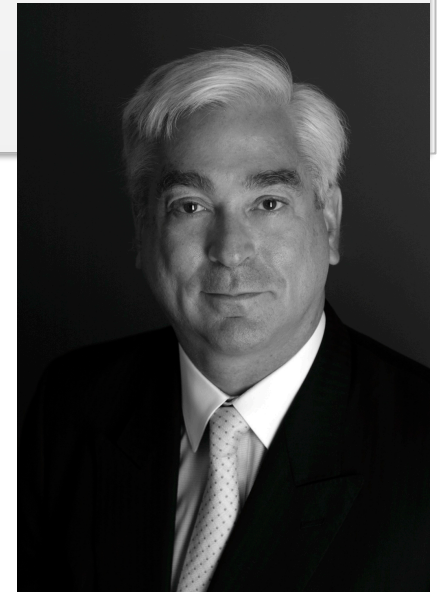
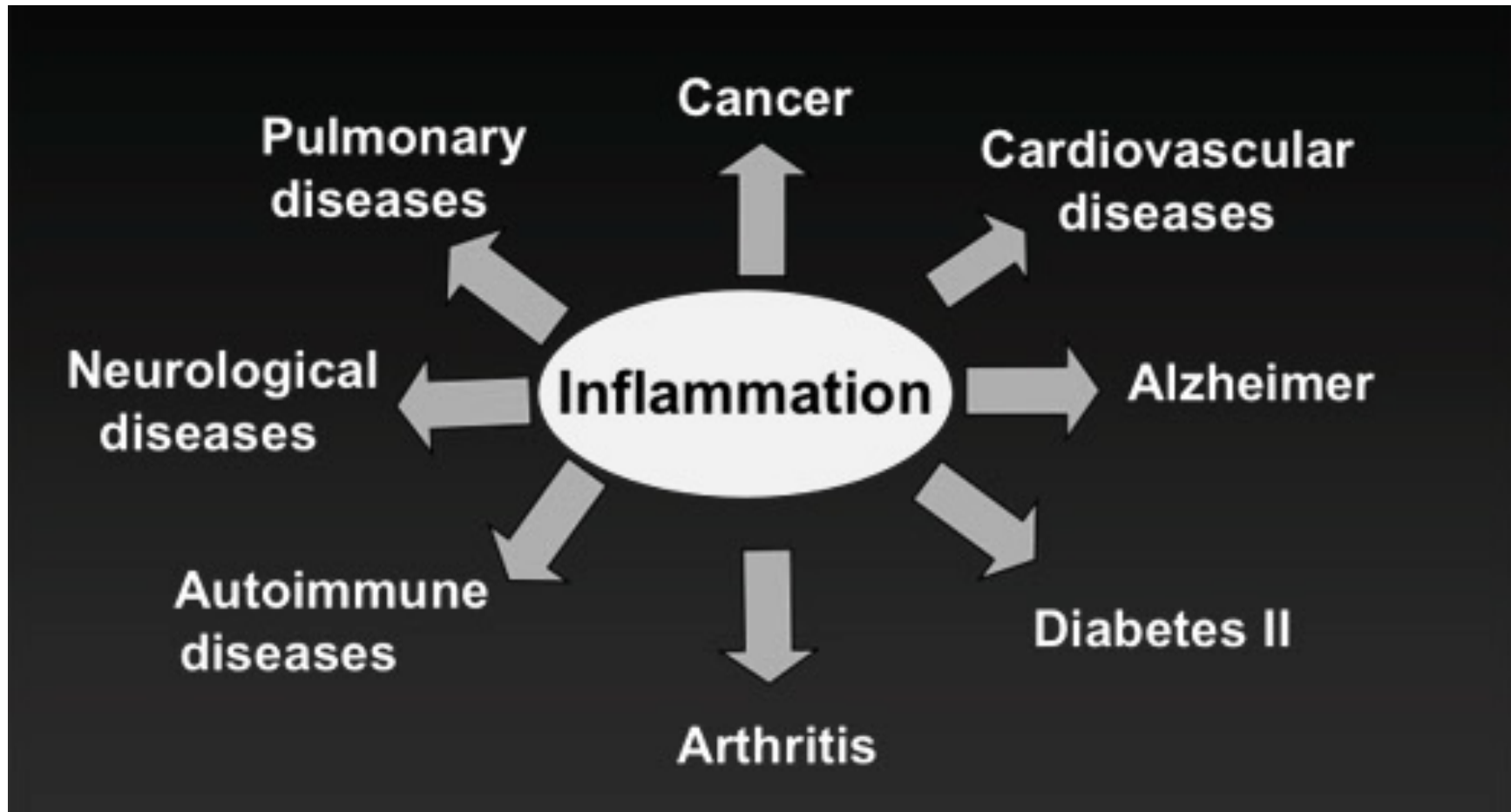


# **Inflammation is Really Repair Deficit: The Alkaline Way to Evoke Healing Responses**



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# ReThink Inflammation

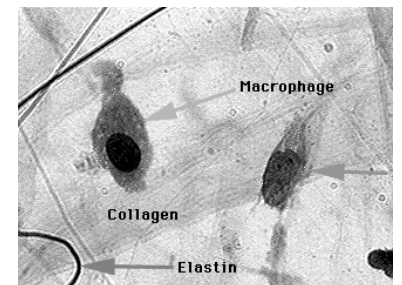


# Clinical Objectives to understand...

- Immune defense & repair mechanisms in body:  
Protect, Recycle, Defend, Repair
- **Inflammation** *rethought* as **repair deficits** &  
H2 practice **The Alkaline Way** for lifelong health
- “**Physiology 1<sup>st</sup>**” principles restore host **homeostasis**  
*via* predictive evidence tests applied functionally &  
individually, referencing healthy values **HV**

