



Healthy Ageing

John Beard



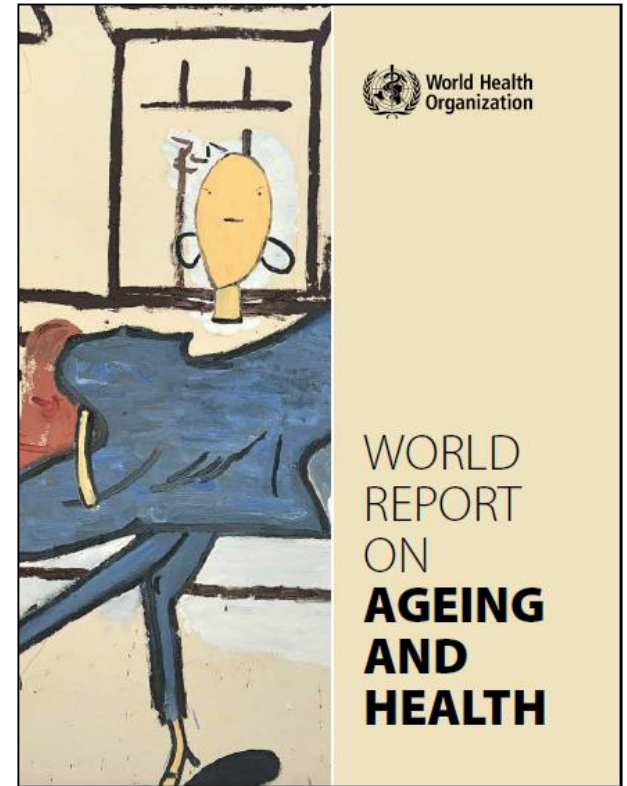
**World Health
Organization**

World Report on Ageing and Health

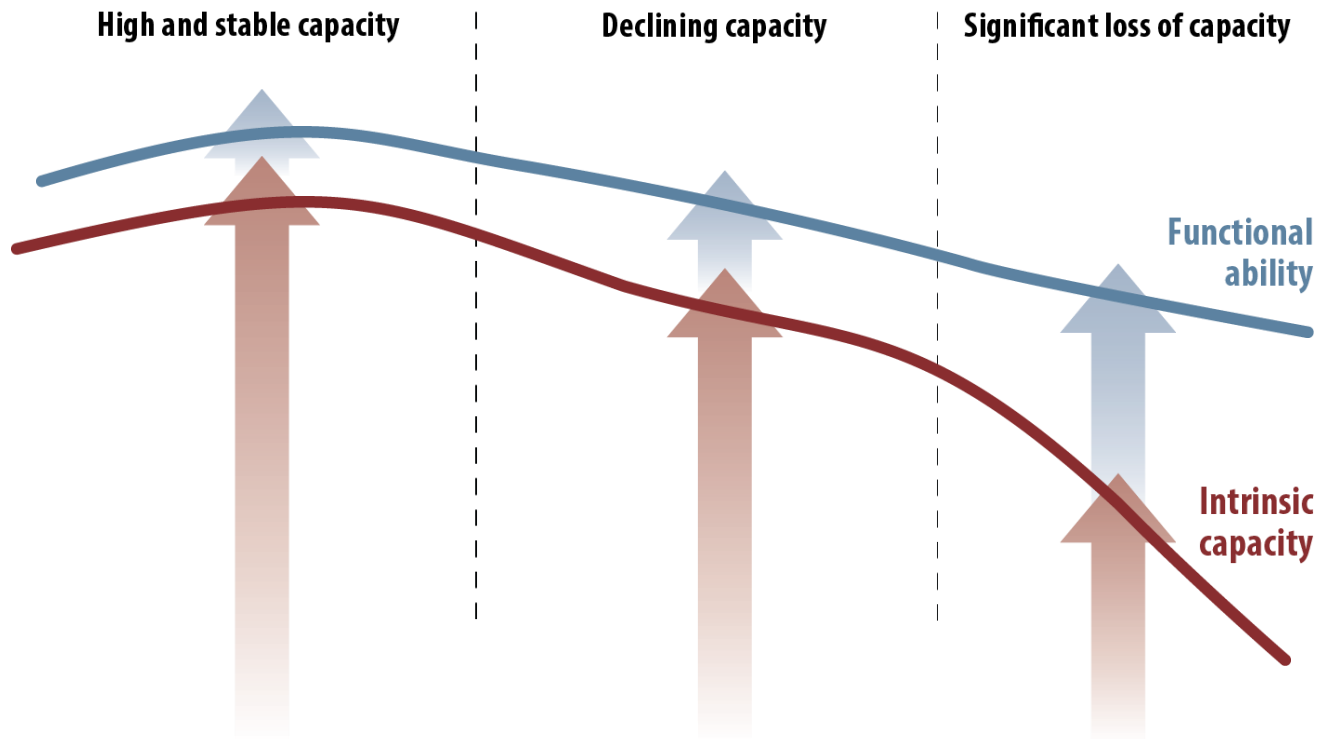
"*Healthy Ageing* - the process of developing and maintaining the functional ability that enables wellbeing in older age."

Link:

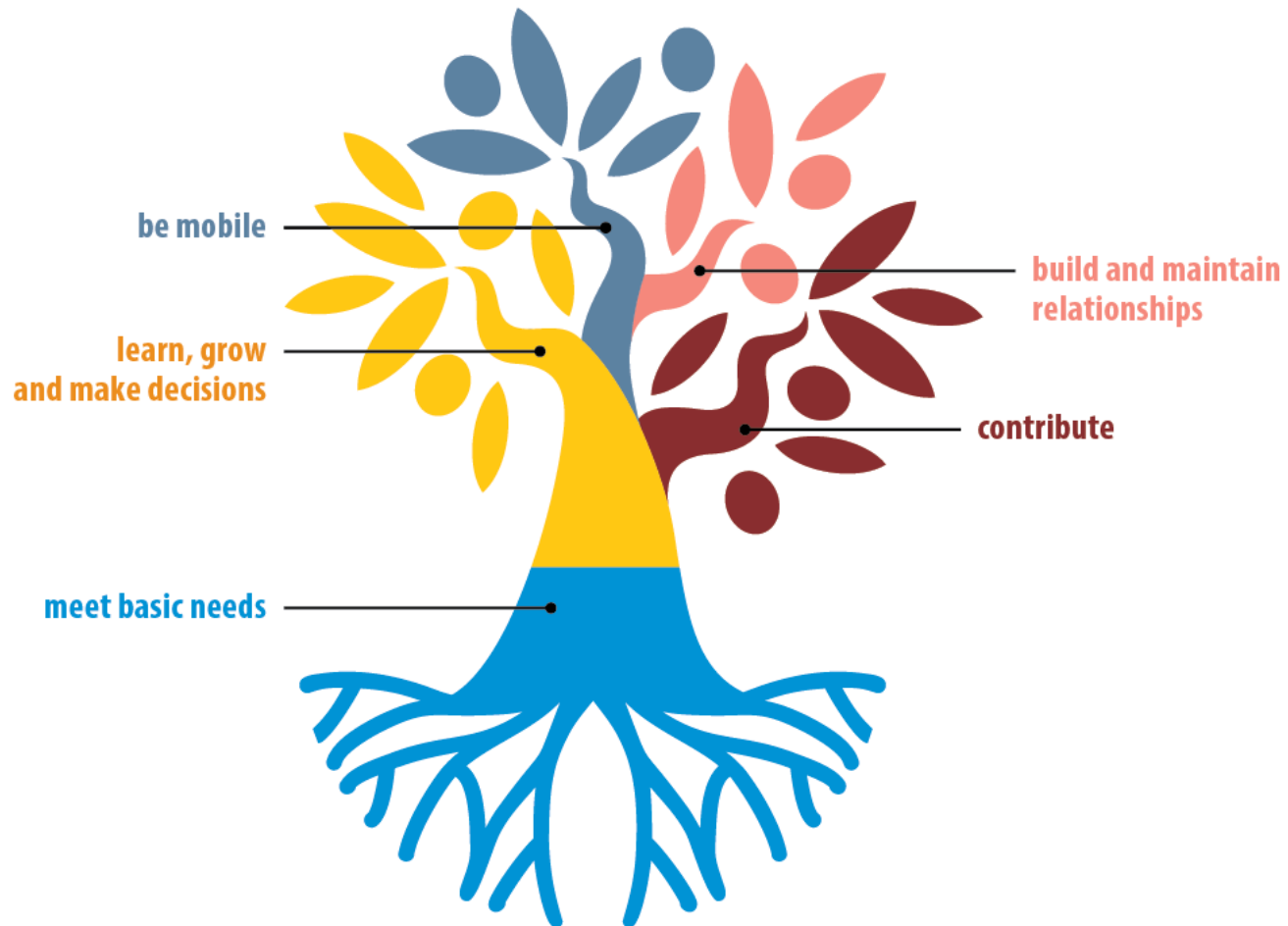
<http://www.who.int/ageing/events/world-report-2015-launch/en/>



Opportunities to foster *Healthy Ageing*



The things older people want



Global Strategy on Ageing and Health

- ✓ Commitment to action on *Healthy Ageing*
- ✓ Age-friendly environments
- ✓ Health systems aligned to the needs of older populations
- ✓ Systems for long-term care
- ✓ Better measurement, monitoring and research

