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IBD & Women’s Health
Around 1.6 million Americans are living with inflammatory bowel disease.
Inflammatory bowel disease average age of onset is 15-40 years.
What role does IBD play in...
• Contraception
• Fertility
• Pregnancy and breastfeeding
• Cervical cancer screening
Contraception in IBD
Planning pregnancy while in remission is ideal. The choice of contraception type is individualized.

<table>
<thead>
<tr>
<th>Method</th>
<th>Annual rate of unintended pregnancy</th>
<th>Special considerations in IBD</th>
</tr>
</thead>
<tbody>
<tr>
<td>No Method</td>
<td>85%</td>
<td>Active disease = risk of adverse pregnancy outcomes</td>
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<tr>
<td>Fertility Awareness</td>
<td>24%</td>
<td>No restrictions</td>
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<tr>
<td>Barrier Methods (Condom/diaphragm)</td>
<td>12-20%</td>
<td>No restrictions</td>
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<tr>
<td>Oral Contraceptives</td>
<td>9%</td>
<td>Avoid with prior venous thromboembolism or at high risk of venous thromboembolism (active disease)</td>
</tr>
<tr>
<td>Depot Medroxyprogesterone Acetate Injection</td>
<td>6%</td>
<td>Avoid in those with osteopenia</td>
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<tr>
<td>Intrauterine Devices</td>
<td>&lt;0.8%</td>
<td>No restrictions</td>
</tr>
<tr>
<td>Implants</td>
<td>0.05%</td>
<td>No restrictions</td>
</tr>
<tr>
<td>Female Sterilization</td>
<td>0.5%</td>
<td>No restrictions</td>
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</tbody>
</table>

Inflammatory bowel disease increases the risk of venous thromboembolism.

- IBD $\rightarrow$ 2x increased risk of DVT/PE
- Oral contraceptives $\rightarrow$ 3x increased risk of DVT/PE

- High risk patients:
  - Prior DVT/PE
  - Active inflammatory bowel disease
Inflammatory bowel disease can contribute to loss of bone density.

- Risk factors:
  - Corticosteroid use
  - Malnutrition
  - Vitamin D/calcium malabsorption and deficiency
  - Underlying inflammatory state
- Osteopenia up to 40% in IBD.

- Depot Medroxyprogesterone Acetate (Depo-Provera) → Associated with bone loss
Fertility in IBD
IBD patients do not have decreased fertility compared with the average population.

However, IBD patients do have an increase in voluntary childlessness.
Passing IBD to offspring is one of the most commonly reported concerns.

- First degree relative with IBD is still the greatest risk factor for IBD.
- However, the absolute risk this confers remains low.
- Two parents with IBD $\rightarrow$ 30% lifetime risk of IBD

<table>
<thead>
<tr>
<th>Medication</th>
<th>Effect on Fertility</th>
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<tbody>
<tr>
<td>Prednisone</td>
<td>No effect in humans.</td>
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<tr>
<td>5-ASA (mesalamine)</td>
<td>No effect in animals.</td>
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<tr>
<td>Sulfasalazine</td>
<td>Reversible decrease in spermatogenesis. No effect on female fertility.</td>
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<tr>
<td>Azathioprine</td>
<td>No effect in humans.</td>
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<tr>
<td>Anti-TNF agents</td>
<td>No effect in animals.</td>
</tr>
<tr>
<td>Vedolizumab</td>
<td>No effect in animals.</td>
</tr>
<tr>
<td>Methotrexate</td>
<td>Contraindicated in women trying to conceive – teratogenic.</td>
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</tbody>
</table>
Decreased births are noted after IBD surgery or after an IBD flare.

Total proctocolectomy with ileal pouch-anal anastomosis is associated with reduced fertility.

- 3x increased risk of infertility after IPAA
  - 48% infertility rate vs 14% in IBD patients w/no surgery
- Anatomic changes, fallopian tube scarring after extensive pelvic dissection
- Infertility treatment are equally as effective compared with non-surgical patients

However, the laparoscopic approach likely improves fertility rates.

Pregnancy/Breastfeeding in IBD
Pregnancy is best timed when inflammatory bowel disease is in remission.

- Improved fertility rates (equal to normal)
- Reduced preterm birth rate
- Lower likelihood of low birth weight

- More likely that IBD will remain in remission through pregnancy
  - ~80% vs 66% who have persistent/worsened flare after conceiving with active IBD

Many IBD medications can be safely continued through pregnancy. Methotrexate is an important exception.

- METHOTREXATE
  - Category X during pregnancy
  - Teratogenic
  - Use at least one reliable form of contraception while on methotrexate
  - Stop medication at least 6 months before trying to conceive
Many IBD medications can be safely continued through pregnancy.

**MESALAMINE**
- Safe during pregnancy and breastfeeding
- No increase in congenital malformation, low birth weight, premature birth

- ASACOL HD: Dibutyl phthalate (coating of Asacol HD) in very high doses led to malformations in animal studies. Never documented in humans.
- Consider change to an alternative form of mesalamine
Many IBD medications can be safely continued through pregnancy.

