

Global Health Cast 52

November 20th, 2023

Every Week

12.00 noon - CET



Dr. Melvin Sanicas
X @Vaccinologist



Prof. Dr. Joe Schmitt
X @Prof_Schmitt

What we talk about today

- **Lowering SALT intake significantly lowered BP in the majority of middle-aged to elderly adults**
- **Study shows evidence of Human papillomavirus HPV strain replacement**
- **World's FIRST Chikungunya vaccine approved by the US FDA**
- **SARS-CoV-2 new mutation BA.2.86**
- **Diphtheria outbreak in Nigeria**
- **Anti-CMV hyper-IgG does not prevent CMV-diseases in infants**

November 11, 2023

Effect of Dietary Sodium on Blood Pressure

A Crossover Trial

Deepak K. Gupta, MD, MSCI^{1,2}; Cora E. Lewis, MD, MSPH³; Krista A. Varady, PhD⁴; [et al](#)

» [Author Affiliations](#) | [Article Information](#)

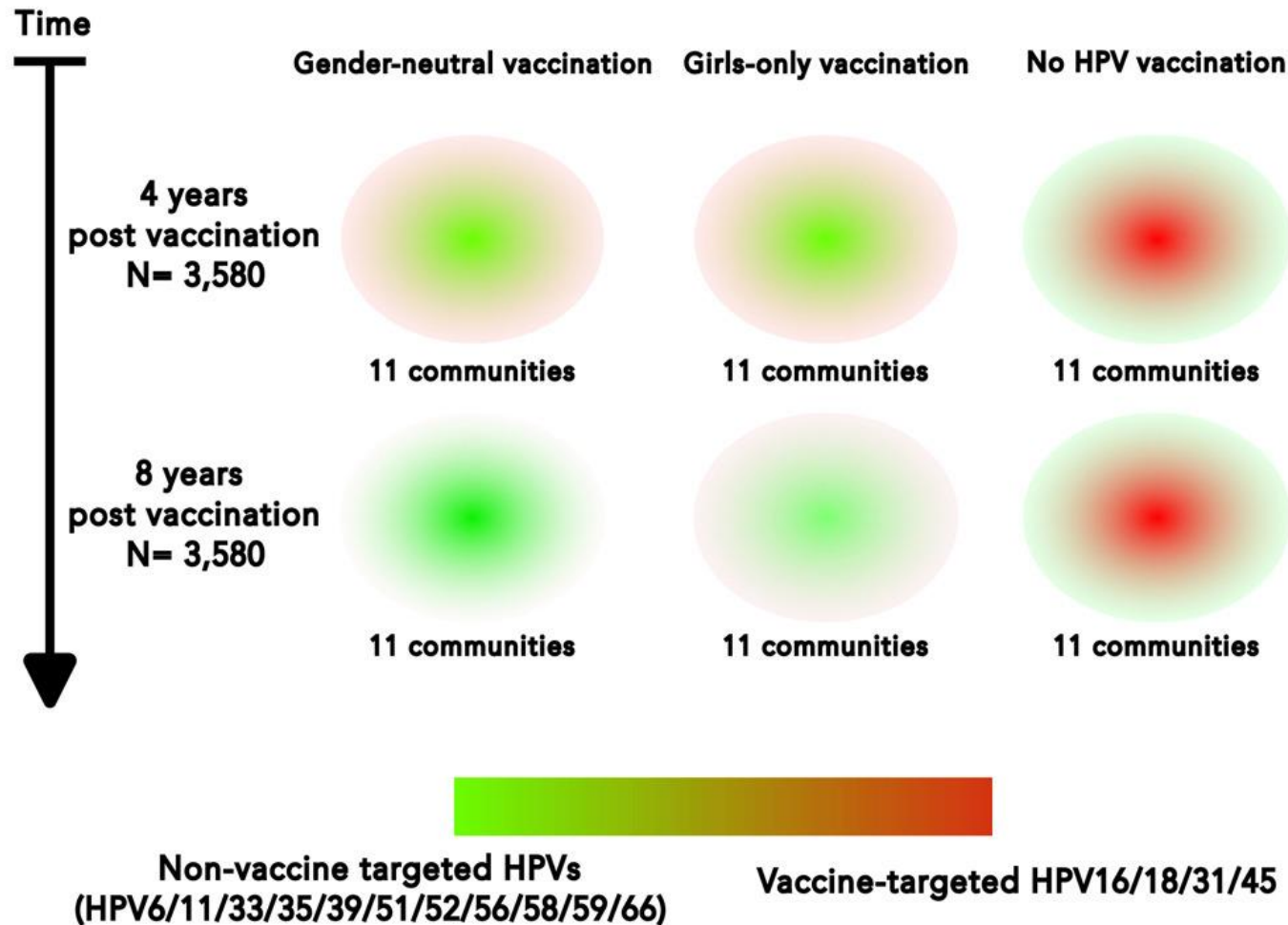
JAMA. Published online November 11, 2023. doi:10.1001/jama.2023.23651

Dietary sodium reduction significantly lowered BP in the majority of middle-aged to elderly adults. The decline in BP from a high- to low-sodium diet was independent of hypertension status and antihypertensive medication use.