2016-2020 Action Plan on Ageing and Health

✓ Action where evidence is strong

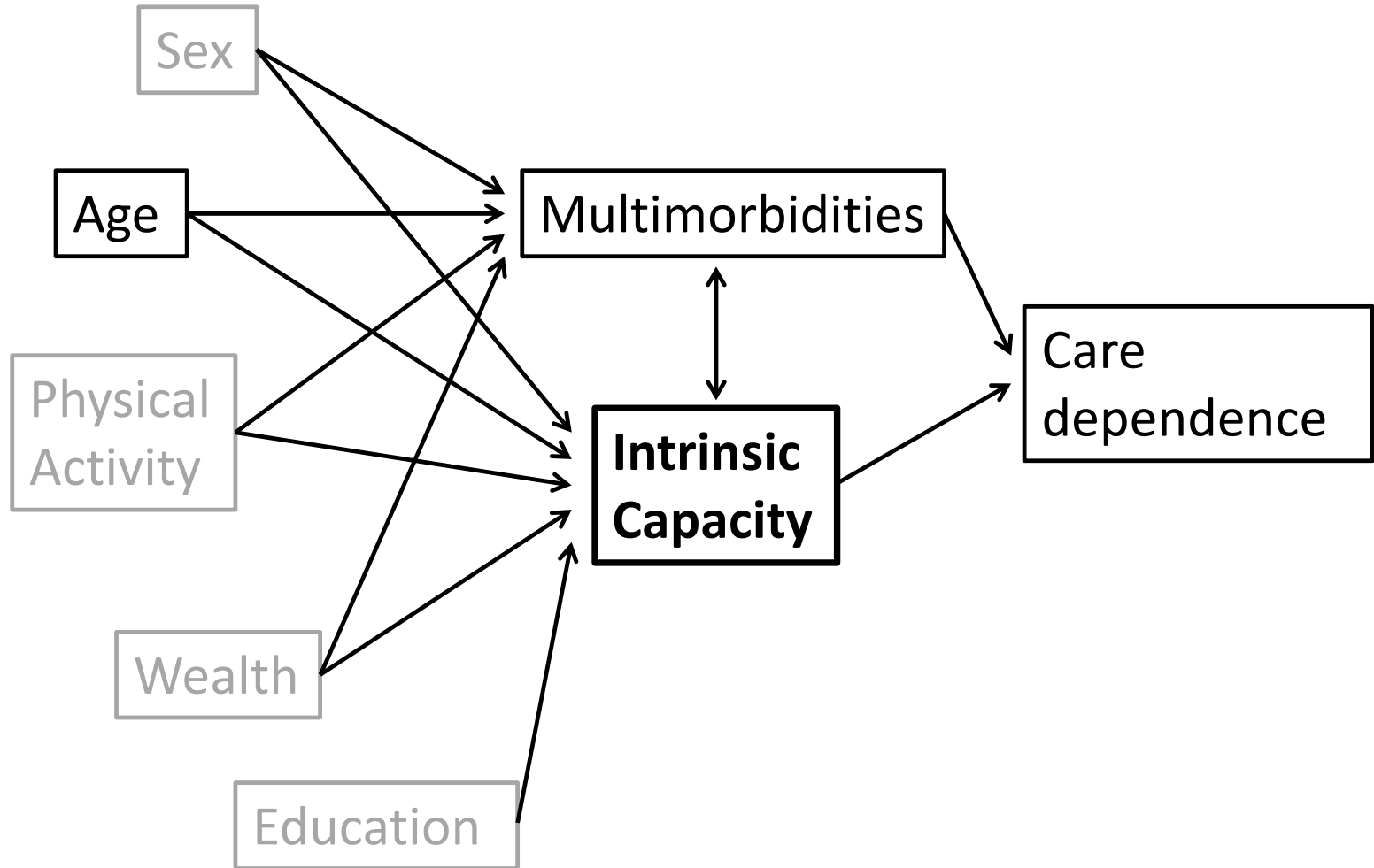
✓ Build the partnerships and infrastructure, and fill the knowledge gaps, to enable a *Decade of Healthy Ageing 2021-2030*

- Capacity
- Baseline Status Report and Monitoring Systems
- Norms and Guidance
- Global campaign against ageism

Global Strategy on Ageing and Health

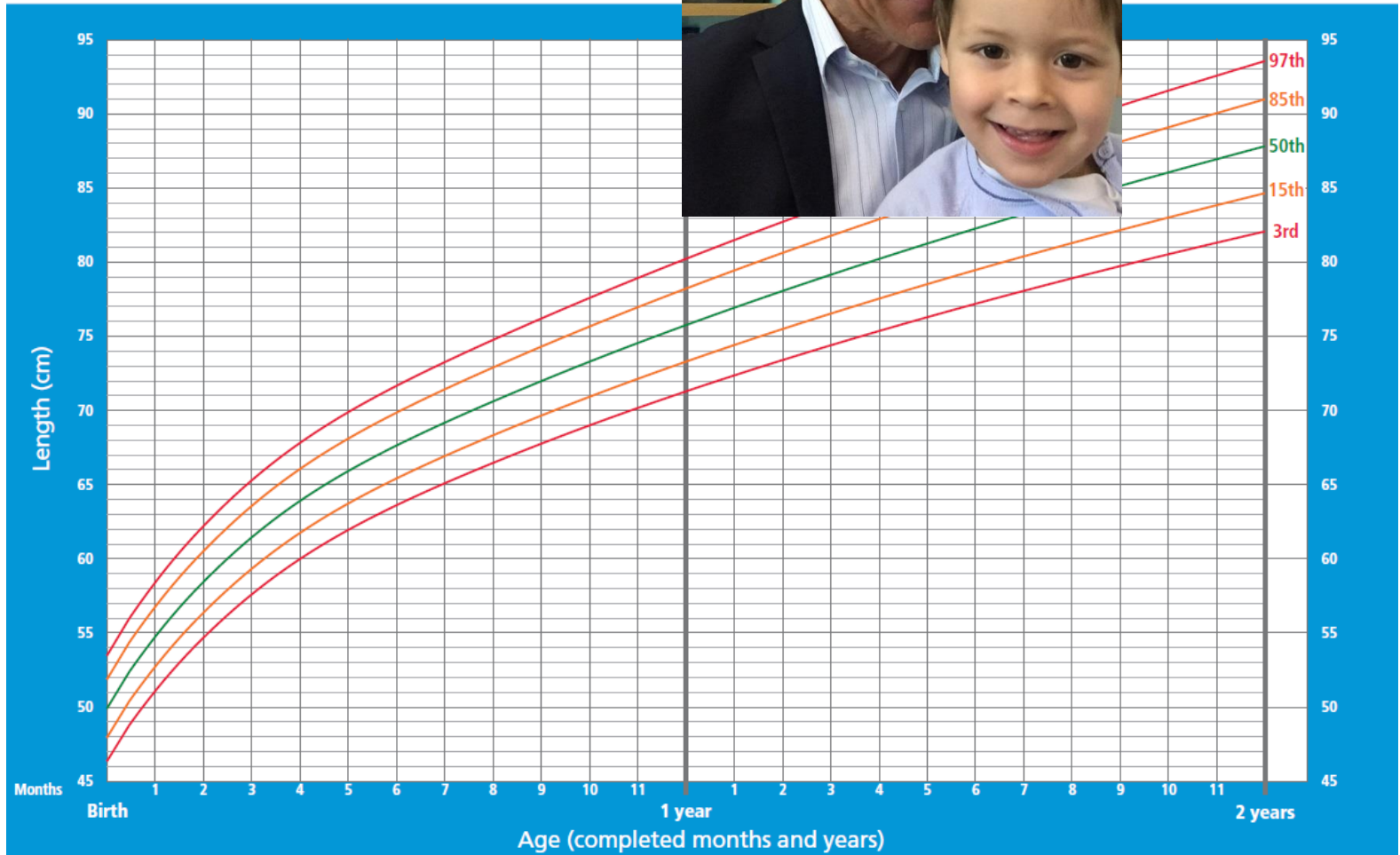
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Predictive value of Intrinsic Capacity



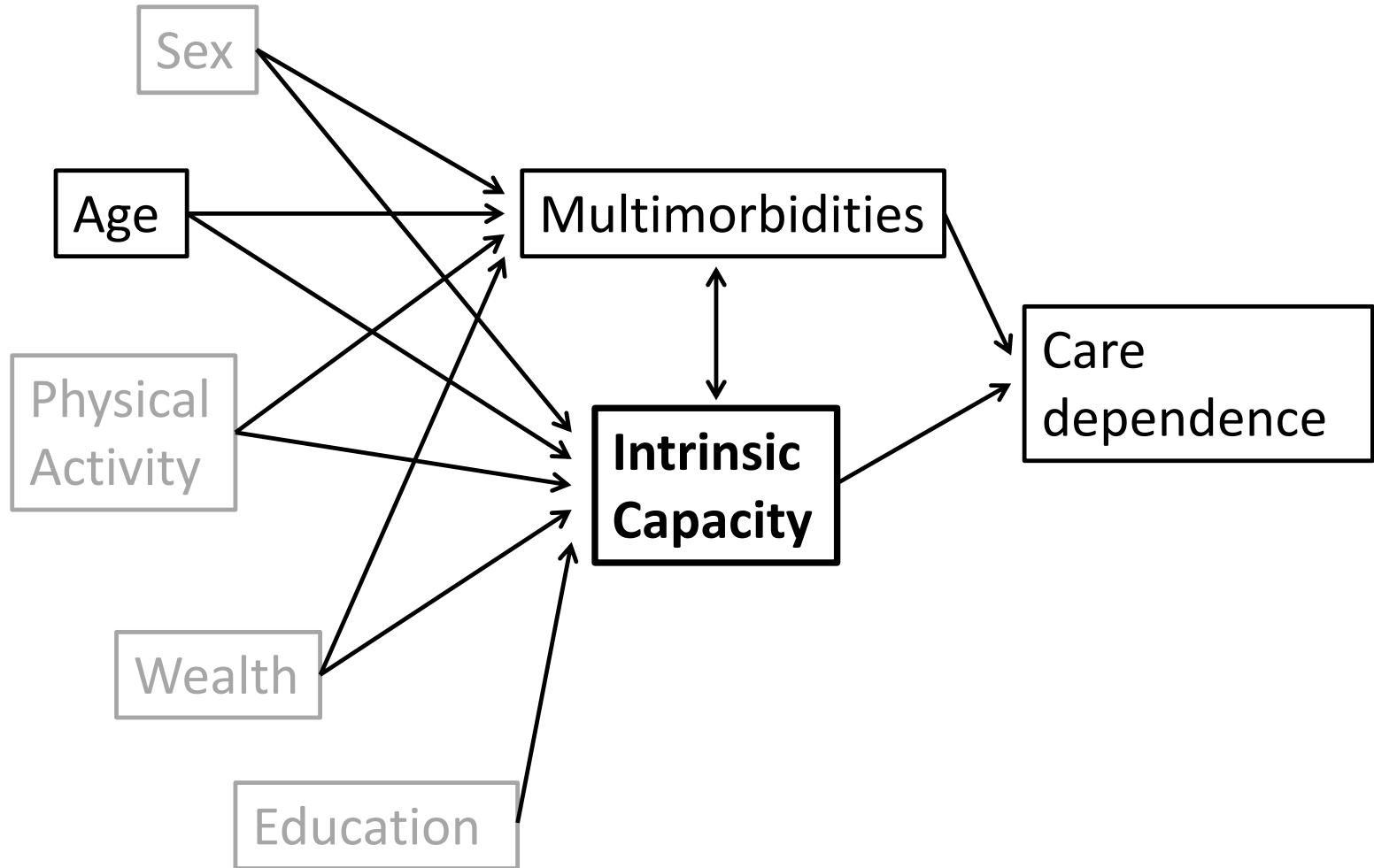
Length-for-age BOYS

Birth to 2 years (percentiles)





Predictive value of Intrinsic Capacity





Intrinsic Capacity:

All the individual level attributes that contribute to functional ability

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All the individual level attributes that contribute to functional ability