- **SULFASALAZINE**
  - Safe during pregnancy and breastfeeding
  - Inhibits folate synthesis
    - Women considering pregnancy should take Folic acid (1 mg twice daily) before conception and during pregnancy
Many IBD medications can be safely continued through pregnancy.

• THIOPURINES
  • Older animal studies suggested a risk when given intravenously in high doses
  • New studies (primarily transplant patients) show NO increased risk of congenital malformations or adverse outcomes
Many IBD medications can be safely continued through pregnancy.

**ANTI-TNF THERAPY**

- No increased risk of congenital malformation, infection, low birth weight, developmental problems
- Timing of dosing during the 3rd trimester may be adjusted
- Certolizumab – no placental transfer
Newborns born to mothers on biologics should avoid live virus vaccine for 6 months.

<table>
<thead>
<tr>
<th>Vaccine</th>
<th>Birth</th>
<th>1 month</th>
<th>2 months</th>
<th>4 months</th>
<th>6 months</th>
<th>9 months</th>
<th>12 months</th>
<th>15 months</th>
<th>18 months</th>
<th>18 through 23 months</th>
<th>2 through 3 years</th>
<th>4 through 6 years</th>
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<tr>
<td>Rotavirus (RV)</td>
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<td>Refer to footnote 1</td>
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<td>(RV1: 2-dose series; RV5: 3-dose series)</td>
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<td>Diptheria, tetanus, acellular pertussis (DTaP) &lt; 7 years)</td>
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<td>Haeomophilus influenzae type b (Hib)</td>
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<td>Pneumococcal conjugate (PCV13)</td>
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<td>Pneumococcal polysaccharid (PCV23)</td>
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<td>Inactivated poliovirus (IPV: &lt;18 years)</td>
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<td>Influenza (IV)^†</td>
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<td>Annual vaccination (IV) 1 or 2 doses</td>
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<td>Measles, mumps, rubella (MMR)^**</td>
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<td>Varicella (VAR)</td>
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<td>Hepatitis A (HepA)^ΔΔ</td>
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<td>2 dose series Refer to footnote ΔΔ</td>
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<td>Meningococcal (MCV): ≤2 weeks; MenACWY(D): 3 months; MenACWY(CRM): ≤2 months</td>
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<td>Refer to footnote 99</td>
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Range of recommended ages for all children: 0-12 months
Range of recommended ages for catch-up immunization: 12-60 months
Range of recommended ages for certain high-risk groups: 0-60 months
No recommendation: None
PIANO registry is tracking mothers with IBD and their offspring.

- >1200 women enrolled
  - Exposure to Biologic therapy and thiopurines
- Possible slight increase in infections seen in infants in first year born to mothers on anti-TNF PLUS thiopurine therapy
- Otherwise, no increased risk of birth defects, achievement of developmental milestones, infections

TEDDY Study shows no increased short or long-term infection risk in children exposed to anti-TNF medication during pregnancy.

- Multicenter European study comparing risk of infection in children exposed to anti-TNF vs unexposed
- Greatest risk of severe infection = Preterm delivery
- No increased severe infection in anti-TNF exposed children

Many IBD medications can be safely continued through pregnancy.

- **VEDOLIZUMAB**
  - Limited number of pregnancy exposures
  - No concerning findings identified

- **USTEUKINUMAB**
  - Limited data (psoriasis and Crohn’s disease) with no concerning findings
Most patients with inflammatory bowel disease can safely have a vaginal delivery.

- Consider planned cesarean delivery for:
  - Active perianal inflammation
  - Prior J pouch surgery
    - Preserve anal sphincter/continence
Minimal amounts of biologic medications are detected in breast milk.

• NO association with:
  • Infant growth
  • Developmental milestones
  • Infection rate

Cervical Cancer Screening in IBD
Women with IBD on immunosuppressive therapy should undergo annual cervical cancer screening.

- Cervical cancer risk factors:
  - HPV infection
  - Smoking
  - Compromised immune system

- IBD on immunosuppression → 1.3x increased risk of cervical dysplasia

- Despite this, IBD patients on immunosuppression have a LOWER than average rate of cervical cancer screening.
Human Papillomavirus vaccine helps to decrease the risk of cervical dysplasia/cancer.

- HPV vaccine is an inactivated vaccine (safe for immunosuppressed)
- Recommended for:
  - Male and female
  - Age 11-26 years of age
- 3 doses over 6 months
Remember …

1) Pregnancy is safest and most successful when planned at a time of inflammatory bowel disease remission.

2) Most forms of contraception are safe, but there may be some individual considerations.

3) Before you attempt pregnancy, discuss your IBD medications with your GI provider. Most can be safely continued.

4) Stay up to date on cervical cancer screening, especially if you are on immunosuppressive medicines.
Thank you!

WE ARE ALL WONDERWOMEN!