

## Influenca

Pripremili:

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*Najbolji lijek protiv gripe je prevencija – sprječavanje pojave gripe*

## Šta je influenza?

- Akutna respiratorna bolest izazvana influenza virusom
- Jako zarazna i veoma brzo se prenosi sa čovjeka na čovjeka
- Neki oblici virusa uzrokuju teže a neke lakše oblike bolesti

## Porijeklo riječi *influenca*:

- Riječ *Influenca* dolazi od latinske riječi *influentia* što znači *utjecaj*.

Ovaj naziv počeli su koristiti Talijani početkom 16. vijeka za svaku epidemiju koja se u to vrijeme pojavljivala, jer su mislili da nastaje zbog utjecaja nebeskih tijela.

## Porijeklo riječi *gripa*:

- Riječ "gripa": dolazi od francuske riječi

"grippe", što znači: šćepati, zgrabiti

## Tipovi influenza virusa

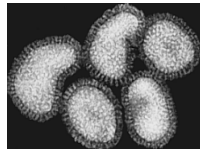
- Influenza virusi su podjeljeni u tri tipa: influenza A, B, i C
- **A virus** – izaziva zarazu kod ptica i drugih životinja kao i kod ljudi
- **A virus** – izvor sezonskih epidemija gripe i svih pandemija
- **B i C virusi** – izazivaju zarazu samo kod ljudi i ne izazivaju pandemije

## Tipovi influenza virusa

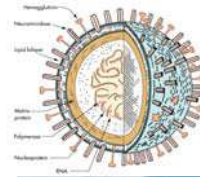
- Jedino neki od influenza A subtipova (H1N1, H1N2, H3N2) trenutno cirkulišu među humanom populacijom. Ostali subtipovi cirkulišu u životinjskim vrstama.
- Influenza tip B virusa je uobičajen u humanoj populaciji. Za razliku od influenza virusa A ovaj virus nije klasificiran u subtipove, već u sojeve. Mada influenza tip B virusa može prouzrokovati epidemiju, ne prouzrokuje pandemije.
- Influenza tip C uzrokuje blaži oblik bolesti u ljudi i ne uzrokuje epidemije niti pandemije

## Virus

- RNA
- Porodica: Orthomyxoviridae
- Veličina: 80-200nm or .08 – 0.12  $\mu$ m (micron) u prečniku
- Tri tipa
  - A, B, C
- Površni antigeni
  - H (haemaglutinin)
  - N (neuraminidase)



Credit: L. Stammard, 1995



### THE FLU VIRUS

**HAEMAGGLUTININ:** This is its hook. As one of the two main surface proteins, it's a key target for the immune system. And its unique shape - 300,000 of which cluster on each influenza virus - gives it its sticky, glue-like quality. For example, flu virus can bind to your nose, throat, or lungs. Immunity to one type will not prevent you from catching another. It's why the flu virus has spread so widely, and why it's so hard to prevent.

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## Influenca A tipovi

- [H1N1](#), koji je izazvao Španski gripu 1918, i ovu 2009
- [H2N2](#), koji je izazvao Azijsku gripu 1957
- [H3N2](#), koji je izazvao Hong Kong gripu 1968
- [H5N1](#), sadašnja pandemična opasnost
- [H7N7](#), koji ima neobičajan zoonotički potencijal
- [H1N2](#), endemičan kod ljudi i svinja
- [H9N2](#)
- [H7N2](#)
- [H7N3](#)
- [H10N7](#)

## Influenca A (H1N1) virus

- Najčešći uzročnik gripe kod ljudi
- Neki sojevi H1N1 su endemični kod ljudi i izazivaju veoma malo bolesti sličnih gripi i takođe malo sezonskih gripa
- H1N1 sojevi su izazvali nekoliko % svih infekcija gripe u 2004–2005
- Drugi sojevi H1N1 su endemični kod svinja (svinjska gripa) i ptica (ptičija gripa).
- U junu 2009, Svjetska Zdravstvena Organizacija je objavila postojanje novog soja virusa svinjskog oblika [H1N1](#) u obliku pandemije.
- Ovaj soj se često u medijima naziva Svinjska gripa

## Influenca A (H2N2) virus

- Ponekada ga zovu virus ptičije gripe
- H2N2 je mutirao u različite sojeve uključujući i soj Azijske gripe (koji je sada izumro u prirodi)
- Sumnja se da je izazvao pandemiju gripe kod ljudi 1889

