

POTENTIAL CLINICAL ASSOCIATIONS

Immunotype/Pattern	May be induced by	May be associated with
IMMUNOTYPE-8 Regulatory T Cell Imbalance High or Low Tregs	Unhealthy lifestyle (including diet, vitamin A, C and D deficiency), many environmental toxins, including bacterial toxins (LPS, BCDT)	Breakdown in peripheral, central and oral tolerance, immune suppression, immune deficiencies, some autoimmune disorders, cancer, lower or higher Th17/Treg ratio (19-21,75-111)
IMMUNOTYPE-9 Th17 Dominance <ul style="list-style-type: none"> • High Th17, low Treg • High Th17, normal Treg • Normal Th17, low Treg 	Stress, infections, xenobiotics, exposure to environmental factors that change many Th0 cells into IL-17-producing Th17 cells, and unhealthy lifestyle (including consumption of high amounts of salt, artificial sweeteners, and many food additives that result in gut dysbiosis)	Imbalance between Th17 and Treg cell resulting in high Th17/Treg cell, severe inflammatory and autoimmune disorders, as well as allergies and hypersensitivities. Th17 acts as an autoreactive lymphocyte in many autoimmune disorders (111-122,133-140,181)
IMMUNOTYPE-10 Th1+Th17 Dominance <ul style="list-style-type: none"> • High Th1+Th17, low Treg • High Th1+Th17, normal Treg 	Stress, unhealthy lifestyle, exposure to many environmental factors (including toxic chemicals, food antigens, pathogens), regulatory T cell dysfunction, too many Th0 cells becoming Th1 and Th17 autoreactive T cells	Higher Th1/Th2 ratio, higher Th17/Treg cell ratio, severe inflammation and autoimmunities (including neuroautoimmune disorders), since these cells can damage the BBB and penetrate the protective layer of the brain (123-129)
IMMUNOTYPE-11 Th2+Th17 Dominance <ul style="list-style-type: none"> • High Th2+Th17, low Treg • High Th2+Th17, normal Treg 	Exposure to many environmental factors (food additives, bacterial toxins), stress, unhealthy lifestyle that affects the gut, and conversion of too many Th0 cells into Th2 and Th17 cells	Lower Th1/Th2 ratio, higher Th17/Treg ratio, allergies, hypersensitivities, inflammation and autoimmune disorders (130-132)
IMMUNOTYPE-12 NK Cell Imbalance High or Low NK or Cytotoxic NK Cells	Environmental toxins and viral infection, unhealthy lifestyle, lack of exercise, and stress	<p>Too few NK or cytotoxic NK cells: Viral and bacterial infections, autoimmune diseases, cancer.</p> <p>Too many NK or cytotoxic cells: Induction of some autoimmune disorders, loss of pregnancies, COPD, and NK proliferative disease (141-150, 161)</p>
IMMUNOTYPE-13 NKT Cell Imbalance High or Low NKT Cells	Imbalance between T, B and NK cells, exposure to different environmental factors including viral antigens, unhealthy lifestyle, stress, and neuropsychiatric disorders, which may all induce low % of NKT cells	<p>Too few NKT cells: Enhanced bacterial and viral infections, induction of autoimmunities, higher tumor burden.</p> <p>Too many NKT cells: Protection against some infections and autoimmune diseases, increased chance of pregnancy in in vitro fertilization, but also contributes to phospholipid syndrome, COPD and neuroautoimmunities (151-160)</p>