Lower level physiologic systems

DNA

Proteostasis

Glycans

Stem cells

Cellular senescence

Epigenetic changes

Intercellular communication

Microbiome

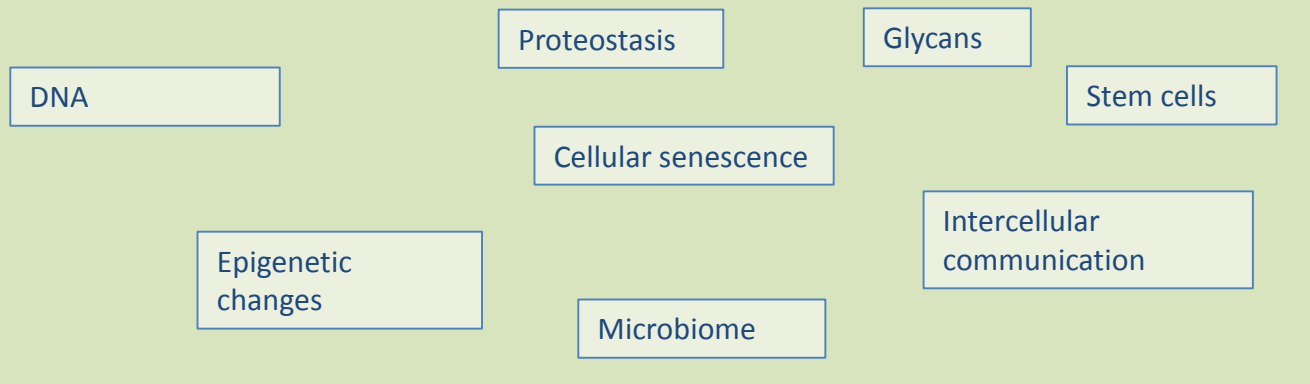
Intrinsic Capacity:

All the individual level attributes that contribute to functional ability

Higher level physiologic systems

Cardiovascular, Respiratory, Genitourinary, Neurological, Musculoskeletal, Dermatological etc

Lower level physiologic systems



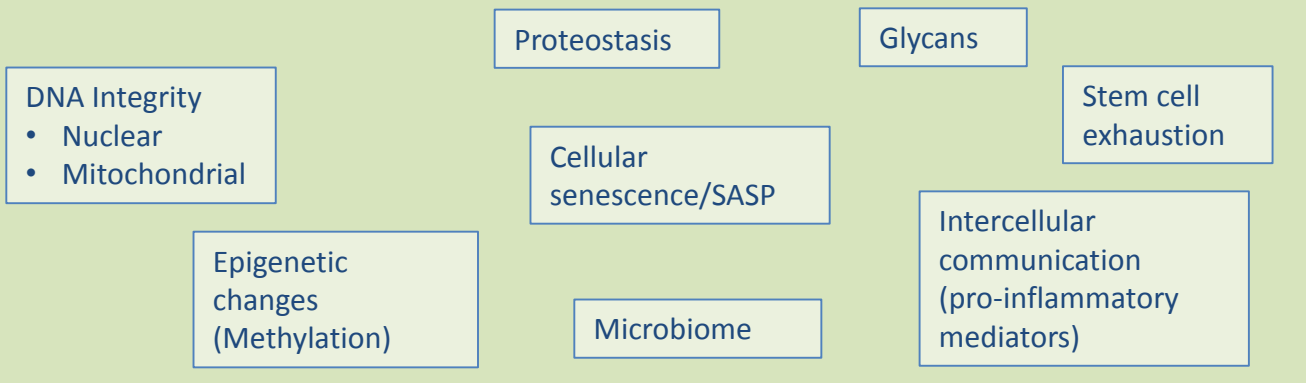
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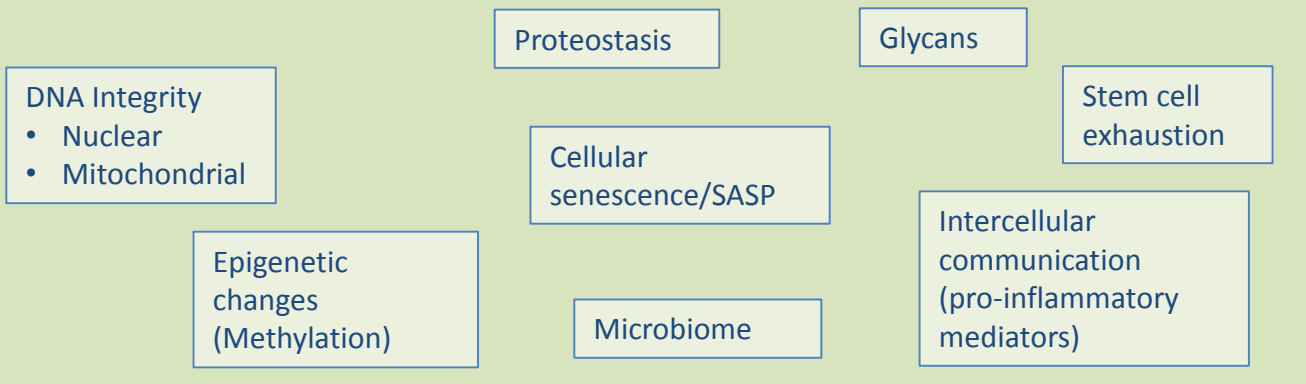


Disease and Intrinsic Capacity

Higher level physiologic systems

Cardiovascular, Respiratory, Genitourinary, Neurological, Musculoskeletal, Dermatological etc

Lower level physiologic systems



Disease and Intrinsic Capacity

Higher level physiologic systems

Cardiovascular, Respiratory, Genitourinary, Neurological, Musculoskeletal, Dermatological etc

Lower level physiologic systems

DNA Integrity

- Nuclear
- Mitochondrial

Epigenetic changes
(Methylation)

Proteostasis

Cellular senescence/SASP

Microbiome

Glycans

Intercellular communication
(pro-inflammatory mediators)

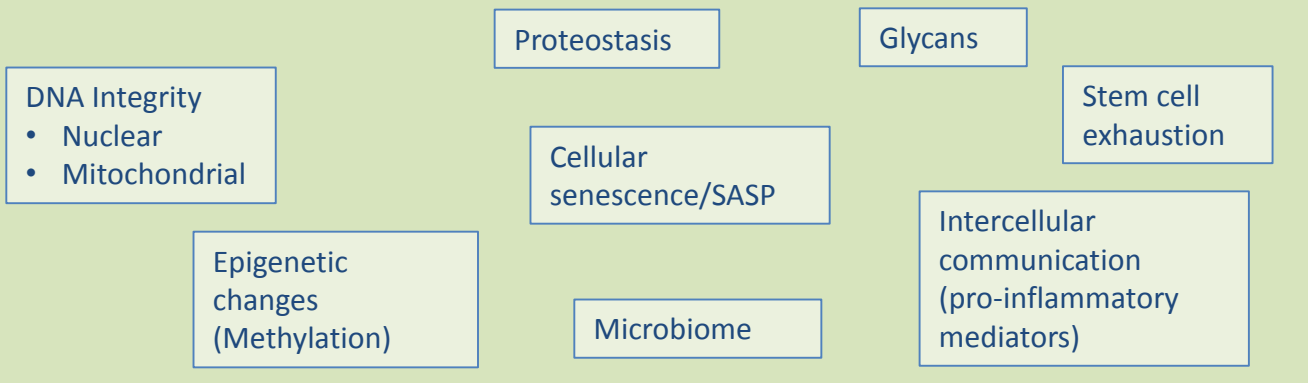
Stem cell exhaustion

Disease and Intrinsic Capacity

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Lower level physiologic systems

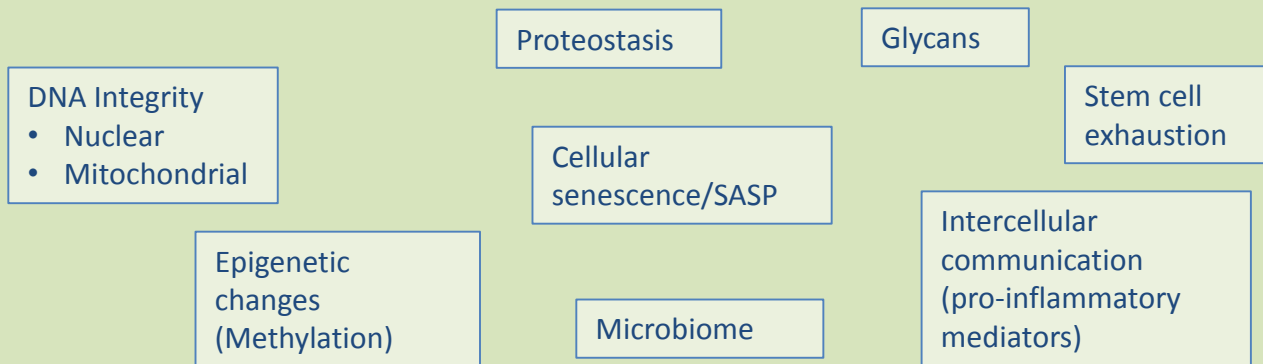


Disease and Intrinsic Capacity

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Lower level physiologic systems

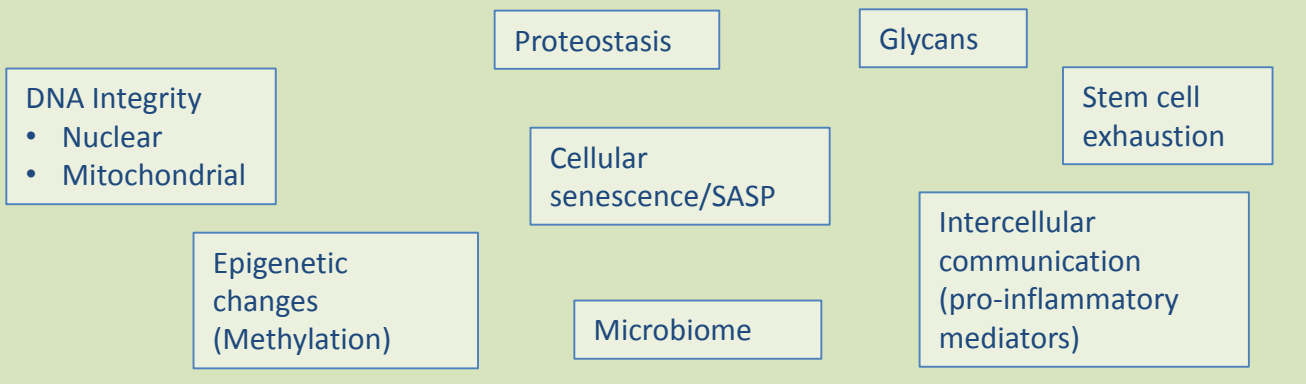


Function and Intrinsic Capacity

Higher level physiologic systems

Cardiovascular, Respiratory, Genitourinary, Neurological, Musculoskeletal, Dermatological etc