## Influenca A (H3N2) virus

- Može inficirati ptice i sisare
- Kod ptica, ljudi i svinja je mutirao u mnoge nove sojeve
- Može se reći da je najzastupljeniji u sezonskim gripama, koja obično usmrti oko 36,000 ljudi u SAD svake godine

## Influenca A (H5N1) virus

- Takođe poznat kao virus ptičije gripe koji izaziva bolest kod ljudi i mnogih životinjskih vrsta
- Ovo je najpatogeniji soj virusa ptičije gripe koji izaziva najteže oblike tkz "[avian influenza](#)" or "ptičije gripe"



## Influenca A (H7N7) virus

- **Postoje visoko i malo patogeni sojevi**
- Inficira ljude, ptice, svinje, foke i konje a takođe i lab miševe
- Ovaj rijedak zoonotički potencijal predstavlja veoma opasnu pandemičnu prijetnju



## Influenca A (H1N2) virus

- Ponekada ga zovu i virus ptičije gripe
- Momentalno je pandemičan i kod ljudi i kod svinja
- H1N1, H1N2, i H3N2 su jedini poznati sojevi virusa influence A da kruže među ljudima



## Influenca A (H9N2) virus

- Ponekada ga zovu i virus ptičije gripe
- 23 decembra 2009 [Hong Kong](#) Center za zdravstvenu zaštitu je prijavio slučaj gripe izazavan ovim sojem 3 godine stare djevojčice
- [1999](#) i [2003](#), ovaj soj virusa je takođe izazvao gripu kod troje ljudi u [Hong Kong](#)-u , starih 1, 4 i 5 godina(svi su se oporavili)
- [2007](#) H9N2 soj je bio odgovoran i za gripu 9-mjesečne bebe u [Hong Kong](#)-
- 2003 u kao i 5 godina star dječak – Hong Kong



## Influenca A (H7N2) virus

- I ovaj soj ponekada ga zovu i virus ptičije gripe
- Jedna osoba u [Virginia, US, 2002](#) i jedna osoba u [New York, US, 2003](#) su serološki bili pozitivni infekcijom sa H7N2; obe su se potpuno oporavile.
- [Februar 2004](#), pojava nisko patogene epidemije ptičjeg gripa sa H7N2 kod 2 pileta u [Delaware](#) i 4 žive ptice na pijaci u [New Jersey](#) koje su bile sa iste farme kao i gore pomenuta pilad
- [Mart 2004](#), kontrolom slučajnog uzorka jata pilića u [Maryland](#) pokazali su se pozitivni na H7N2. smatra se da je to bio isti soj kao i u gore pomenutom slučaju

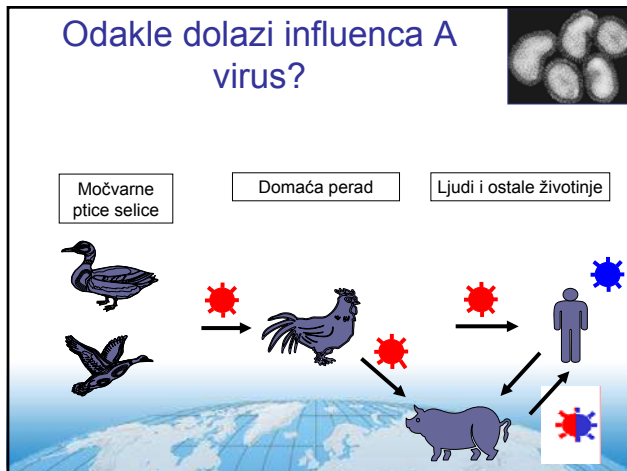
## Influenca A (H7N3) virus

- Takođe i ovaj soj ponekada ga zovu i virus ptičije gripe
- [North America](#), postojanje H7N3 je bilo dokazano na nekoliko farmi peradi u [British Columbia](#), Kanada u [Februaru 2004](#).
- [April 2004](#), 18 farmi je bilo u karantinu da bi se onemogućilo dalje širenje virusa
- Dva slučaja bolesti ljudi su bila prijavljena u tom regionu. Simptomi su bili [conjunctivitis](#) i srednje teška bolest slična gripi. Oba slučaja su se potpuno oporavila

## Influenca A (H10N7) virus

- Takođe virus gripe
- 2004 [Egypt](#), H10N7 je bio prijavljen prvi put kod ljudi. Bolesno je bilo 2 godišnje dijete iz Ismailije, Egipat; Dijetov otac je bio prodavač peradi
- Prva pojave H10N7 u USA su bile u [Minnesota](#) na dvije farme čurki [1979](#) i jedna isto na farmi čurki [1980](#).
- Klinički znaci bolesti su bili različiti i to jako teški sa stopom smrtnosti 31%, do subkliničkih.
- Antigenski neprimjetni virusi su bili izolovani iz zdrave populacije divljih pataka koje su obitavale na ribnjaku tik pored gore spomenute farme čurana.

