

# MEDICATIONS IN PSYCHOSIS

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# DISCLOSURES

- none

# OUTLINE

- Oral medications
- Injectable medications
- Nutritional supplements

# Early Intervention for Psychosis

<https://raiseetp.org/>

- The RAISE Early Treatment Program (ETP) is a research study that supports coordinated specialty care (CSC).
- Dr. John Kane from the Feinstein Institute for Medical Research in Manhasset, NY directed the ETP study. The study took place in 34 community mental health centers and hospital outpatient mental health facilities in 21 states

# Psychopharmacology

- **NAVIGATE Psychopharmacological Treatment Manual**
  - Developed by The NAVIGATE Psychopharmacological Treatment Committee.
    - The Committee is chaired by Delbert G. Robinson, M.D. Christoph U. Correll, M.D., Ben Kurian, M.D., Alexander L. Miller, M.D., Ronny Pipes, M.A. and Nina R. Schooler, Ph.D. contributed to the scientific content of the Manual and the COMPASS Computer Decision Support System. Preston Park, MCSD led the programming team and Patricia Marcy, R.N. and Cristina Gomes Gonzalez, CCRP provided administrative support

# ORAL MEDICATIONS

- Antipsychotics: all have similar efficacy except clozapine
  - Benefits
    - Relief from positive symptoms
    - Improved mood stability
    - Decreased anxiety
    - Improved sleep
    - Relapse prevention: relapse rates are 2-6 fold higher off medication

# ORAL MEDICATIONS

- First generation antipsychotics (FGAs, Typical)
  - Higher risk of abnormal movements
- Second generation antipsychotics (SGAs, Atypicals)
  - Higher risk of weight gain and associated metabolic syndrome

# CLOZAPINE

- considered for patients who have persistent positive symptoms after trials of **two antipsychotics**
- should be the treatment, unless contraindicated or refused, for patients with persistent positive symptoms after trials of three antipsychotics.
- Use is limited by potential for agranulocytosis
  - Requires weekly blood draws for 6 months, then every 2 weeks for 6 months, then every 4 weeks as long as the medication is taken



# CLOZAPINE

- Earlier use of clozapine in the medication sequence should be considered for patients with persistent suicidal ideation.
- Prior to initiating clozapine treatment for persistent positive symptoms, trials of risperidone and olanzapine (and long acting antipsychotics for suspected nonadherence) should be considered.

# ANTIDEPRESSANTS

- Depressive symptoms very commonly co-occur with a first episode of schizophrenia.
- Depressive symptoms may be a core part of the acute illness.
- These symptoms usually resolve with antipsychotic monotherapy as the psychosis remits (see Koreen et al; Am J Psychiatry 1993; 150:1643-1648).



# LONG ACTING INJECTABLES (LAI)

- Benefits
  - Adherence: up to 50% of patients stop taking oral medication
  - Decreased rates of hospitalization
  - Superior to oral medication



# LONG ACTING INJECTABLES (LAI)

- Options
  - All appear to be equivalent in efficacy
  - Side effect profiles and frequency of injection drive selection

# LAIs

- First Generation Antipsychotics (FGA)
  - Fluphenazine (Prolixin) given every 4 wks
    - Fluphenazine Decanoate
  - Haloperidol (Haldol) given every 4 weeks
    - Haloperidol Decanoate

# LAIs

- Second Generation Antipsychotics (SGA)
  - Aripiprazole (Abilify)
    - Maintena formulation given every 4 weeks
    - Newer Aristada formulation can be given up to every 6 weeks
  - Risperidone (Risperdal)
    - Given every 2 weeks

# LAIs

- Second Generation Antipsychotics (SGA)
  - Paliperidone (Invega)
    - Sustenna given every 4 weeks, includes a loading dose so does not need overlap with oral medication
    - Trinza given every 12 weeks
  - Olanzapine (Zyprexa)
    - Relprevv, requires 3 hours of monitoring post injection due to risk of post injection syndrome including confusion, sedation, agitation, EPS