Question What is the impact of dietary sodium intake on blood pressure in middle-aged to elderly individuals?

Findings In this prospectively allocated diet order crossover study of 213 individuals, 1 week of a low-sodium diet resulted in an average 8–mm Hg reduction in systolic blood pressure vs a high-sodium diet, with few adverse events. The low-sodium diet lowered systolic blood pressure in nearly 75% of individuals compared with the high-sodium diet.

Community-level ecology of oncogenic HPVs post-vaccination



Study shows evidence of HPV strain replacement

- Examination of the long-term effect of HPV vaccination on the ecology of untargeted HPVs
- Community-level depletion of vaccine-targeted HPV types occurs 4 years post-vaccination
- HPVs' ecological diversity increases 8 years post gender-neutral vaccination alone
- Observed ecological diversity increases despite the clearance of vaccine-targeted HPVs



WORLD'S FIRST CHIKUNGUNYA VACCINE

Chikungunya is a mosquito-borne viral disease caused by the **chikungunya virus (CHIKV)**, an RNA virus in the alphavirus genus of the family *Togaviridae*. The name chikungunya derives from a word in the Kimakonde language, meaning “to become contorted”

Symptoms



Fever



Joint pain



Muscular pain



Joint swelling



Headaches



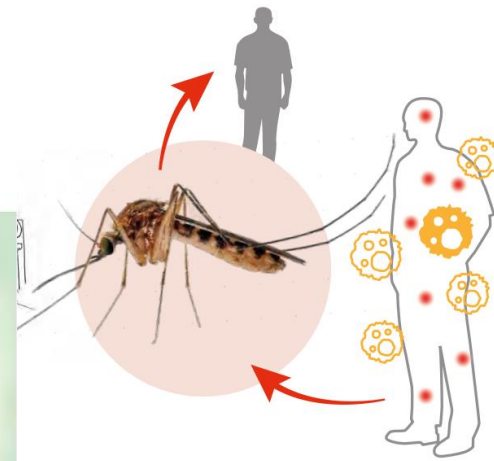
Nausea



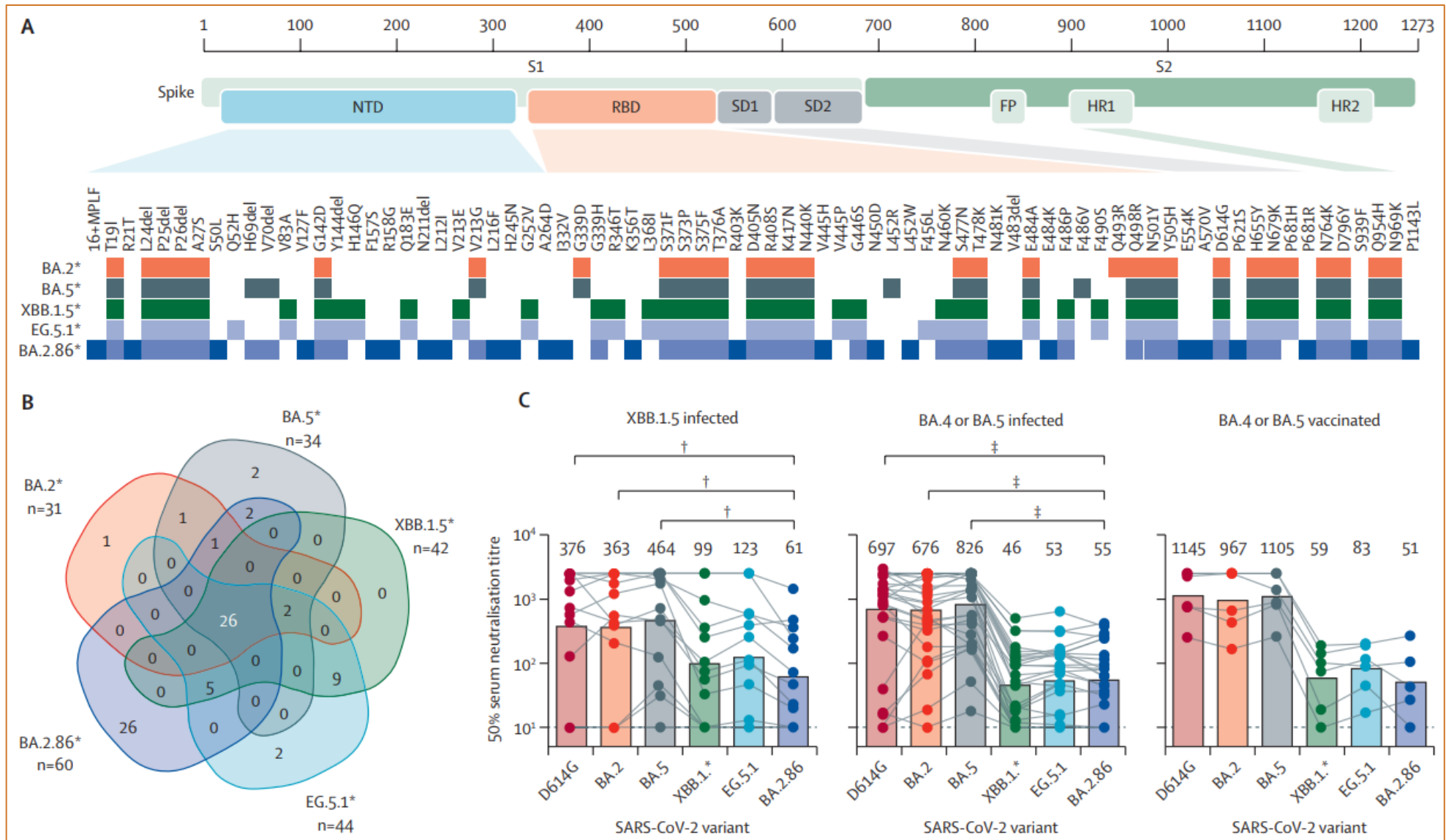
Fatigue



Rash



New mutations in SARS-CoV-2: BA.2.86





Diphtheria outbreak in Nigeria (NCDC, WHO)

- ▶ **13 416** suspected cases since May 9, 2022,
- ▶ **8576 confirmed cases** in 116 Local Government Areas, 19 States + the Federal Capital Territory
- ▶ States Kano, Yobe, Katsina, Bauchi, Borno, Kaduna, accounting for 95.8% of cases,
- ▶ Kano is the epicentre, reporting about 85% of cases
- ▶ **73.6% of cases in children aged 1–14 years.**
- ▶ As of Oct 12, 2023, **600 deaths, primarily in children.**
- ▶ Outbreak worsened because of
 - ▶ **population growth** and climate-related **declines in hygiene** due to water shortages,
 - ▶ Main driver is a historical gap in vaccine uptake
 - ▶ **Of 8574 people with confirmed diphtheria,**