Lower level physiologic systems



Function and Intrinsic Capacity

Locomotor

Higher level physiologic systems

Cardiovascular, Respiratory, Genitourinary, Neurological, Musculoskeletal, Dermatological etc

Lower level physiologic systems

DNA Integrity

- Nuclear
- Mitochondrial

Epigenetic changes
(Methylation)

Proteostasis

Cellular
senescence/SASP

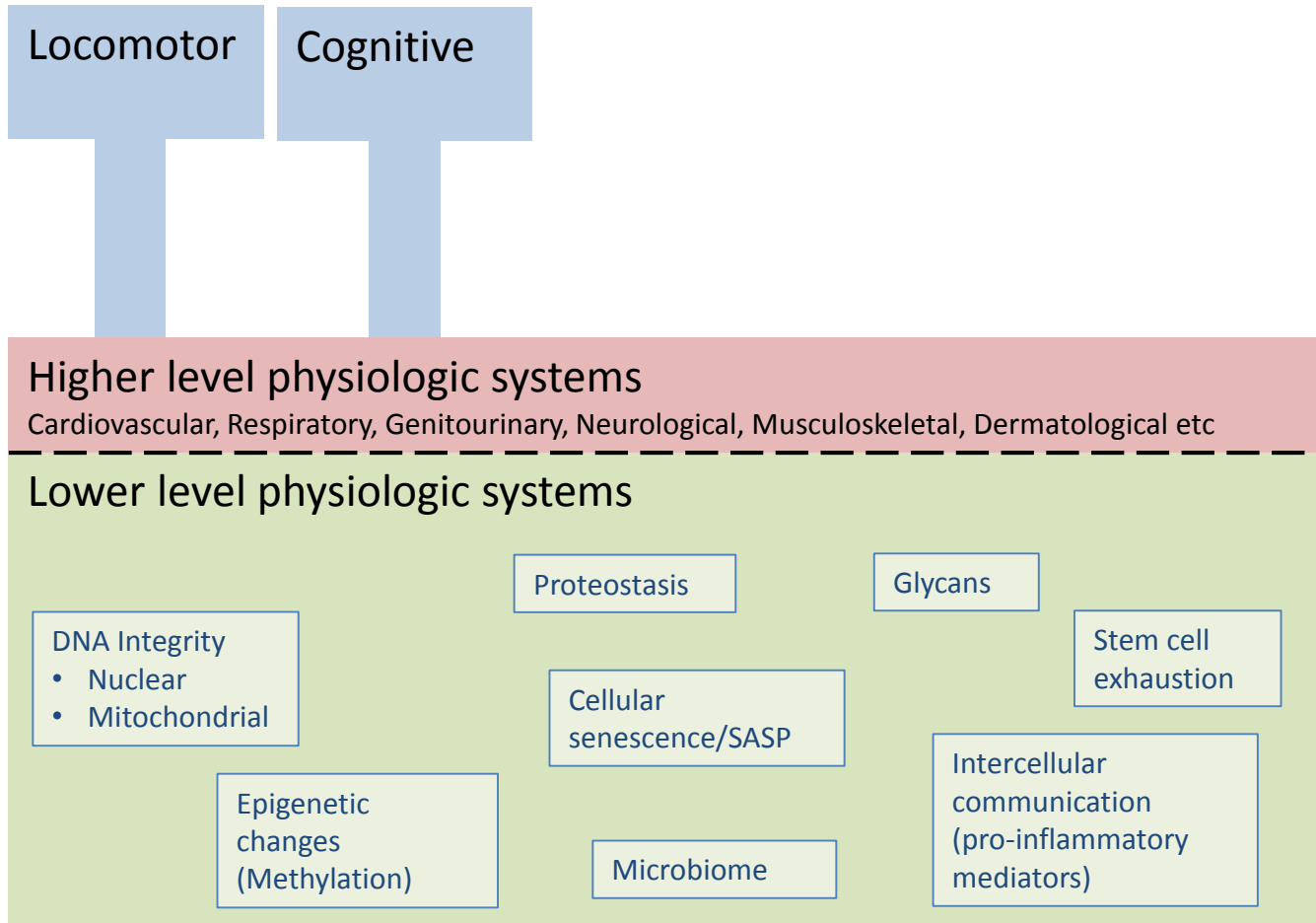
Microbiome

Glycans

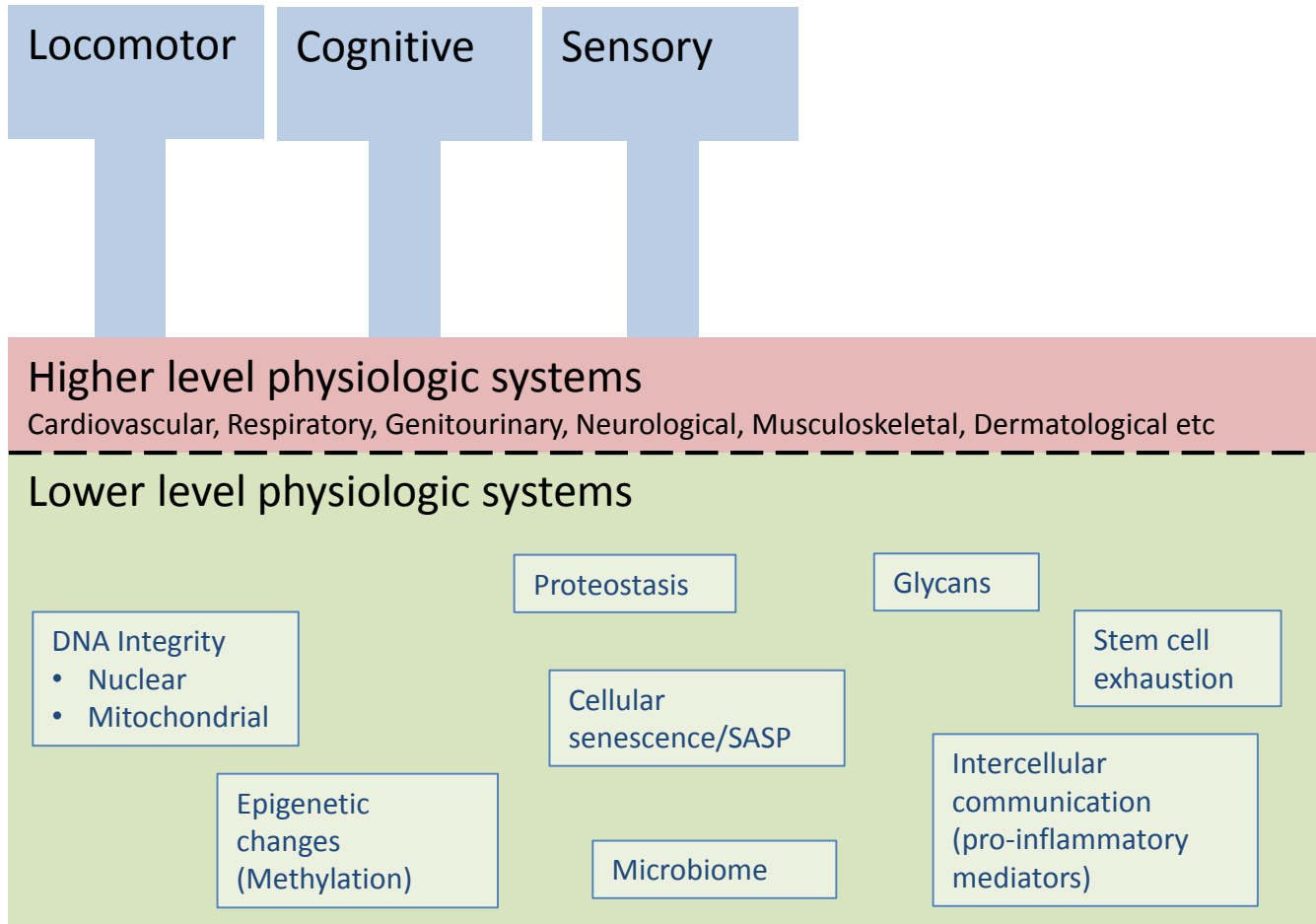
Stem cell
exhaustion

Intercellular
communication
(pro-inflammatory
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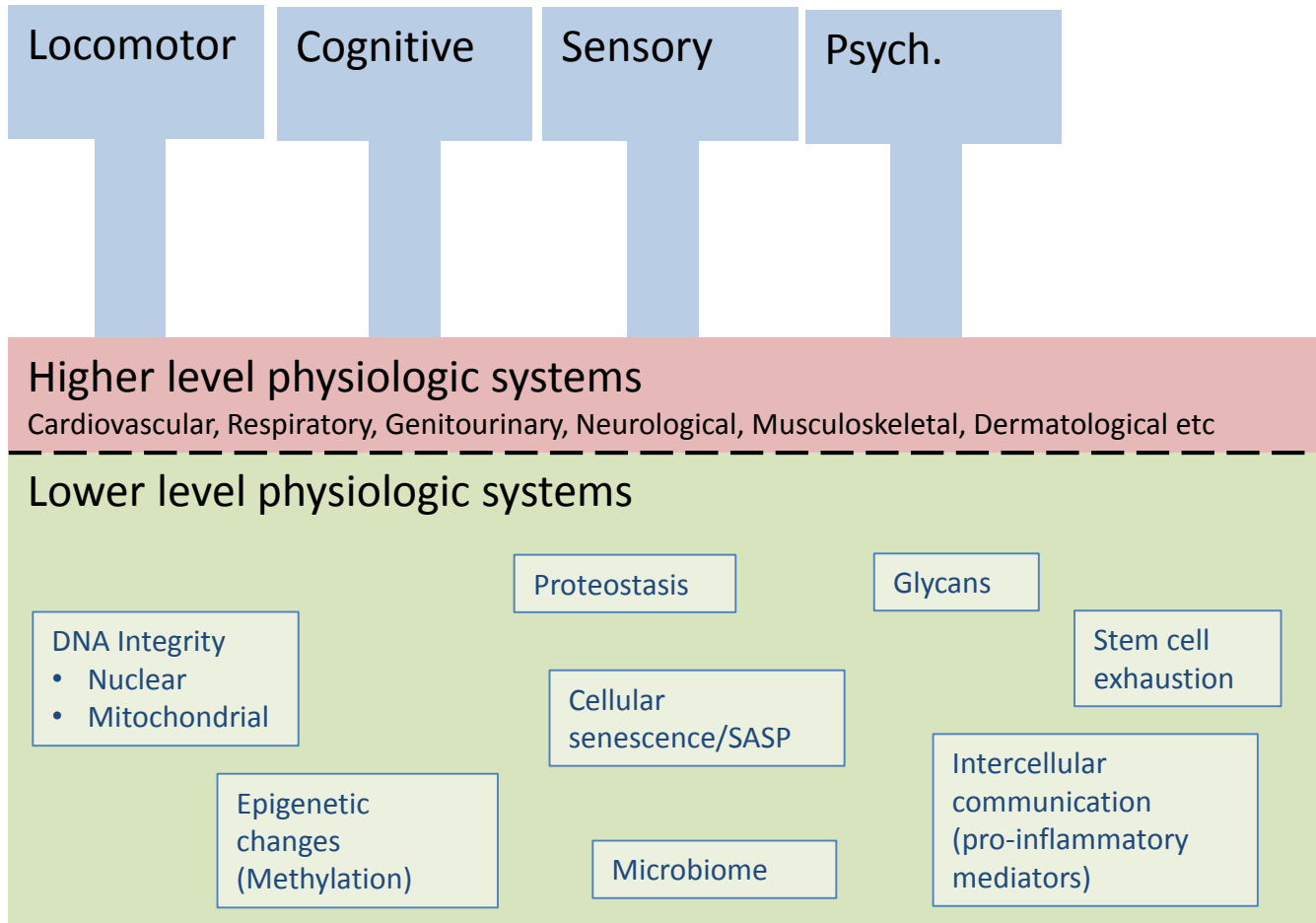
Function and Intrinsic Capacity



