

**Il contesto immuno-
metabolico del
paziente con diabete
favorisce e patologie
respiratorie vaccino-
prevenibili.**

Angelo Avogaro

**Presidente Società Italiana di
Diabetologia**



ITALIA LONGEVA
PER L'INVECCHIAMENTO E LA LONGEVITÀ ATTIVA

Convegno

**Prioritizzazione della prevenzione vaccinale contro le patologie respiratorie
nell'anziano e nel fragile: esperti a confronto**

16 ottobre 2024

Auditorium Ministero della Salute | Roma, Lungotevere Ripa 1

Conflitti di interesse di Angelo Avogaro

Dichiaro di aver ricevuto negli ultimi 2 anni compensi dalle seguenti aziende:

Pharma International Company, AstraZeneca, Boehringer Ingelheim, Bristol Myers Squibb, Eli Lilly, Bruno Farmaceutici, Mundipharma, Neopharmed, Amgen, Servier, GlaxoSmithKline, Merck Sharp & Dohme, Novartis, Novo Nordisk, Sanofi, Takeda.

OBESITY SYSTEMS

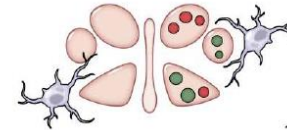
Metaflammation in obesity and its therapeutic targeting

Michael W. Schleh¹, Heather L. Caslin¹, Jamie N. Garcia¹, Mona Mashayekhi², Gitanjali Srivastava^{2,3,4,5}, Anna B. Bradley^{2,5,6}, Alyssa H. Hasty^{1,6*}

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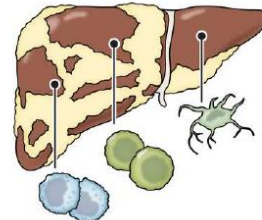
1 Brain

Microglia activation and recruitment



2 Liver

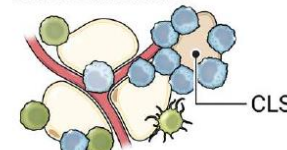
Macrophage recruitment and polarization, Kupffer cell activation, CD8⁺ T cell accumulation