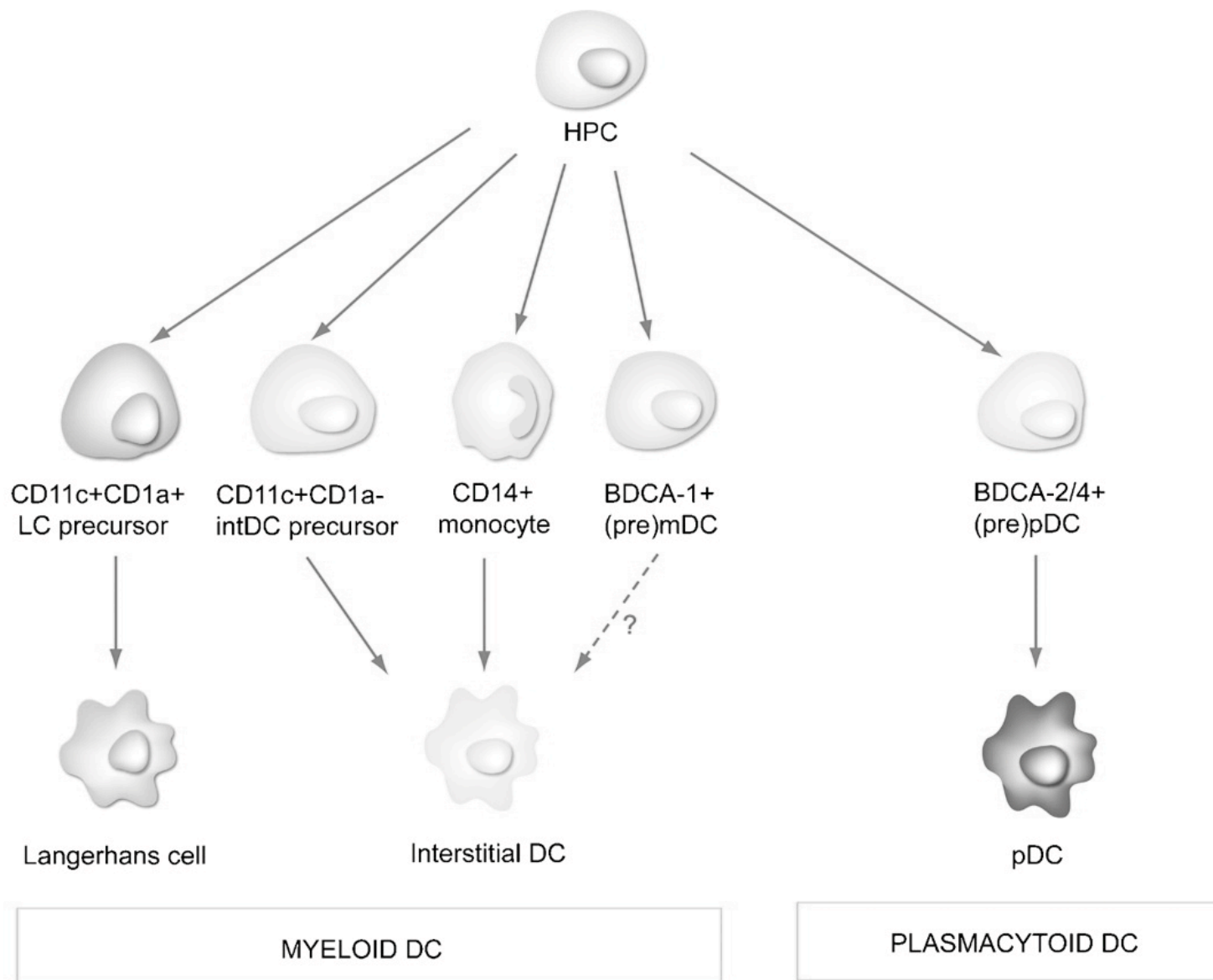
# Immune defense & repair mechanisms in body: Protect, Recycle, Defend, Repair

- **Innate Immune System:** Distributed, interdependent Dendritic 1<sup>st</sup> Responder Cells: Poly, Mono, Enterocyte, Kupfer, Fibroblast, Endothelial, Sinusoidal, Baso, Eo, Astrocyte, ...  
**Protect, recycle, defend & repair**  
*Protect* from xenotoxins, hormone mimics,  
*Recycle* cancer,  
*Defend* from infection, &  
*Repair* from wear & tear, inflammation



# Immune defense & repair mechanisms in body: Protect, Recycle, Defend, Repair

- **Adaptive Immune System** *respond* repair deficit  
IgM, sIgA, IgA, IgG [Abs from plasma cells],  
B cell & T cell **lymphocytes**,  
**Cytokine** interleukins from *PUFA* modulate,  
**CRP** when cells need *enhanced* repair,  
**TNF** to target *cancer* cells,  
**Neuroamines**: Epi/Norepi/5HT, DOPA/Glycine  
**Hormones**: D3/folate, T3/TSH , C/D, Ts/Es

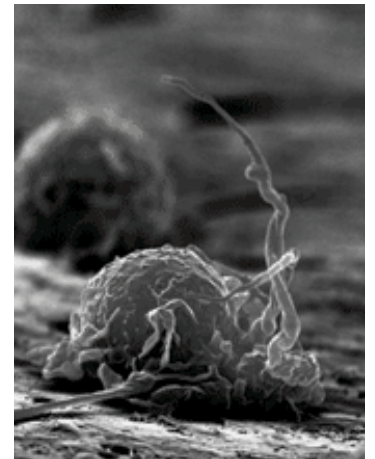


# Immune defense & repair mechanisms in body: Protect, Recycle, Defend, Repair

- Innate Immune System **enhancers**
  - \* *Balance* rest & active stretching breathing
  - \* *Mindfulness*, active meditation practice
  - \* Movement *via* Trager, Pilates, *etc.*
  - \* Do what you *love*, love what you do
  - \* Eat *whole*, local The Alkaline Way
  - \* *Supplement* based on predictive tests using healthy value **HV**
  - \* Environmental awareness; *edible* landscaping