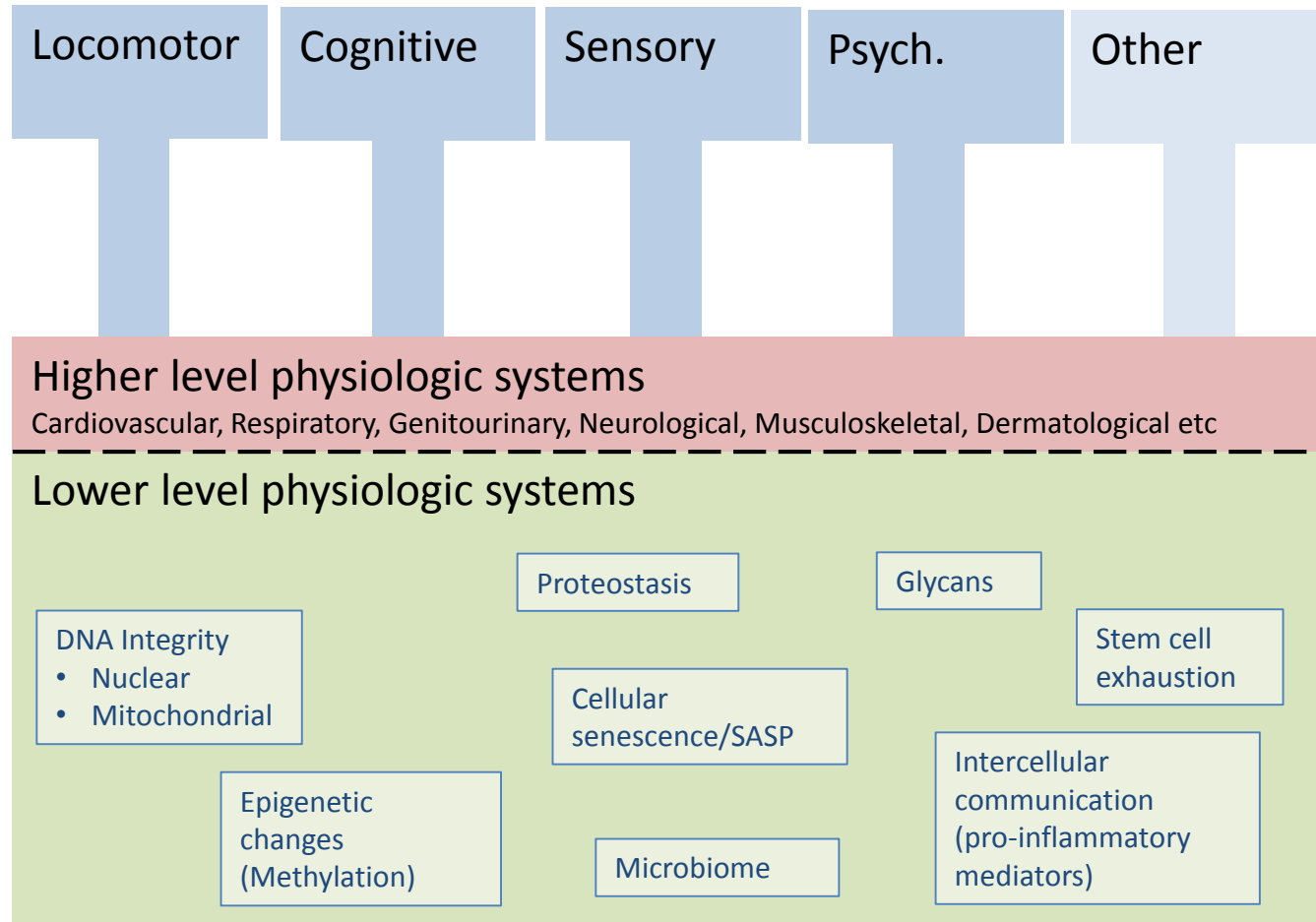
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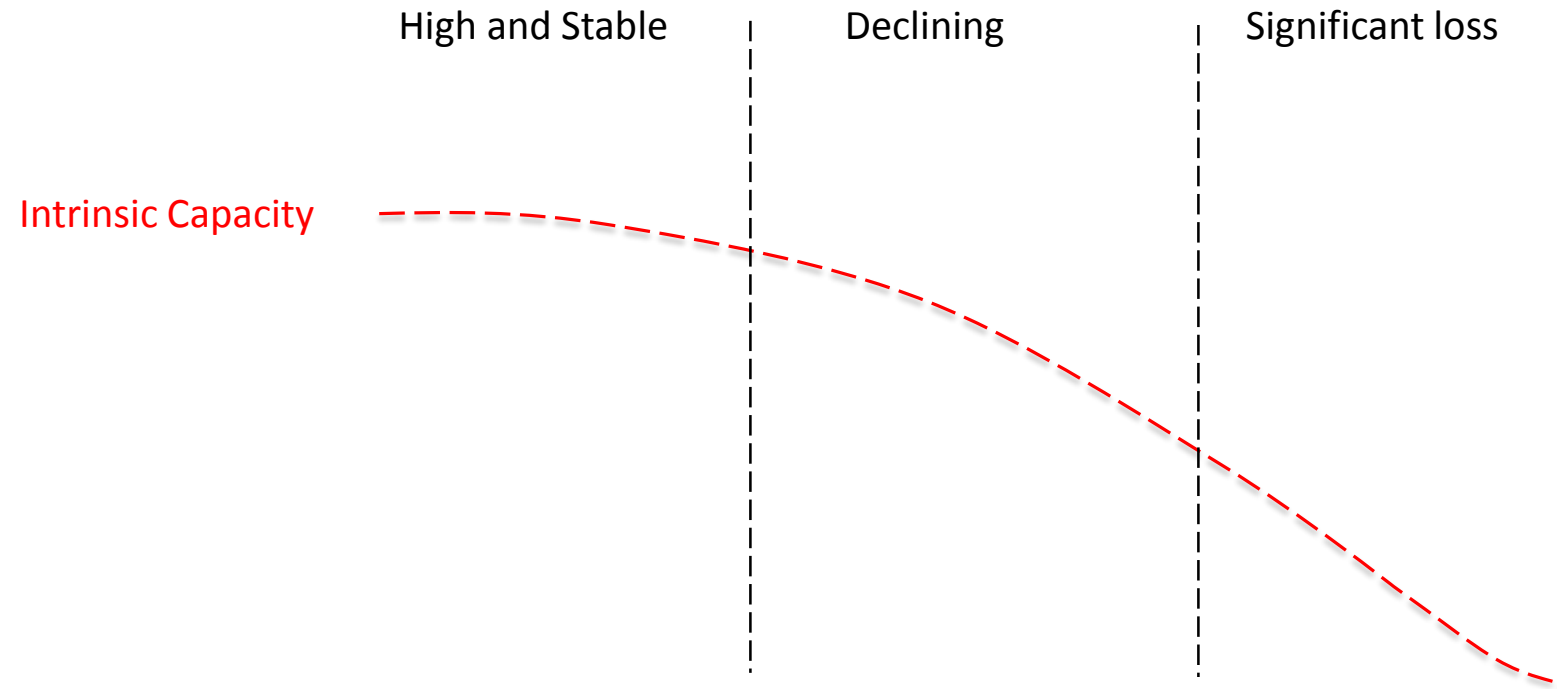
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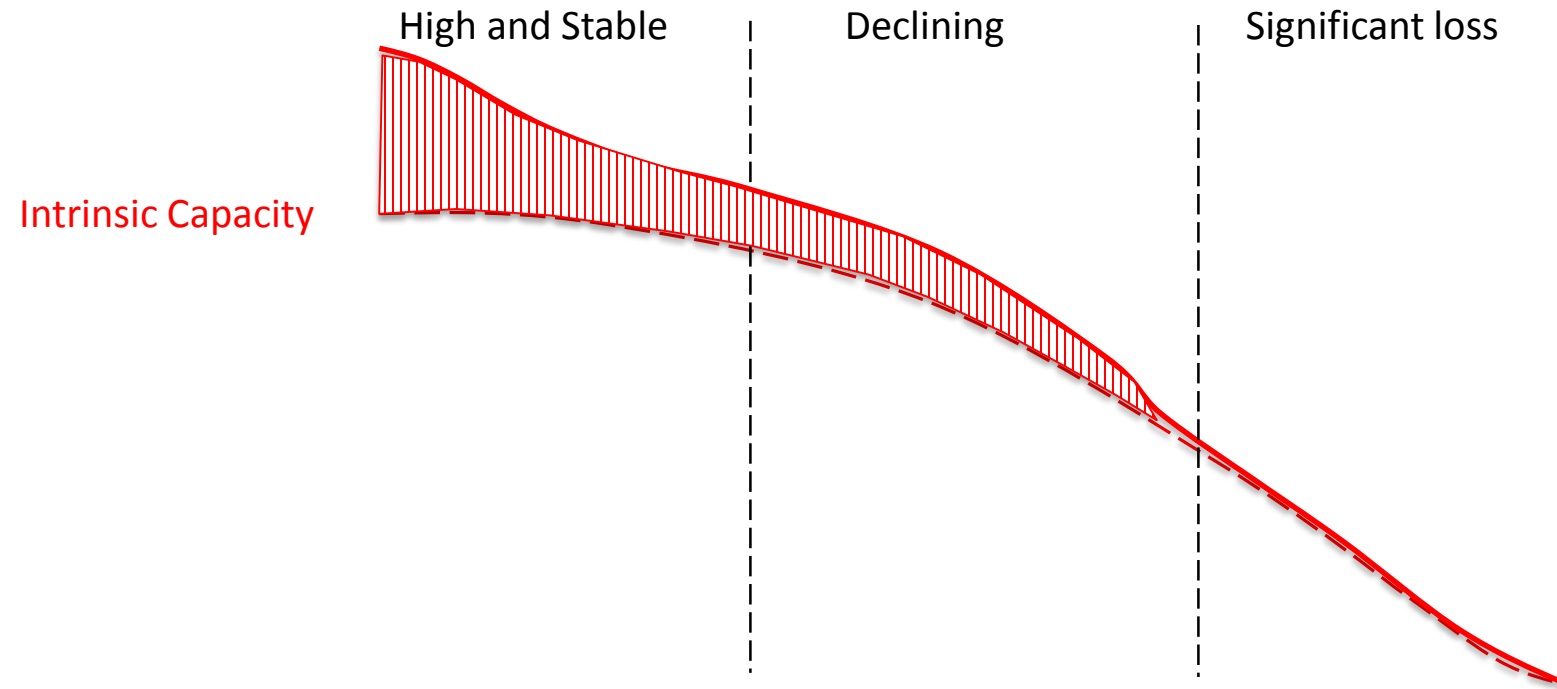
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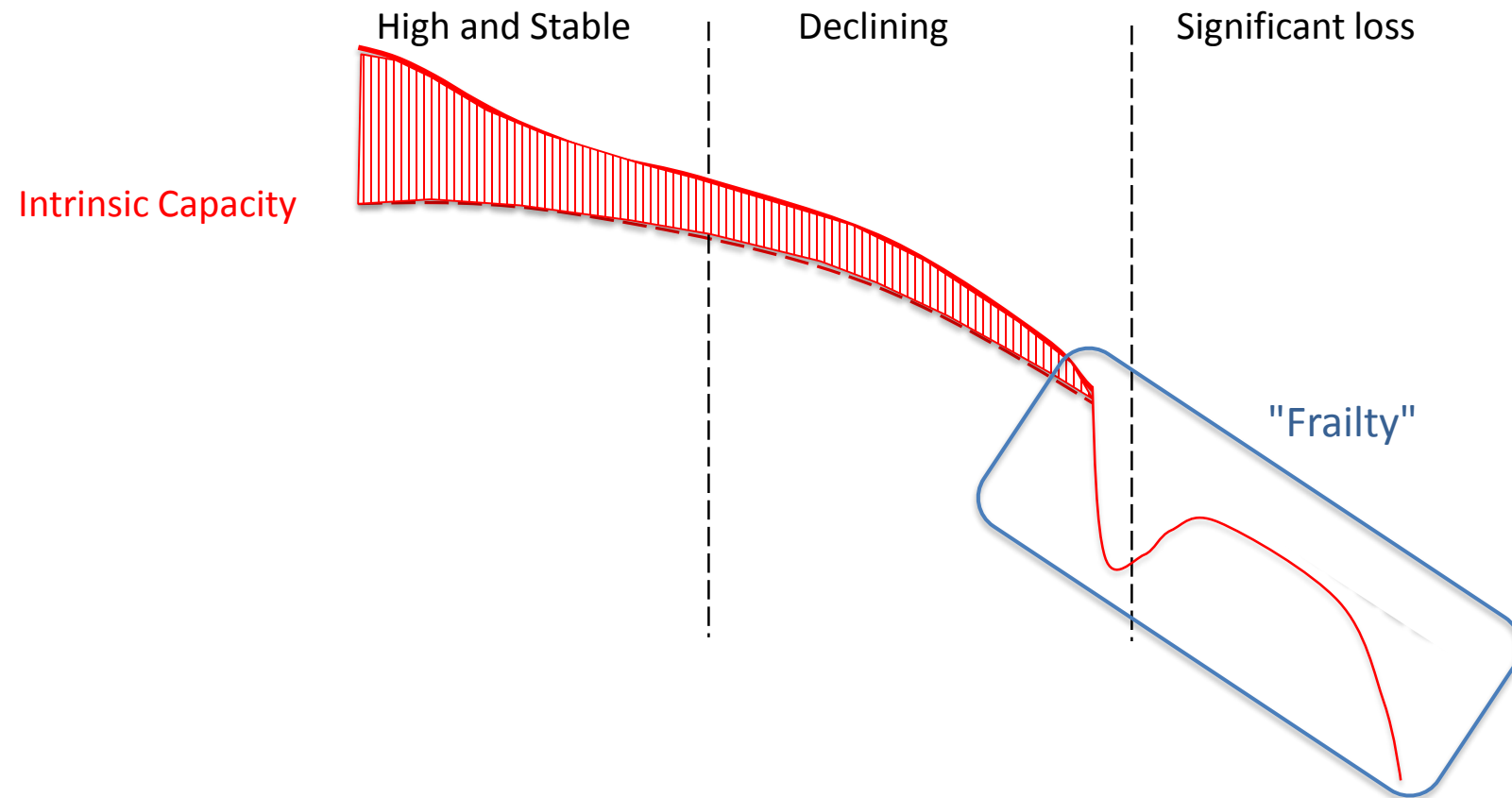
Population in the second half of life



