



# Agranulocytosis

## DIAGNOSIS / DISORDER

Granulocytes is a white blood cell that fights infections from germs. When the body decreases in numbers of granulocytes, it is harder for the body to remove infections/germs. It may be caused by an autoimmune disease having symptoms of chills, malaise, and bone pain. Neutrophils, eosinophils and basophils are types of granulocytes (Medline Plus, 2024)

## THEORY

Genetic factors: Gene mutations involved in neutrophil production that can be inherited or acquired (Pubmed, 2018).

Drug induced: Agranulocytosis can be a side effect of mental health medications such as clozapine (Pubmed, 2018).

Auto immune conditions: The body's immune system can mistakenly attack the neutrophils (radiopaedia, 2021).

Infections: There are some infections that can lower the production of neutrophils (radiopaedia, 2021).

## PREVALENCE, ETIOLOGY

### RISK FACTORS

Prevalence: Annually- 1.1-4.9 per million Population

Etiology: Drug induced (adverse drug reactions in antibiotics, antithyroid and antipsychotics), autoimmune diseases (lupus and rheumatoid arthritis), infections (viral, bacterial, and parasitic), bone marrow disorders (myelodysplastic syndrome), and nutritional deficits (low B-12 and folate levels) (Cleveland clinic,

## NURSING ACTIONS / RATIONALES / CLINICAL INFORMATION

### ANTIBIOTICS

An order for a CBC to check neutrophil counts in your blood. Then your healthcare system will prescribe antibiotics to treat symptoms (Cleveland Clinic, 2023)

### BONE MARROW TRANSPLANT

If treatment is ineffective, a donor is needed for your body to make neutrophils (Cleveland Clinic, 2023)

### EDUCATE ABOUT NEUTROPENIA

Inform patients of risk factors, monitor for sign and symptoms, and check lab values regularly

### HAND HYGIENE

Hand washing prevents the spread of germs from person to person

2025).

Risk Factors: It's possible to get this in any age group, however it is more common in older adults. It is also more common in women than men (Cleveland clinic, 2025).

Medications, chemotherapy, autoimmune disease, infections and bone marrow disorders are also risk factors (Cleveland clinic, 2025).

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