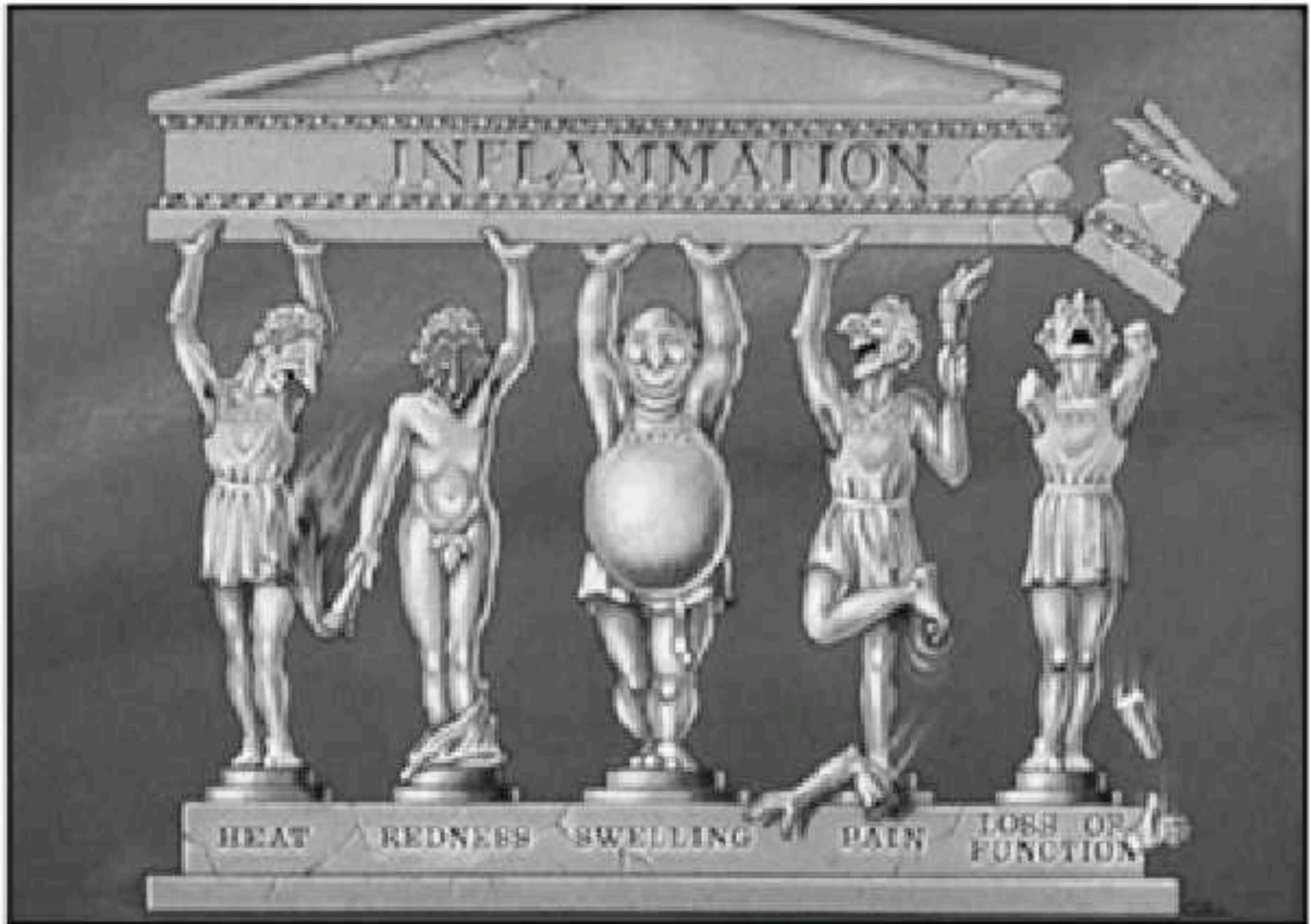
# Inflammation *rethought* as repair deficits & H2 practice **The Alkaline Way** for lifelong repair

- Immune Defense & Repair Systems *via* **view** of conventional pathobiology *or integrative physiology*.
- **Acute** inflammation *only* if repair can't keep up
- **Chronic** inflammation *only* if essentials deficit &/or excess distress
- Rubor, calor, tumor, dolor, functio laesa

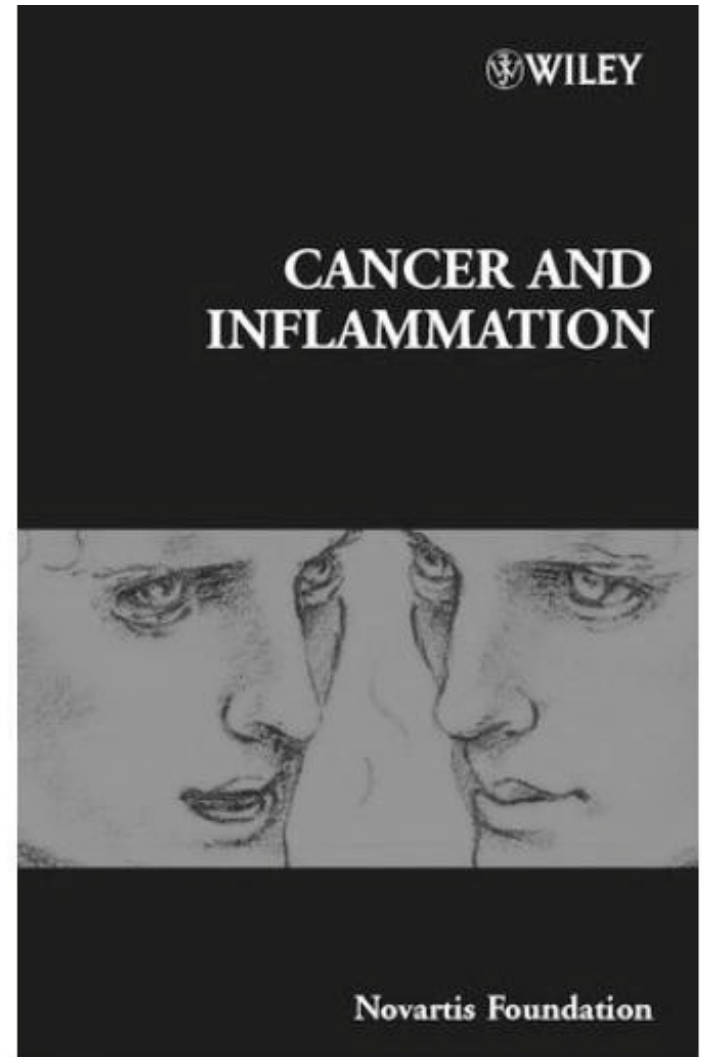
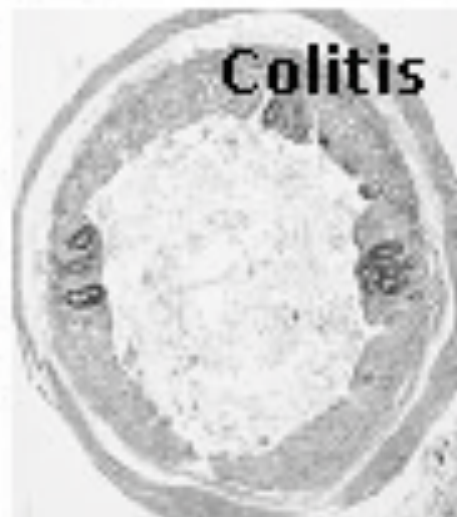