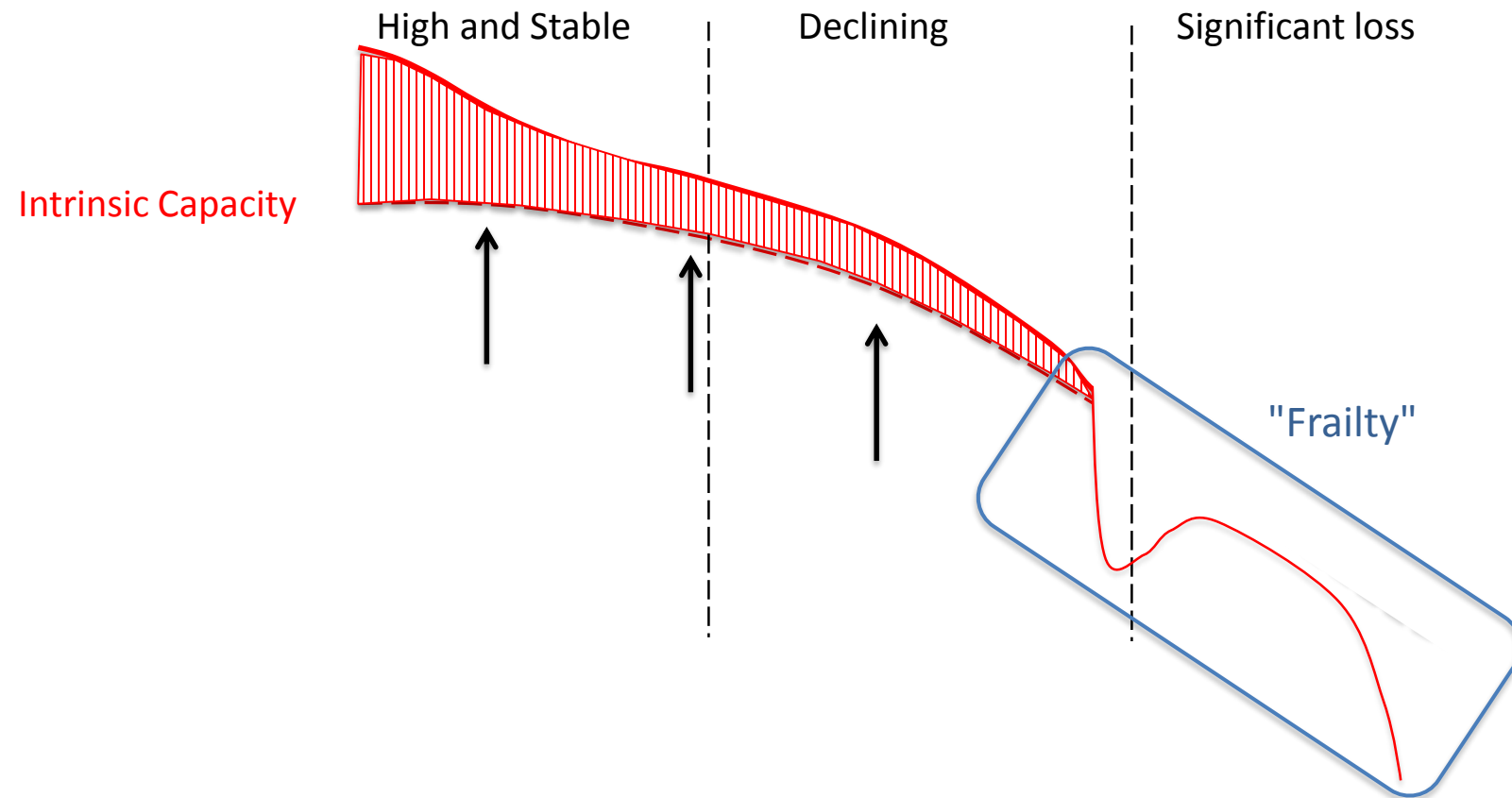
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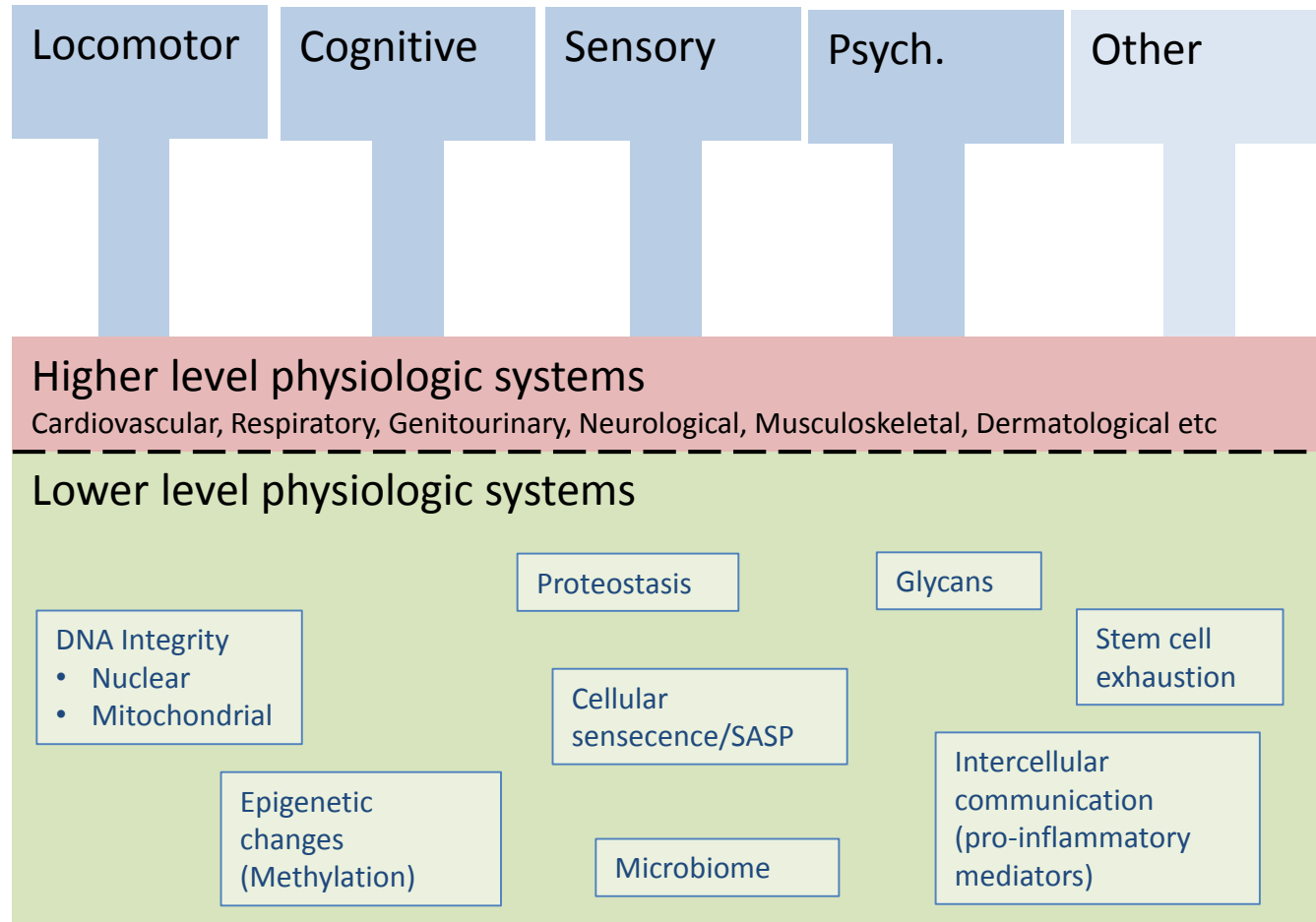
Frailty