# SUBTHRESHOLD PSYCHOSIS

- A pooled meta analysis found a NNT of 7 so far...
- Antipsychotic medication is not effective enough at preventing transition to psychosis to justify its use
- And it is not any more effective than therapy in reducing psychotic like symptoms
  - (McGlashan 2003, McGorry 2002, Phillips 2009, McGorry 2013)





# Omega Fatty Acids

- Essential fatty acids needed for brain development
- May help reduce side effects to antipsychotics
- Decreases risk of cardiovascular disease



# FISH OIL

- Omega fatty acids
  - Amminger et al, 2010
- 76 individuals, 12-week intervention period of 1.2g/d PUFA (700mg EPA +480mg DHA) or placebo, followed by a 40-week monitoring period
- 2 of 41 individuals (4.9%) in the omega-3 group and 11 of 40 (27.5%) in the placebo group transitioned to psychosis
- [Omega-3 Treatment Shows Long-term Psychosis Prevention-Medscape-Aug 20, 2015](#)



# FISH OIL

- McGorry et al, 2017
- Multisite study of 304 adults, 840 mg EPA and 560 mg of DHA for 6 months, all received cognitive behavioral case management
- At 12 months, the transition rates were 11.2% in the control group and 11.5% in the  $\omega$ -3 PUFA group
- [Final Word? Omega-3's Don't Prevent Transition to Psychosis](#)-Medscape-Nov 30, 2016

# FISH OIL, but it's natural

- “evidence from animal studies show that large doses of oxidised lipids may cause organ toxicity, growth retardation, and accelerated atherosclerosis.”

-Albert, BB et al, Fish oil supplements in New Zealand are highly oxidised and do not meet label content of n-3 PUFA. Scientific Reports, January 2017.

# VITAMINS

BrainVitaminz  
PREMIUM

60G  
(2.1 oz)

## Sarcosine

N-Methyl Glycine

100% Pure Amino Acid  
BRAIN HEALTH SUPPLEMENT

Promotes Brain Cell Function\*

\*These statements have not been evaluated by the Food and Drug administration.  
This product is not intended to diagnose, treat, cure or prevent any disease.

# NMDA RECEPTOR MODULATORS

- Sarcosine
- N-Acetyl Cysteine
- D-serine
- Glycine
  - All led to small improvements when added to antipsychotics EXCEPT for clozapine
  - Glycine worsened symptoms in individuals treated with clozapine

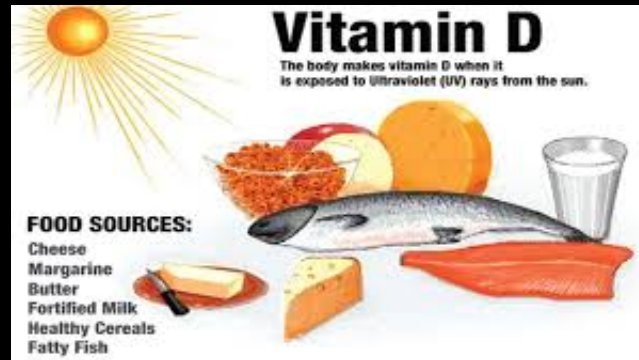
# B VITAMINS

- Idea of “megavitamins” introduced in the 1950s
- There is no consistent evidence to support the use of B vitamins in the treatment of schizophrenia



# VITAMIN D

- Individuals with schizophrenia are more likely to be deficient in Vitamin D
- There is no current evidence to suggest vitamin D supplementation reduces symptoms of schizophrenia





# VITAMINS A, C and E

- There is no current evidence to suggest vitamin A, C or E supplementation reduces symptoms of schizophrenia
- Toxicity can occur
  - Vitamin A: headaches, nausea, blurred vision, hair loss
  - Vitamin C: nausea, diarrhea, kidney stones
  - Vitamin E: nausea, digestive problems

# SUPPLEMENTS

- There is limited evidence to support the use of vitamin supplements in schizophrenia
- A healthy, balanced diet that limits processed foods is a good goal for everyone
- NMDA receptor modulators such as sarcosine and NAC can provide some benefit when added to an antipsychotic

# QUESTIONS