


Rhythmic Strength
Immune Response
& Kundalini Yoga



Guru Ram Das Center
FOR MEDICINE & HUMANOLOGY

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on IG kundaliniyogatherapy_

1

Prevention is Different from
Treatment

- ▶ Recommendations here are for Prevention
- ▶ For Healthy People to Support a Healthy Immune Response
- ▶ For Healthy People to Build Resilience
- ▶ Not for those already with a viral condition

2

Immune Response
Involves nearly every system of body

We Focus On These 4

- ▶ Endocrine
- ▶ Nervous
- ▶ Digestive
- ▶ Lymphatic

3

What The Immune Response Needs

- ▶ O2 to blood
- ▶ Lymphatic Circulation
- ▶ Balanced Endocrine System
- ▶ Strong Nervous System
- ▶ Detoxification/Elimination

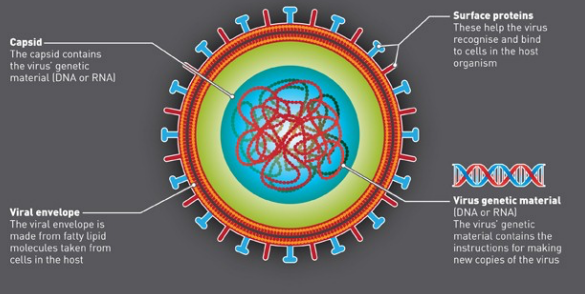
4

Immune Response to Viral Conditions

"A Virus is the form of life that cannot subsist. It doesn't have the machinery with which to live. It can only do so by entering and utilizing another cell for that purpose." -Jonas Salk

5

VIRUS STRUCTURE



Source: BBC Science <http://www.bbc.co.uk/science/0/21143412>

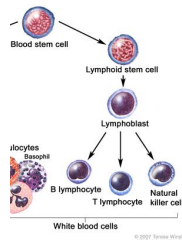
6

Two Types of Immune Response

- ▶ Innate: non specific using neutrophils, macrophages, the role of inflammation & cell signaling, dispersed throughout body
 - ▶ Immediate but general protection to a wide range of pathogens
 - ▶ Swelling, running nose, fever, etc.
- ▶ Acquired: customized to fight specific invaders using B & T Cells and Lymphoid Tissue
 - ▶ Develops slowly, combats a particular pathogen
 - ▶ Body learns to recognize "self" and "non-self"
 - ▶ Recognize the "Sat Nam" of the body.
 - ▶ Community, Connection and Personal Boundaries

7

B cells T cells NK cells



8

B cells & T cells

Born in the bone marrow
Migrate to lymphoid tissues for maturation and to await activation

- | <u>B Cells</u> | <u>T Cells</u> |
|--|---|
| ▶ Produce antibodies that indirectly lead to the destruction of foreign material | ▶ Directly destroy virus-invaded cells and mutant cells |
| ▶ This is known as antibody-mediated immunity | ▶ Punch holes in the target cells |
| | ▶ This is known as cell-mediated immunity |

9

B Cells & T Cells

B Cells

- ▶ Defend against conspicuous invaders. Help eliminate mostly bacteria by enhancing the innate immune response
- ▶ Life Span: Short
- ▶ Specific using antibodies
- ▶ Generates antibodies
- ▶ Two kinds of activated B Cells:
 - 1) Short acting Plasma Cells which secrete free floating antibody into the blood stream
 - 2) Longer lived memory cells, dormant and ready when exposure happens again

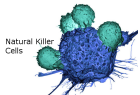
T Cells

- ▶ Defend against covert invaders that hide inside cells, virus-infected cells and cancer cells, aid B cells in antibody production, modulate immune responses
- ▶ Life Span: Long
- ▶ Specific using receptors, self antigens & foreign antigens
- ▶ Secrete cytokines
- ▶ Three Kinds:
 - 1) Cytotoxic (Killer) T Cells CD8+
 - 2) Regulatory T Cells CD4+CD25+
 - 3) Helper T Cells CD4+

10

Natural Killer Cells (NK cells)

- ▶ Naturally occurring, lymphocyte-like cells that nonspecifically destroy virus infected cells. They are part of the innate immune system.
- ▶ They recognize general features of these cells and do not require the prior exposure needed by T cells and B cells, however antibodies do enhance the killing capability of NK cells



Natural killer Cells

11

Prana has massive impact on
Thymus and B cell, T cell & NK cell Function
Nervous System
Endocrine System



12

Disease starts when apana does not work. Health restores when prana works

Prana Vayu
Apana Vayu
Udana Vayu
Vyana Vayu
Samana Vayu

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13

How do Lymph Nodes Work?

Tonsils
Thymus
Artery
Vein
Lymph node
Lymph vessel
Spleen
Bone marrow

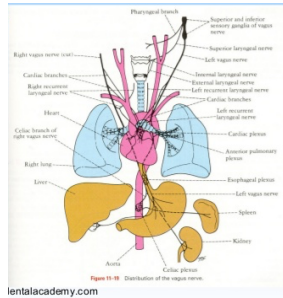
- Lymph Fluid drains into capillaries
- Fluid enters node
- Lymph node cleans up/destroys foreign bodies
- Clean fluid returns to bloodstream

14

Rhythmic, Targeted Movement Provides Lymphatic Circulation

15

Central Vagus Nerve & Its Branches



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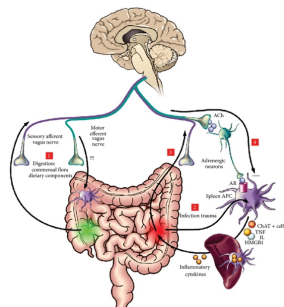
16

Vagal Tone Stress Resilience Ability to be calm w vitality

- ▶ Complicated network of nerves that connects the brain to the heart, the gut, and the visceral organs, known collectively as the vagus nerve.
- ▶ Origin of Parasympathetic NS
- ▶ The Vagus Nerve's modulation is tied to the ebb or flow of hormones/endocrine system
- ▶ Essential to Digestion, Elimination & Immunity
- ▶ Essential to Self Regulation following Stress Reactivity

17

Vagal System, Immune Response & Digestion



18

Rhythmic Strength Supports Vagal Tone

- ▶ **Pulse**
 - ▶ Sleep/Wake Up at same time each day
 - ▶ Meal time/Elimination at same time each day
 - ▶ Exercise/Movement at same time each day
- ▶ **Pause**
 - ▶ Regular Rest/Recreation
 - ▶ The ability to relax deeply at will
- ▶ **Play**

19

Vagal Tone, Immune Resilience & the Center Line of the Body Kundalini Yoga at the Throat, Heart, & Navel Centers



20

What Else Builds Vagal Tone?

- ▶ Whistling Breath Techniques
- ▶ Any Breath Technique that Exposes the Tongue (Sitali, Lion Breath, etc)
- ▶ Chanting Out Loud
- ▶ Healthy Diet & Good Nutrition
- ▶ Cold Water Hydrotherapy
- ▶ Mutual Supportive Relationships
- ▶ Gratitude

21

Cold Water Therapy



22

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23