 - ▶ **63.9% were either unvaccinated or partially vaccinated,**
 - ▶ **24.6% were fully vaccinated**
 - ▶ **8.9% unknown vaccination status**

Randomized Trial of Hyperimmune Globulin for Congenital CMV Infection — 2-Year Outcomes

- ▶ Congenital cytomegalovirus (CMV) at birth: **0.2 to 2.2%**, disability in up to 25% by age 2 years
- ▶ Previously reported: multicenter, randomized, **placebo-controlled trial of CMV hyperimmune globulin** (Cytogam, CSL Behring) involving **399 pregnant women who had primary CMV infection** in pregnancy. Randomly assignment of **monthly infusions of CMV hyperimmune globulin or placebo** until delivery
 - ▶ **No benefit** of CMV hyperimmune globulin on incidence of congenital CMV infection or fetal or neonatal death:
- ▶ **Results of a planned 2-year follow-up** study involving the children of mothers who were enrolled (n=360; 90%)
- ▶ Death or CMV infection with severe disability occurred in 20 of the 149 children (**13.4%**) in the hyperimmune-globulin group and in 15 of the 149 children (**10.1%**) in the placebo group (**relative risk, 1.33**; 95%CI 0.71; 2.50)
- ▶ **No relevant differences between groups on incidence of any component of the composite outcome or in any other outcome at 24 months, including severe disability with or without congenital CMV infection**
- ▶ Limitations of this study include low event rates and missing data.
- ▶ **In this multicenter trial, CMV hyperimmune globulin did not improve 2-year hearing or developmental outcomes. These results, along with those previously reported, do not support the use of maternal CMV hyperimmune globulin to improve outcomes in the children of women with primary CMV infection in early pregnancy.**

What we talked about today

- **Lowering SALT intake significantly lowered BP in the majority of middle-aged to elderly adults**
- **Study shows evidence of Human papillomavirus HPV strain replacement**
- **World's FIRST Chikungunya vaccine approved by the US FDA**
- **SARS-CoV-2 new mutation BA.2.86**
- **Diphtheria outbreak in Nigeria**
- **Anti-CMV hyper-IgG does not prevent CMV-diseases in infants**

“OVERNIGHT
SUCCESS”