CD8⁺, M1-like macrophage, Kupffer cells

3 Adipose tissue

Macrophage recruitment and polarization, CD8⁺ T cell accumulation



CD11c⁺, CD9⁺, Trem2⁺ macrophages, NK cells, ILC1, DC, CD8⁺ T cells, B cells

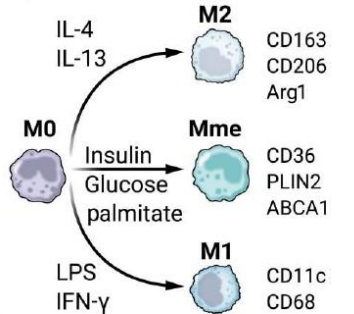
4 Pancreas

Macrophage recruitment and polarization



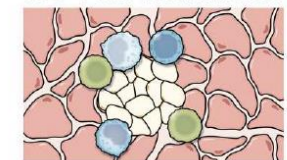
5 Bone marrow

Monocyte release and polarization

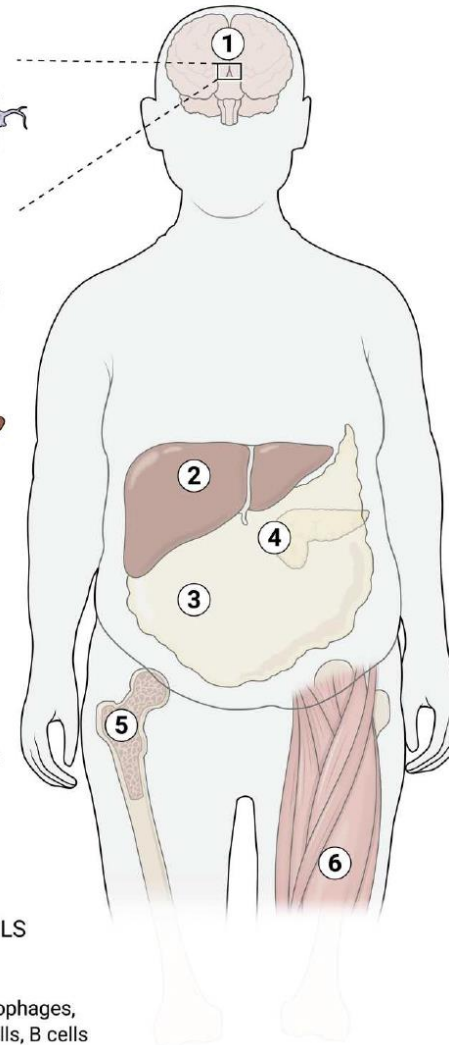


6 Skeletal muscle

Macrophage recruitment and polarization, CD4⁺ and CD8⁺ T cell accumulation

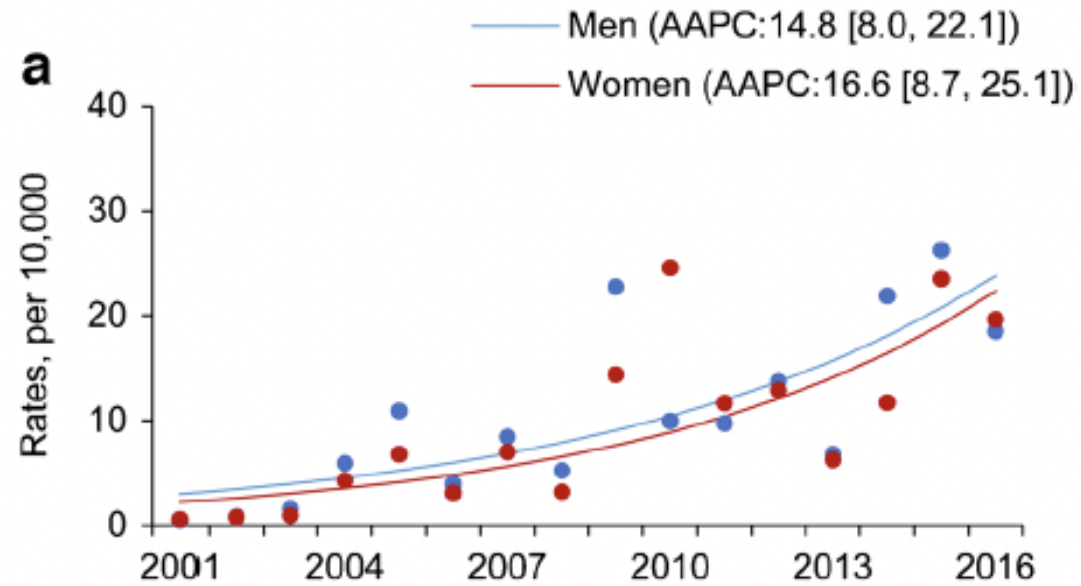


CD11c⁺, CD4⁺/CD8⁺

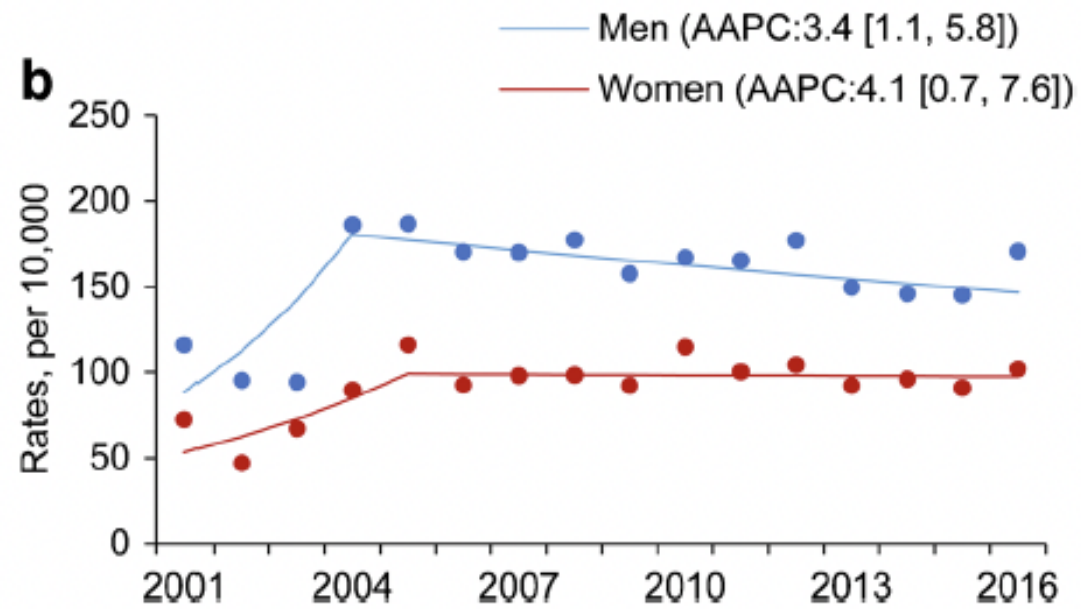


Diabetes and infection: review of the epidemiology, mechanisms and principles of treatment