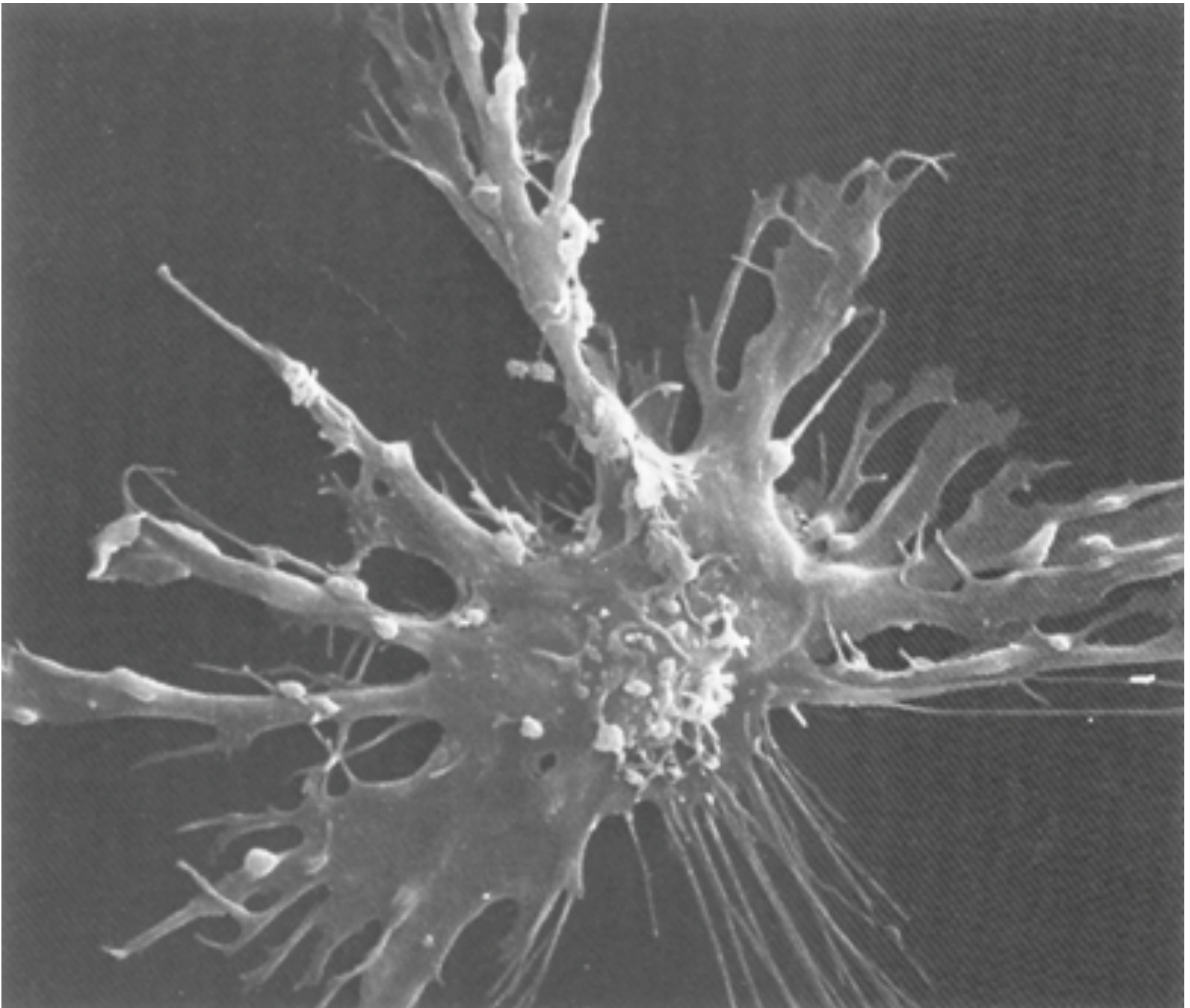


# Repair Deficit by Pathologists



# Inflammation Autoimmunity Cancer





# Dendritic 1<sup>st</sup> Responders *vulnerable*

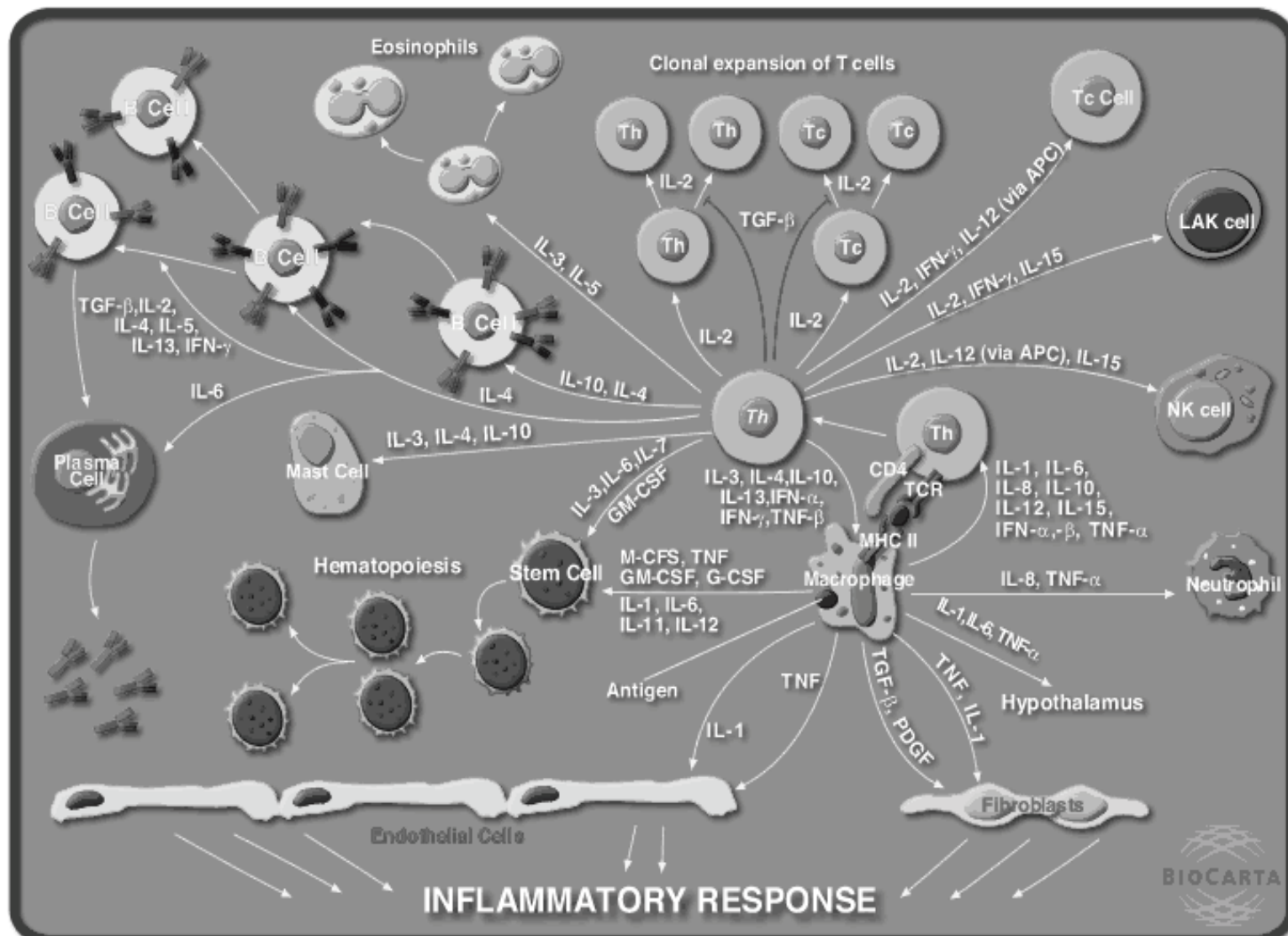
- **Metabolism** essential antioxidants prevent oxidative stress / damage *only* ▲ when repair deficit is present; high turn over, 1<sup>st</sup> to run out  
Markers: **hsCRP**, HSP, TNF, IL-1/IL-1R, Ω 6/Ω 3 cytokines, neurohormones
- **Antioxidants**: 8 Vitamins E & SeMet, Ascorbate, Glutathione, Bs, NAD, FAD, carotenoids, CoQ10
- **pH**: K/Na, **Mg**/Ca, **Zn**/Cu, **Cr**/Vn, **Mo**/Mn
- **Detoxification** in mitochondria [CoQ10, Asc]

# Integrative 1<sup>o</sup> tests: Healthy Values [HV]

- **Repair** / Inflammation *status*: hsCRP <0.5 HV
- \* Measure antioxidant status: 8-oxo-guanine, oxidized HDL/LDL [Shiel Lab], 0 HV
- \* **Antioxidants** *sufficient to achieve above*:  
8 Vitamins E 800-3200 IU/day & SeMet 50-1000 mcg/day, B complex, PABA, I, D3, Krebs' energy, ascorbates based on calibration,
- \* **pH**: 1<sup>st</sup> AM Urine, 6.5-7.5 HV [minerals...]
- \* **Detoxification** *sufficient* TMG & methylation *to*:  
homocysteine < 6 mg/dl HV