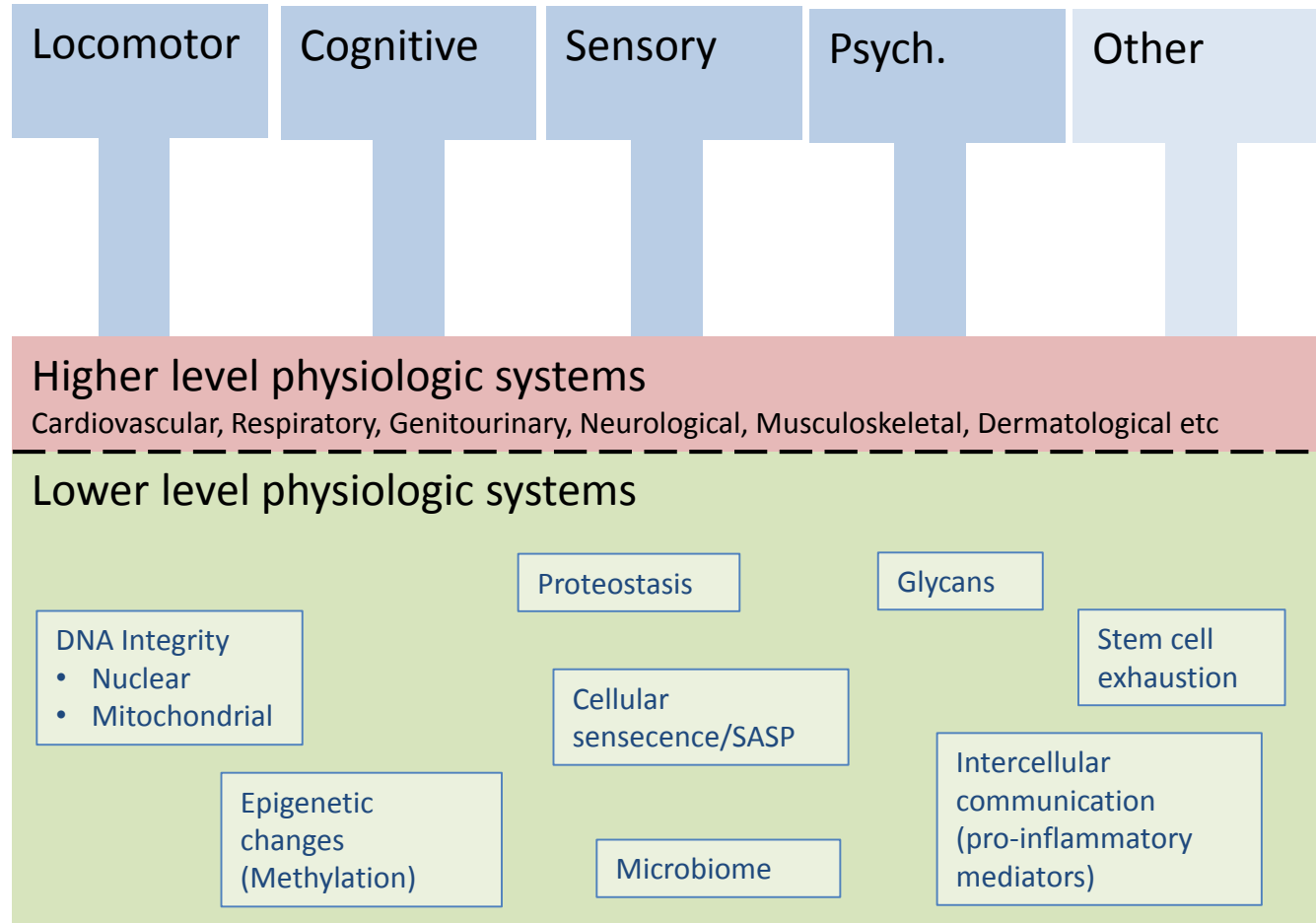
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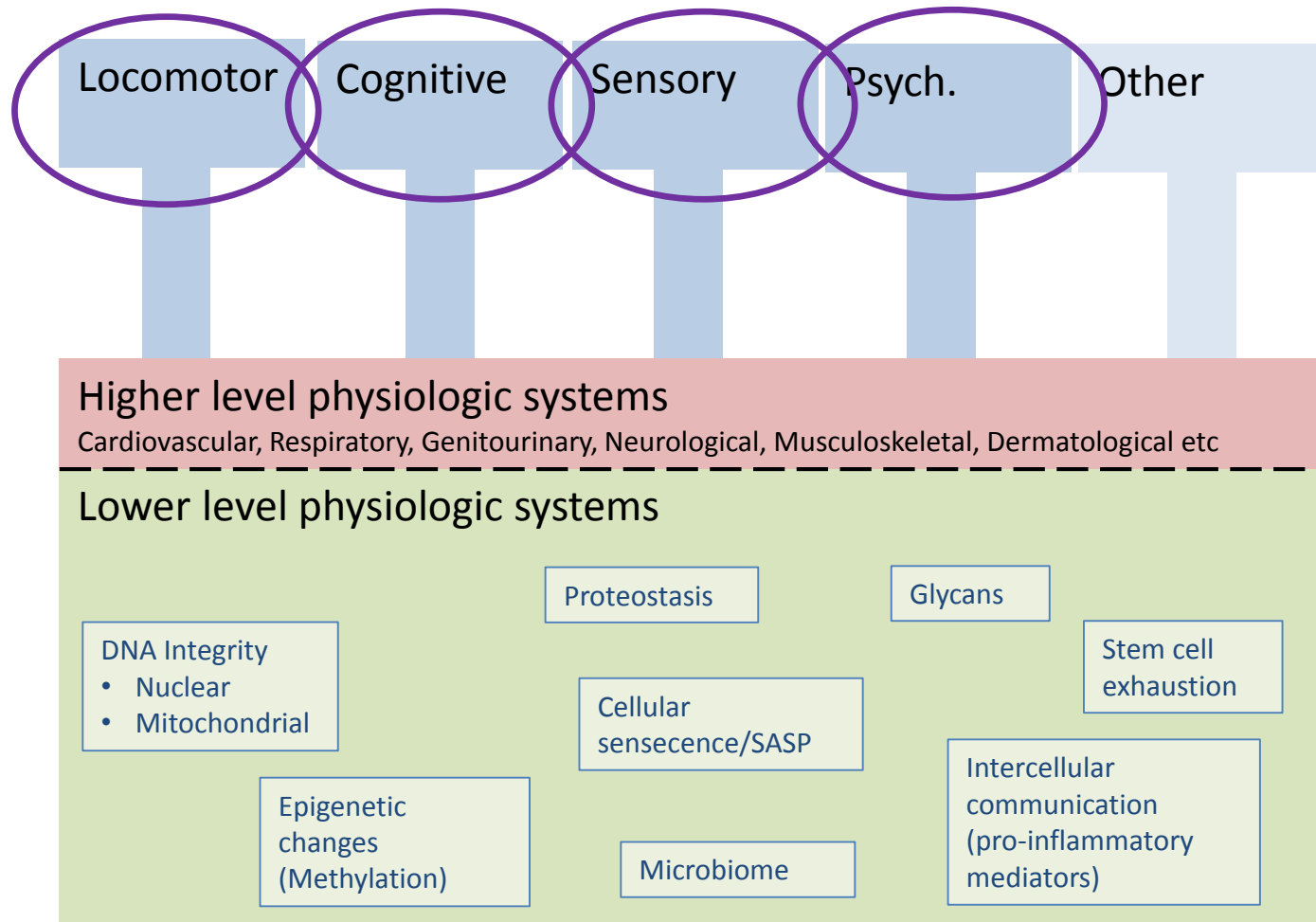
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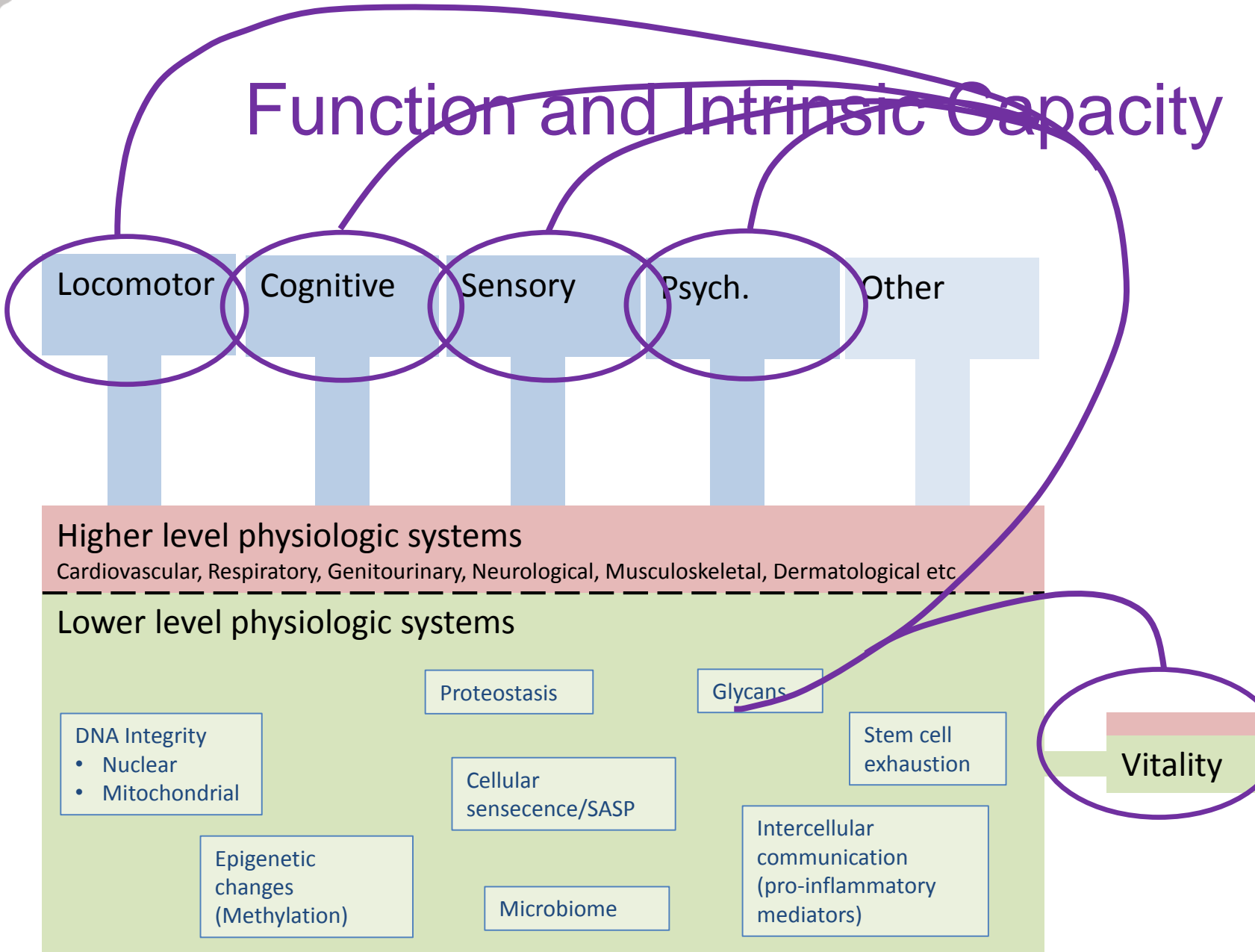
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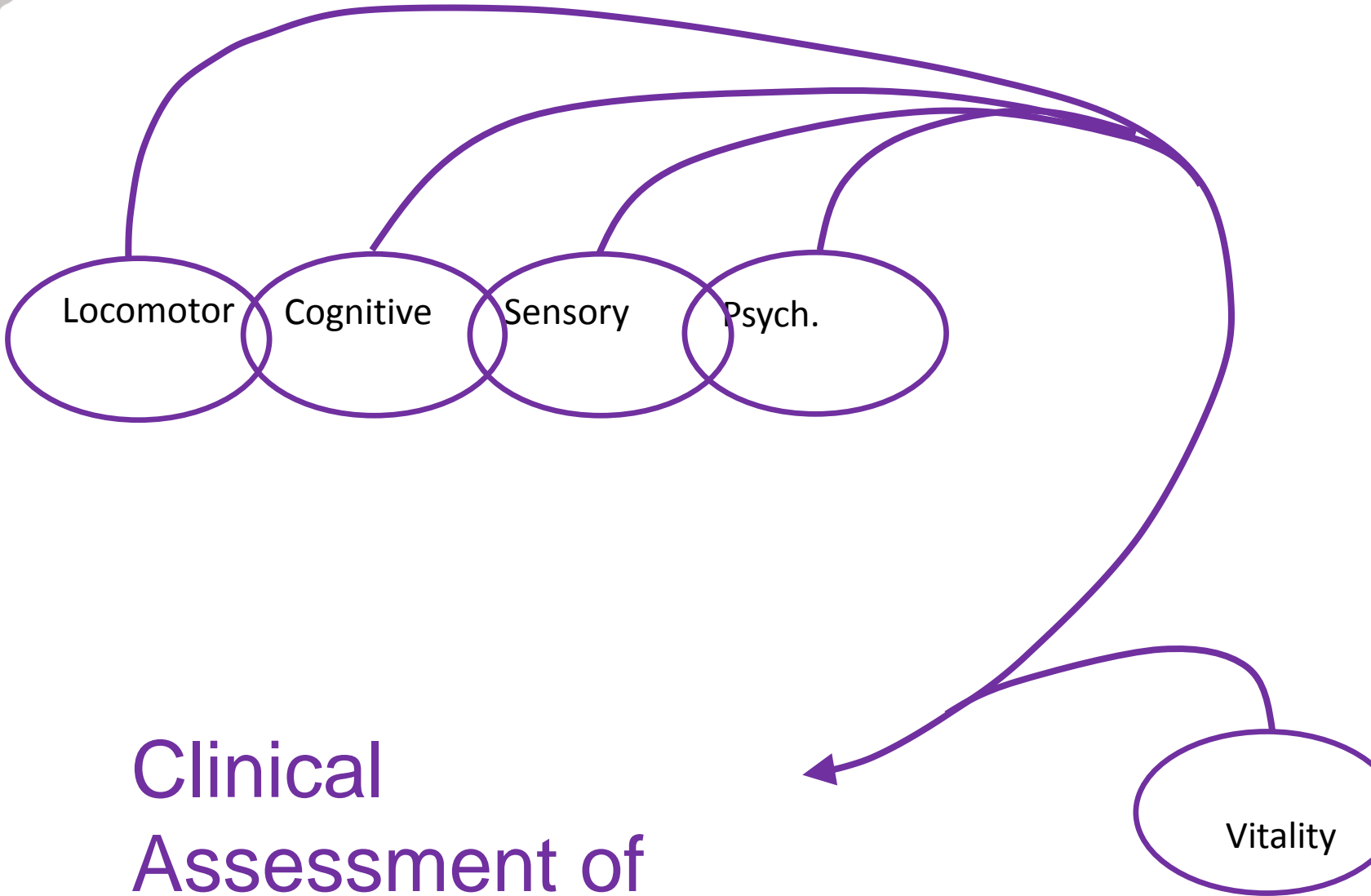


