



# 10 Warning Signs of Primary Immunodeficiency

Primary Immunodeficiency (PI) causes children and adults to have infections that come back frequently or are unusually hard to cure. 1:500 persons are affected by one of the known Primary Immunodeficiencies. If you or someone you know is affected by two or more of the following Warning Signs, speak to a physician about the possible presence of an underlying Primary Immunodeficiency.

**1**   
Four or more new ear infections within one year.


**2**   
Two or more serious sinus infections within one year.

**3**   
Two or more months on antibiotics with little effect.


**4**   
Two or more pneumonias within one year.


**5**   
Failure of an infant to gain weight or grow normally.

**6**   
Recurrent, deep skin or organ abscesses.

**7**   
Persistent thrush in mouth or fungal infection on skin.

**8**   
Need for intravenous antibiotics to clear infections.

**9**   
Two or more deep-seated infections including septicemia.

**10**   
A family history of PI.

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# 10 Señales de Peligro de la Inmunodeficiencia Primaria

La inmunodeficiencia primaria (Primary Immunodeficiency, PI) hace que los niños y los adultos tengan infecciones que reaparecen con frecuencia y que son inusualmente difíciles de curar. 1:500 personas están afectadas por una de las inmunodeficiencias primarias conocidas. Si usted o alguien a quien usted conoce está afectado por dos o más de las siguientes señales de peligro, hable con un médico acerca de la posible presencia de la inmunodeficiencia primaria subyacente.

**1**



Cuatro o más infecciones de oídos nuevas en un año.

**2**



Dos o más infecciones de senos paranasales graves en un año.

**3**



Dos meses o más de tratamiento con antibióticos con escaso efecto.

**4**



Dos neumonías o más en un año.

**5**




Dificultad de un bebé o niño pequeño para aumentar de peso y crecer normalmente.

**6**



Abscesos en órganos o abscesos cutáneos profundos recurrentes.

**7**




Aftas persistentes en la boca o infecciones micóticas en la piel.

**8**



Necesidad de recibir antibióticos intravenosos para eliminar las infecciones.

**9**



Dos infecciones profundas o más, incluida la septicemia.

**10**



Antecedentes familiares de PI.

Presentado como servicio público por:



Curing PI Worldwide.



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National Institute of Allergy and Infectious Diseases (NIAID)



Estas señales de peligro fueron presentadas por el Comité de Asesoramiento Médico de la Fundación Jeffrey Modell. Se recomienda enfáticamente la consulta a especialistas de inmunodeficiencia primaria. ©2013 Jeffrey Modell Foundation. Para obtener más información o remisiones, comuníquese con la Fundación Jeffrey Modell. [info4pi.org](http://info4pi.org) | 866-INFO-4-PI

# 10 FOR ADULTS Warning Signs of Primary Immunodeficiency

**Primary Immunodeficiency (PI) causes children and adults to have infections that come back frequently or are unusually hard to cure. 1:500 persons are affected by one of the known Primary Immunodeficiencies. If you or someone you know is affected by two or more of the following Warning Signs, speak to a physician about the possible presence of an underlying Primary Immunodeficiency.**

- 1** Two or more new ear infections within 1 year.
- 2** Two or more new sinus infections within 1 year, in the absence of allergy.
- 3** One pneumonia per year for more than 1 year.
- 4** Chronic diarrhea with weight loss.
- 5** Recurrent viral infections (colds, herpes, warts, condyloma).
- 6** Recurrent need for intravenous antibiotics to clear infections.
- 7** Recurrent, deep abscesses of the skin or internal organs.
- 8** Persistent thrush or fungal infection on skin or elsewhere.
- 9** Infection with normally harmless tuberculosis-like bacteria.
- 10** A family history of PI.

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Funding was made possible in part by a grant from the U.S. Centers for Disease Control and Prevention (CDC).



National Heart,  
Lung, and Blood  
Institute (NHLBI)



PPTA  
Plasma Protein Therapeutics Association



National Institute of  
Allergy and Infectious  
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# 4 Stages of Testing for Primary Immunodeficiency

- 1**
  - History and physical examination, height and weight
  - CBC and differential
  - Quantitative Immunoglobulin levels IgG, IgM, IgA (related to age)
- 2**
  - Specific antibody responses (tetanus, diphtheria)
  - Response to pneumococcal vaccine (pre/post) (for ages 3 and up)
  - IgG subclass analysis
- 3**
  - Candida and Tetanus skin tests
  - Lymphocyte surface markers CD3/CD4/CD8/CD19/CD16/CD56
  - Mononuclear lymphocyte proliferation studies (using mitogen and antigen stimulation)
  - Neutrophil oxidation burst (if indicated)
- 4**
  - Complement screening CH50, C3, C4
  - Enzyme measurements (adenosine deaminase, purine nucleoside phosphorylase)
  - Phagocyte studies (surface glycoproteins, mobility, phagocytosis)
  - NK cytotoxicity studies
  - Further complement studies AH50
  - Neo antigen to test antibody production
  - Other surface/cytoplasmic molecules
  - Cytokine receptor studies
  - Family/genetic studies

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