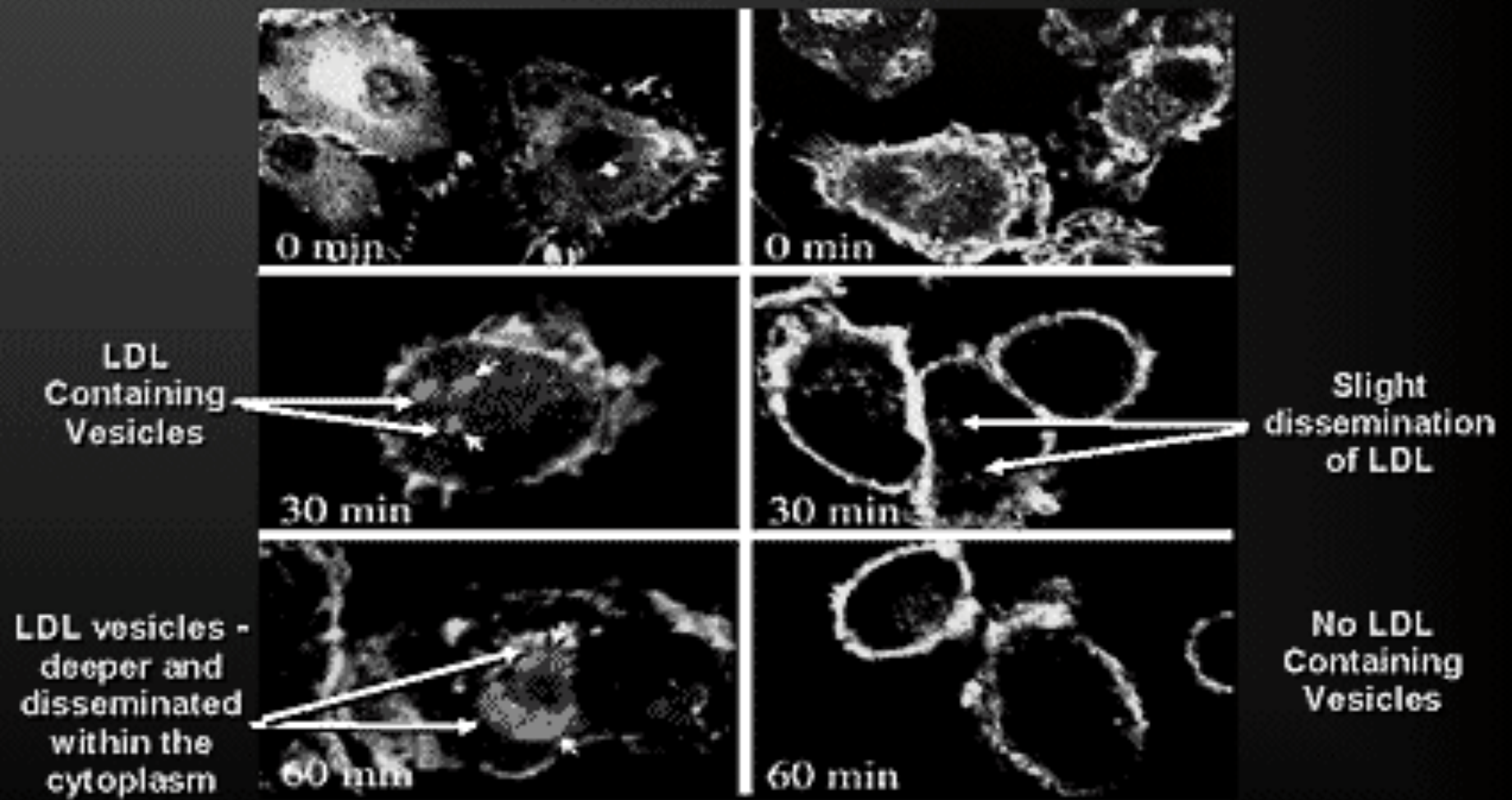
# Repair deficit seen as inflammation



# CRP-Mediated Uptake of LDL by Macrophages

Macrophages incubated with  
CRP/LDL

Macrophages incubated with  
LDL alone



Adapted from Zwaka TP, et al. *Circulation*. 2001;103:1194-1197.

# The Alkaline Way Integrative Care

- Practice “**Physiology 1<sup>st</sup>**” principles
- Restore host **homeostasis** based on predictive evidence based functional tests at **HV**
- Tolerance, resilience, reserve **enhanced**
- Consumption, activity, attitude, environment: relationships, **interdependence**
- **BioDetox** for sustainable survival *now*



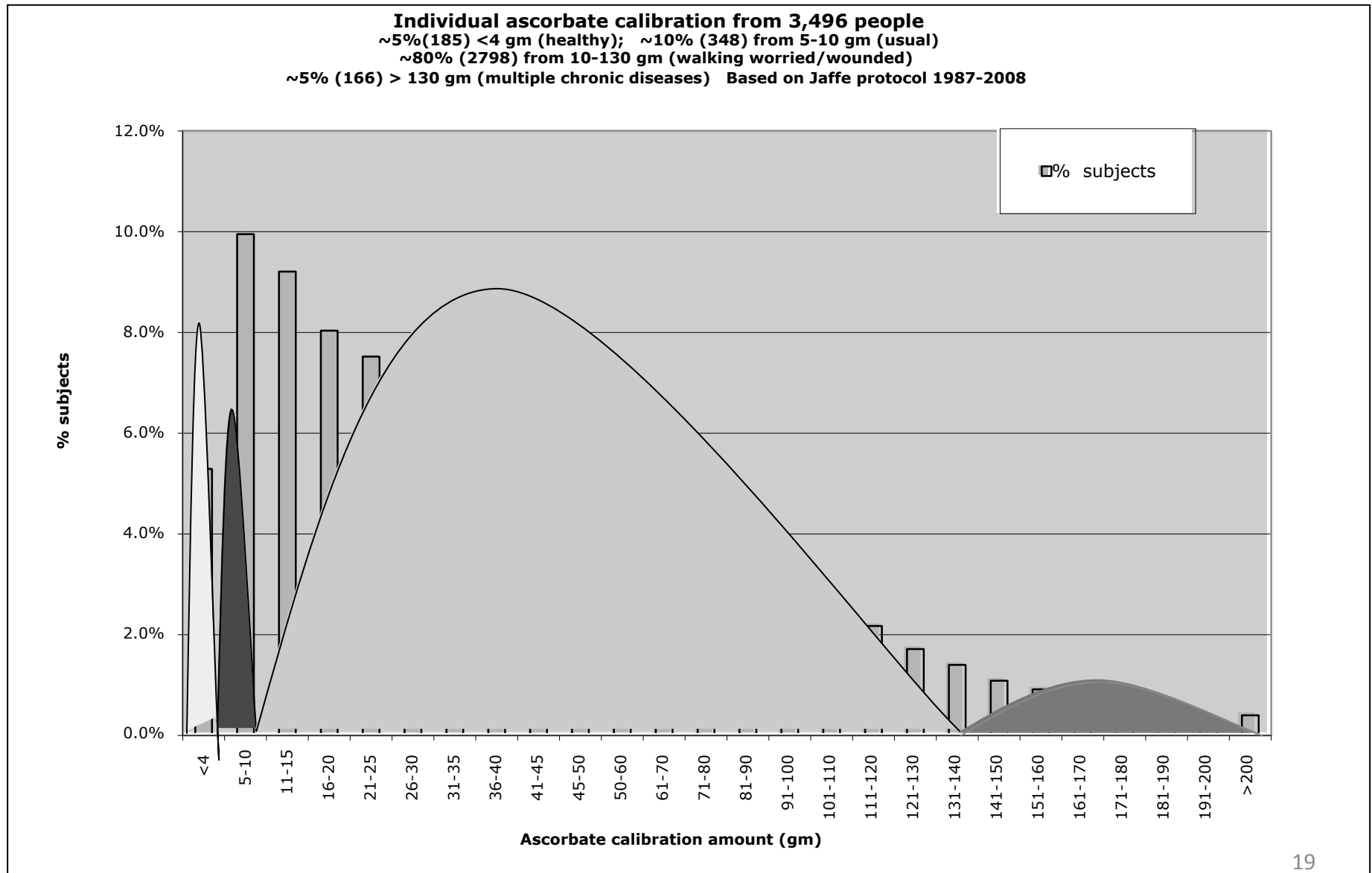
# The Alkaline Way BioDetox

- **BioDetox** for sustainable survival now
  1. Ascorbates based on calibration
  2. Carotenoids, B complex, methyl cofactors
  3. Broccoli sprouts, 8 ounces daily
  4. Magnesium + Choline Citrate, 2-4+ doses = 220-880+ mg elemental magnesium daily
  5. Quercetin dihydrate + soluble OPC
  6. EPA/DHA in MCT (2-6 gm daily)
  7. Low temp sauna [105° C until oily]

