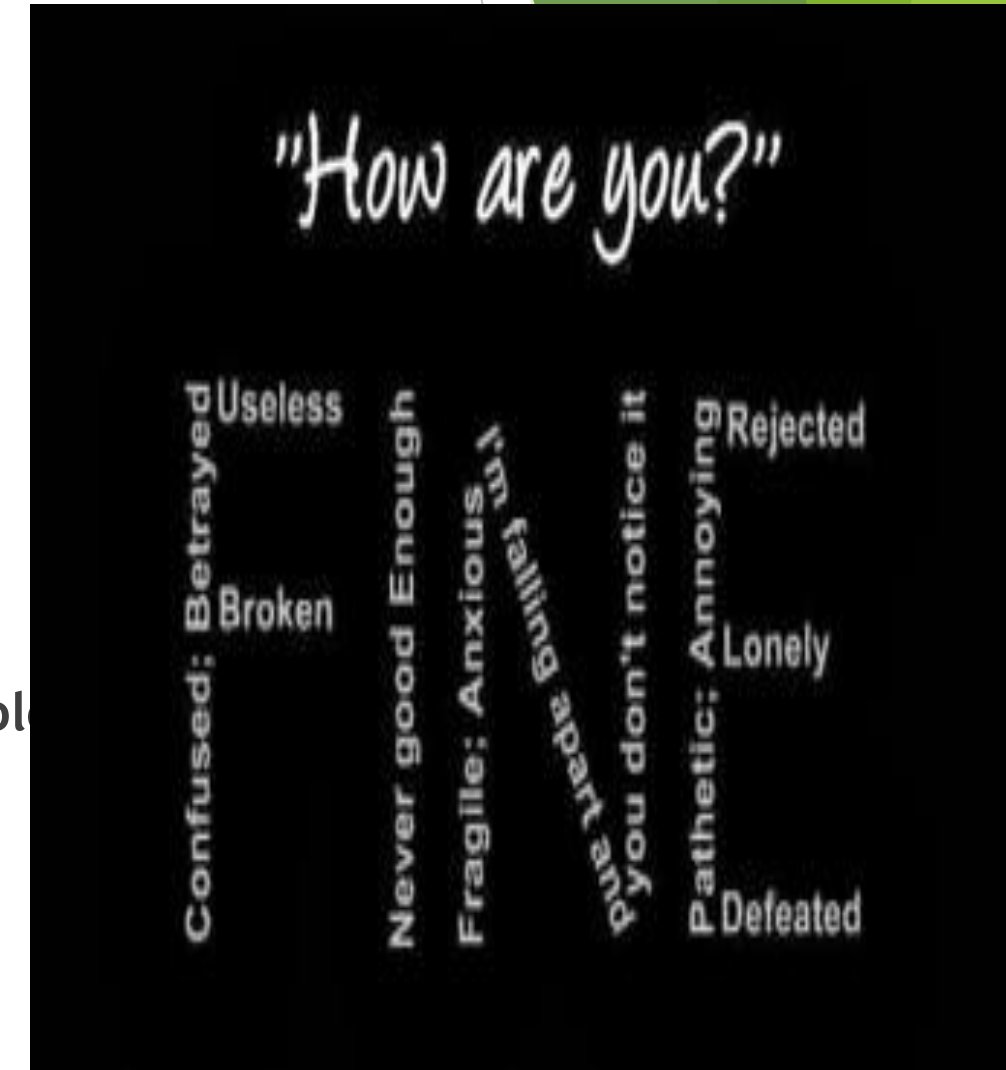
Drugs for anxiety common side effects

- ▶ **Buspirone (Buspar)**
 - ▶ Nausea, headache, confusion, drowsiness, blurred vision, lightheadedness
- ▶ **Bupropion (Wellbutrin)**
 - ▶ Agitation, dry mouth, insomnia, nausea, constipation
- ▶ **Benzodiazepines: Clonazepam (Klonopin), Alprazolam (Xanax), Diazepam (Valium), Lorazepam (Ativan)**
 - ▶ Confusion, hallucinations, imbalance, drowsiness, dry mouth, abuse potential



General rules for antidepressants/anti-anxiety meds

- ▶ All of them could take 4-6 weeks to notice effect
- ▶ Unclear effect on apathy
- ▶ If no side effects but no benefit, go higher not lower
- ▶ Many people need more than one
- ▶ ECT is always an option as is TMS
- ▶ Meeting with a therapist/counselor can help a lot
- ▶ Avoid haloperidol (Haldol), risperidone (Risperdal), olanzapine (Zyprexa), lurasidone (Latuda), aripiprazole (Abilify), cariprazine (Vraylar)
 - ▶ All can substantially worsen your PD motor symptoms
 - ▶ May use quetiapine or clozapine if needed



Can't I do something besides pop pills?

- ▶ Exercise in PD
- ▶ PT, OT, ST
- ▶ Diet and nutrition
- ▶ Adequate Sleep
- ▶ Stay social
- ▶ Treat depression/anxiety if needed
- ▶ Continue to challenge your mind
- ▶ Be honest with your neurologist
- ▶ Use strict fall precautions if needed
- ▶ No, marijuana and CBD oil is not going to save you and DBS isn't an option for everyone



I am blessed with the best PD
Community Anywhere. Thank you
St. Louis and Surrounding Areas!
NEVER GIVE UP!