Richard I. G. Holt^{1,2} · Clive S. Cockram³ · Ronald C. W. Ma^{3,4,5} · Andrea O. Y. Luk³






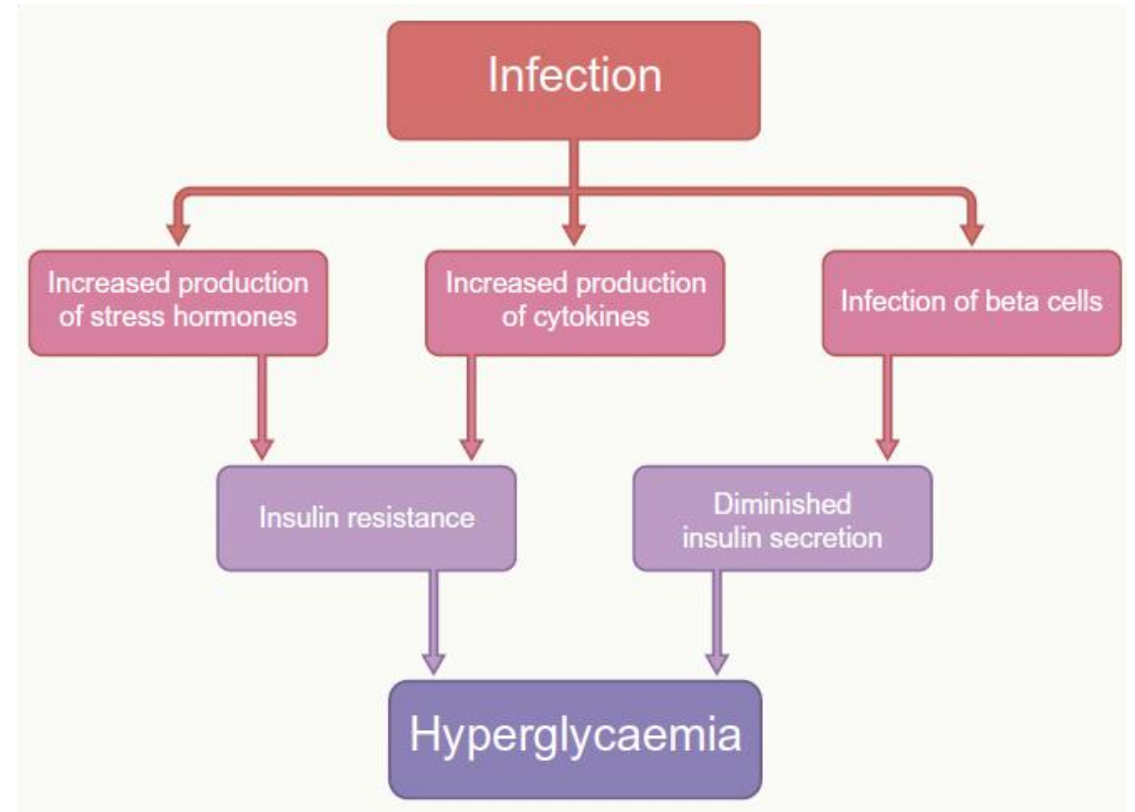
Influenza






Community acquired pneumonia

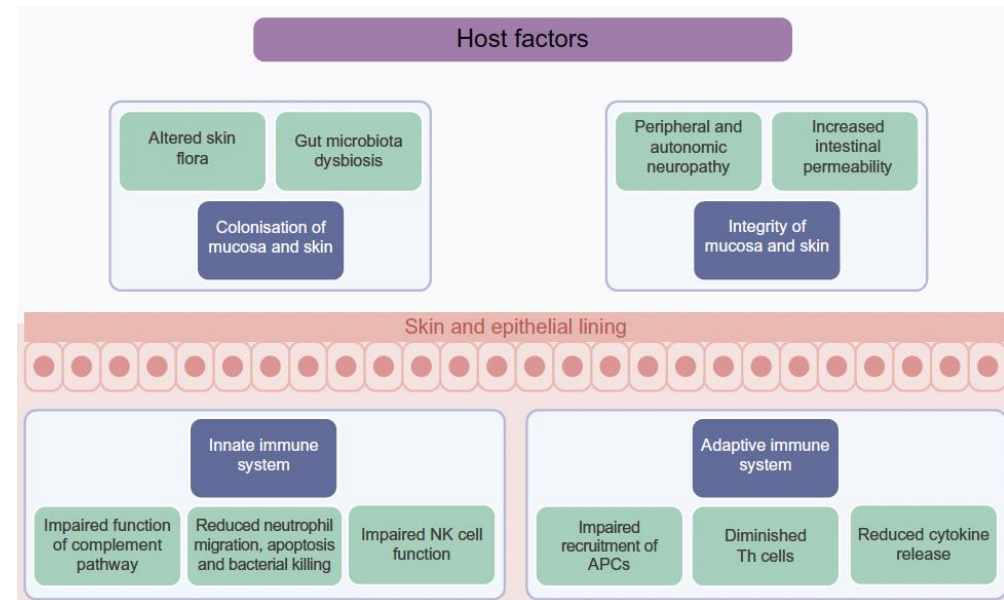
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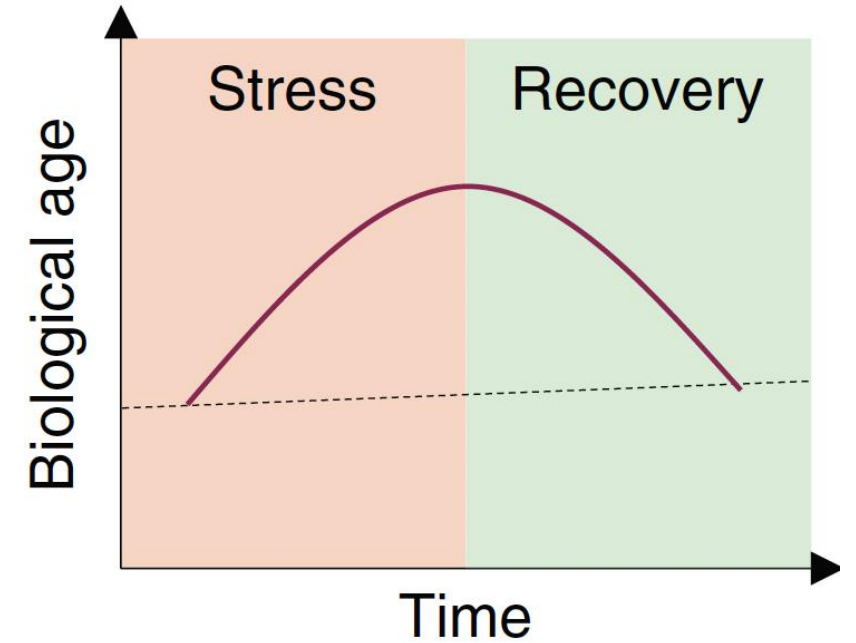
Richard I. G. Holt^{1,2}  · Clive S. Cockram³ · Ronald C. W. Ma^{3,4,5}  · Andrea O. Y. Luk³ 

Table 1 Recommended vaccination schedule for people with diabetes

Vaccine	Age group
COVID-19	All
Hepatitis B	<60 years of age, ≥60 years of age after discussion with healthcare professionals
Human papilloma virus	≤26 years of age, 27–45 years of age after discussion with healthcare professionals
Influenza	All
Pneumococcal	All
Tetanus, diphtheria and acellular pertussis	All
Zoster	≥50 years

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- Biological age undergoes rapid fluctuations in mice and humans
 - Severe stress induces increases in biological age that are reversed upon recovery
 - Parabiosis, surgery, pregnancy, and COVID-19 transiently elevate biological age
 - Biological age recovery rate may predict gerotherapeutics



Cell Metabolism

Article

Biological age is increased by stress and restored upon recovery