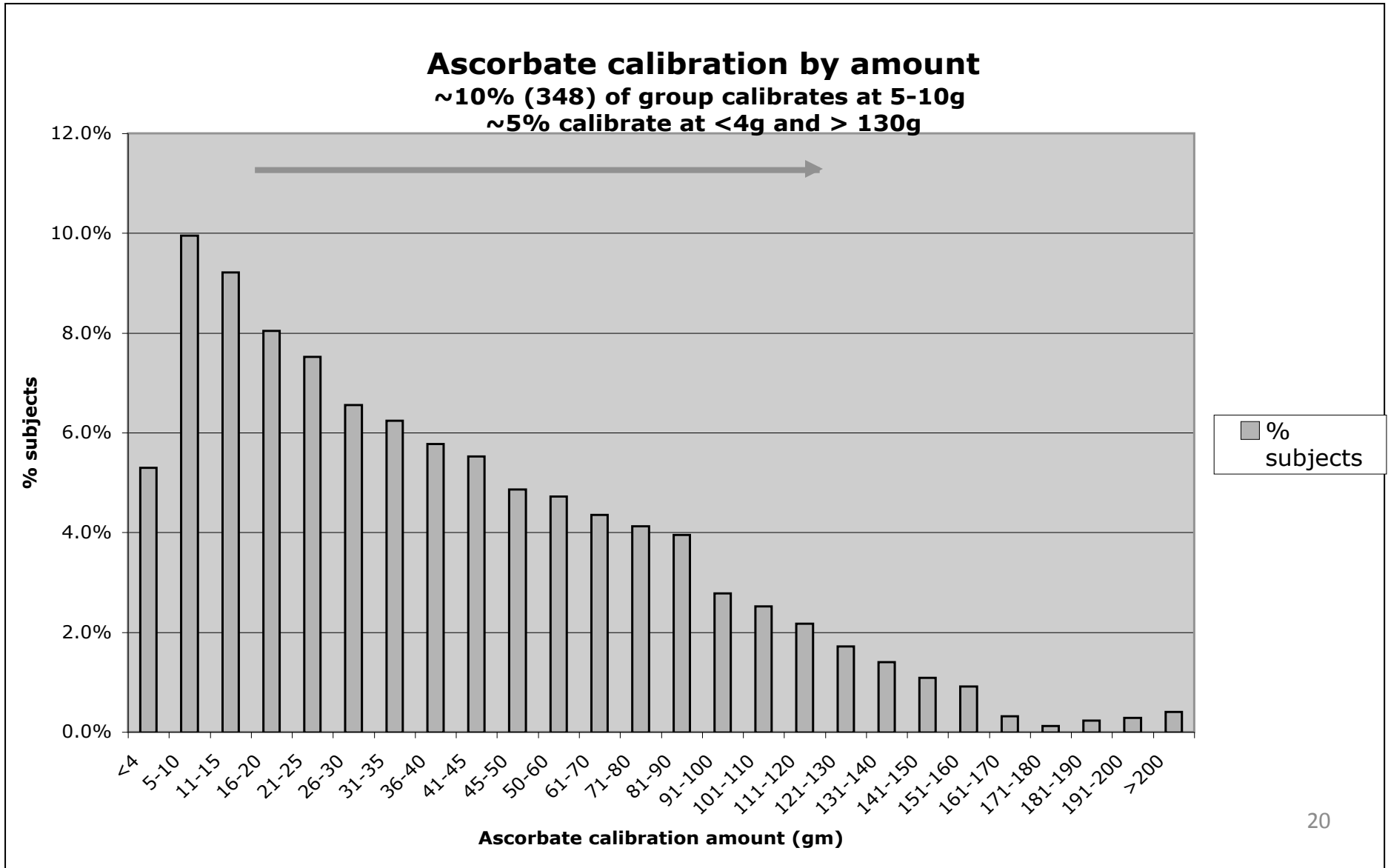
# The Alkaline Way BioDetox

- **BioDetox** for sustainable survival now
  1. **Ascorbates** based on **personal calibration**
    - \* **Individualize ascorbate** *central* protective antioxidant; *in vivo* always protective; 100% L-ascorbate, fully reduced & buffered
    - \* **Protects & Recycles** tocopherols, lipoate, glutathione, taurine, NAD, FAD, DNA, PUFA [Omega 3 & Omega 6], cytochromes,
    - \* Sets **ReDox** level: healthy ferrous iron, chromium, **stops** oxidative stress

# Ascorbate needs from 4-100+ g/day



# ***Most people have 'oxidative stress': 10-130 gm ~80% of people ('free rads')***



# The Alkaline Way BioDetox

- **BioDetox** for sustainable survival now
  2. **Carotenoids**, B complex, methyl cofactors
    - \* alpha & beta carotene, zeaxanthine, pseudoxanthine, lycopene, lutein
    - \* B complex by fermentation [all forms; not synthetic single form of B6, B9 folate]  
*Clinical pearl:* Keep urine sunshine yellow
    - \* Methylation: B complex, TMG, DMG  
*Clinical pearl:* Homocysteine < 6 mg/dl

