Mononucleosis

Mononucleosis, commonly known as mono or the "kissing disease," is most often caused by the **Epstein-Barr virus** (EBV).

In **younger children**, the infection often presents as a **mild fever or cold**, whereas **adolescents** more commonly present with **fatigue, sore throat**, and **swollen lymph nodes**.

EPIDEMIOLOGY

- **EBV infects > 90% of people worldwide** by adulthood.
- Most symptomatic cases occur in ages **15-25 years old**, with peak incidence in **late adolescence**.
- EBV is a **lifelong infection**; after the primary illness, the virus remains latent in B cells and may reactivate without symptoms.
- In **low/middle income countries**, EBV infection commonly occurs in **early childhood**, when it is typically **asymptomatic or mild**.

PRESENTATION

CHILDREN:
Usually present with a **mild, nonspecific illness** resembling a common cold.

History
- Mild to moderate fever (< 2 weeks)
- Cough, congestion, or sore throat (often mild or absent)

Physical Exam
- Often unremarkable or shows mild pharyngitis

ADOLESCENTS:
More likely to show the **classic triad** of fatigue, sore throat, and lymphadenopathy.

History
- Sore throat, fatigue, fever
- Headache, nausea, decreased appetite
- Abdominal discomfort or pain (due to splenomegaly)

Physical Exam
- Tonsillar enlargement, with or without exudate
- Cervical lymphadenopathy (especially posterior chain)
- Hepatosplenomegaly
- Possible jaundice or maculopapular rash

PATHOPHYSIOLOGY

- **Causative agent:** Epstein-Barr virus (EBV), a member of the herpes virus family
- **Transmission:** Spread through saliva; initially infects oropharyngeal epithelial cells.
- **Lymphoid Involvement:** Results in lymphadenopathy, tonsillar hypertrophy, hepatomegaly, and splenomegaly.
- **Latency:** EBV remains latent in memory B cells and can reactivate if the immune system is suppressed.

Infectious mononucleosis may have a long incubation period, up to 30-50 days in teens, during which the child can be infected but asymptomatic

DIAGNOSIS

Infectious mononucleosis is typically suspected **clinically**, based on characteristic symptoms and physical findings.

Investigations are generally not required for diagnosis, but if performed, they may show:
- **CBC with differential** – lymphocytosis with >10% atypical lymphocytes
- **Monospot (heterophile antibody) test** – may be positive after the first week of illness
- **EBV serology** – confirms diagnosis if needed
- **Consider liver function tests** – mild transaminitis may occur due to secondary hepatitis
- **Consider ultrasound** – to assess spleen size if splenomegaly suspected

Possible complications: *mild hepatitis with elevated liver enzymes, hemolytic anemia, or (rarely) splenic rupture.*

MANAGEMENT

Supportive Care:
- Focus on rest, hydration, and comfort
- Avoid contact sports and heavy lifting for 3–4 weeks (risk of splenic rupture)

Medications:
- Acetaminophen or ibuprofen for fever/pain
- Corticosteroids **only if severe** (e.g., airway obstruction, marked cytopenias)
- **Avoid antibiotics –** amoxicillin/ampicillin may cause rash

Counselling
- Most recover in **2- 4 weeks**; fatigue may last longer
- Monitor for complications (e.g., splenic rupture, jaundice)
- Seek care if symptoms worsen or if immunocompromised

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