Function and Intrinsic Capacity



Function and Intrinsic Capacity





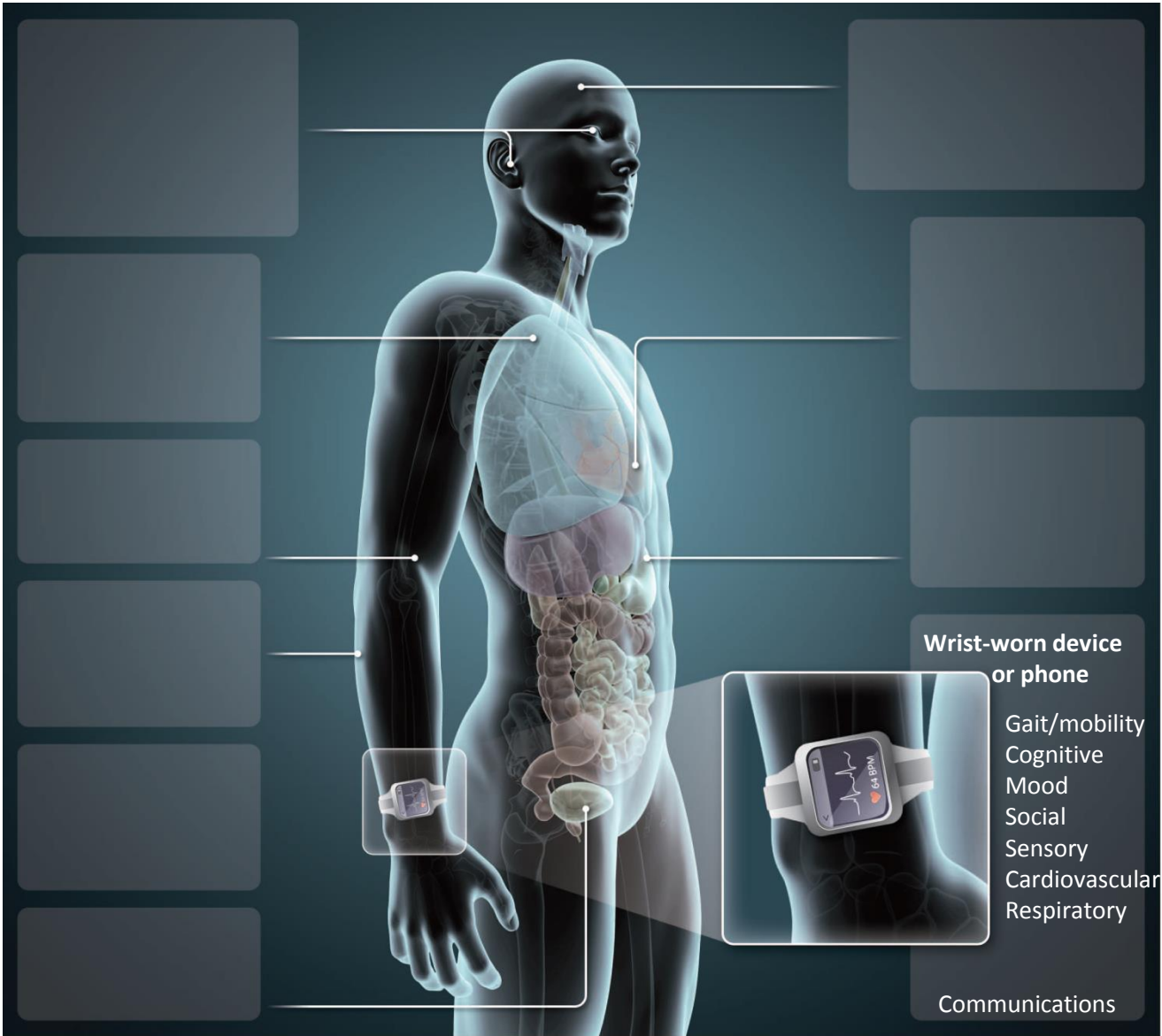
Clinical Assessment of Intrinsic Capacity:



Clinical Assessment of Intrinsic Capacity

- Locomotor Capacity
- Cognitive Capacity
- Sensory Capacity
- Psychological Capacity
- Vitality

New ways to measure what we are doing



Cohort trends