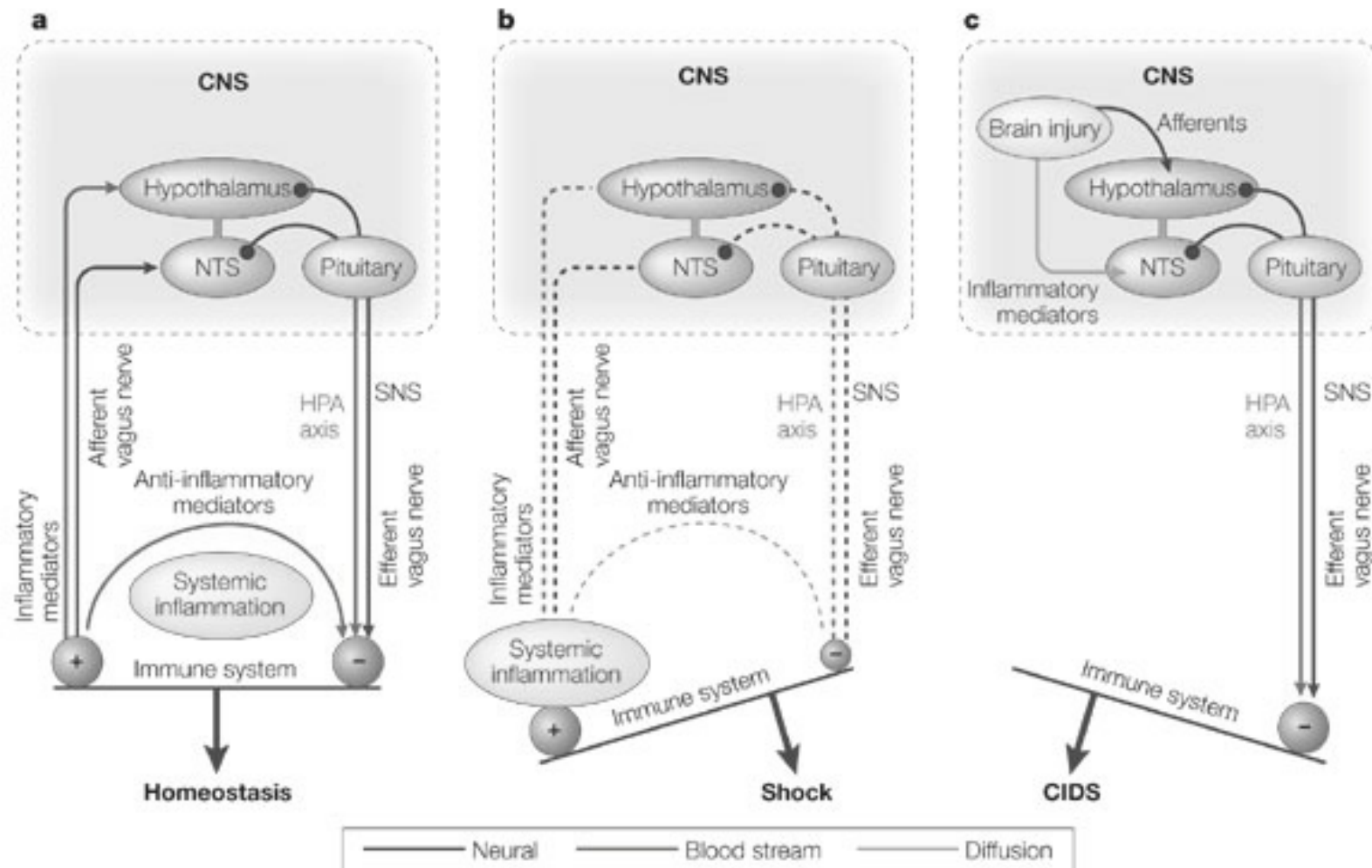
# The Alkaline Way BioDetox

- **BioDetox** for sustainable survival now
  3. **Broccoli sprouts**, 8 ounces daily:
    - \* Sulforaphane, IP6, minerals
  4. **Magnesium & Choline Citrate**, 2-4+ doses = 220-880+ mg elemental magnesium daily
    - Clinical Pearl:* 1<sup>st</sup> AM urine pH 6.5-7.5
    - Magnesium displaces toxic minerals
    - Choline, acetylcholine, cholinergic bile
    - Citrate energizes & alkalinizes mitochondria

# The Alkaline Way BioDetox

- **BioDetox** for sustainable survival now
- 5. **Quercetin dihydrate** 500-1000 mg+  
**soluble OPC** 5-50 mg 2 tabsules 2-4+ daily  
*Clinical pearl:* Protect & Activate repair  
Safer, synergistic flavanoid & flavanol  
Activate elective protectives, detox, recycling
- 6. **EPA/DHA in MCT** (2-6 gm daily)
  - \* EPA for body & brain; DHA for brain & body
  - \* Distilled under nitrogen *always*
- 7. **Low temp sauna** [105° C until oily]

# Homeostasis *or* Imbalances



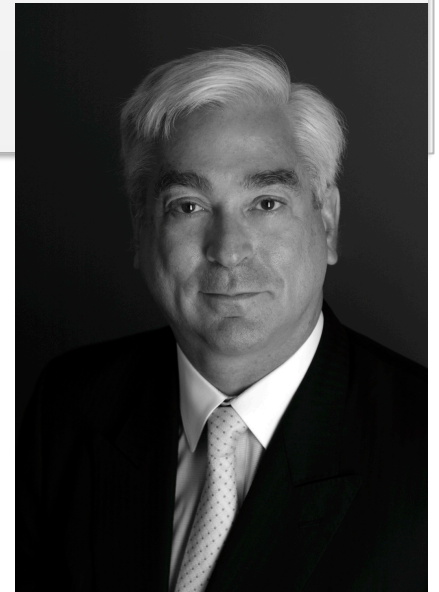
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# Clinical Objectives to understand...

- Immune defense & repair mechanisms in body: Protect, Recycle, Defend, Repair; stop fighting!
- **Inflammation is repair deficits: Promote repair**  
**Integrative ReThink** is basis for health promotion;  
H2 practice **The Alkaline Way** for lifelong repair
- “**Physiology 1<sup>st</sup>**” principles restore host **homeostasis**; predictive evidence tests applied functionally & individually; the New Medicine

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