## Odakle dolazi influenza A virus?



## Influenca B virus

- Ima samo jedan soj i skoro isključivo inficira ljude i to mnogo rjeđe nego A virus
- Jedine životinje do sada poznate koje su bile inficirane ovim virusom su foke i afrički tvorovi
- Mutira mnoge sporije
- Kao rezultat nepostojanja antigenske diverzije-promjene, imunitet prema gripī B se stiče veoma rano i djetinjstvu
- Ipak influenza B mutira dovoljno tako da dugotrajni imunitet nije ni moguć
- Ova smanjena antigenska promjena kombinovana sa ograničenim brojem domaćina osigurava za sada to da pandemije influenza B se ne javljaju

## Zašto nemamo pandemije influce B?

- Do sad nije zabilježen antigenski pomak kod virusa
- Životinjski rezorvoar je još nepoznat ili ne postoji



## Influenca C virus

- Jedan soj koji inficira ljude, pse i svinje,
- Izaziva i težak oblik bolesti i lokalne epidemije
- Ipak je manje česta nego drugi tipovi i obično oboljevaju djeca i to budu srednje teške gripe

## Simptomi sezonske gripe

- Iznenadan nastanak
- Groznica, glavobolja, bol u mišićima, teška slabost
- Respiratorni simptomi, kašalj, upala grla, otežano disanje



## Simptomi pandemične gripe

- Slični kao kod sezonske ali mogu biti još i teži Može da bude prisutno i sljedeće:
  - Infekcija očiju i osjetljivost na svjetlost
  - Po život ugrožavajuće komplikacije kao npr. pneumonija i akutna respiratorna bolest
  - Proljev



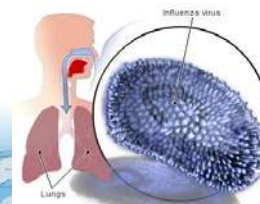
## Kako se influenza širi

- Prenosi se veoma lako sa osobe na osobu putem kašljanja i kihanja



Courtesy of CDC

## KOMPLIKACIJE PANDEMIJSKE GRIPE





## PLUĆNE KOMPLIKACIJE

- KRUP (DJECA)
- PNEUMONIJA SA PRIMARNIM VIRUSOM GRIPE
- SEKUNDARNA BAKTERIJSKA INFEKCIJA
  - *Streptococcus pneumoniae*
  - *Staphylococcus aureus*
  - *Hemophilus influenzae*

## Izvan plućne KOMPLIKACIJE

- myositis (rijetko, > kod djece, > kod tipa B)
- srčane komplikacije
- encefalopatija
- jetar i CNS
  - Reye's sindrome
- periferni nervni sistem
  - Guillian-Barré sindrome

## Reye-ov sindrom

- jetra – deponovanje masnoće
- mozak - edem
- povraćanje, letargija, koma
- riziko faktori
  - mladost
  - Određene virusne infekcije (influenca, pljuskavice)
  - aspirin

## Guillian-Barré sindrome

- 1976/77 vakcina protiv svinjske gripe
  - 35,000,000 doza
    - 354 slučajeva GBS
    - 28 GBS-povezanih slučajeva
  - Vakcine u posljednje vrijeme imaju znatno manji rizik





**Priprema za Pandemičnu gripu**

## Mjere zdravstvene zaštite

- Izolacija
- Karantin
- Samo zaštita
- Smanjiti Socijalizaciju ili je ukinuti potpuno



## Druge metode da smanjimo širenje zaraze

- Pranje ruku
- Respiratorna higijena, kod kašljanja pokriti rukom
- Čišćenje površina
- Fizičke barijere (npr na šalterima)
- Maske i sl.

## Vrste zaštitnih maski

- Hirurške maske
  - Jednostavno korištenje i uobičajeno se koriste za rutinske hirurške procedure
- Visoko- filtrirana respiratorna maska
  - Specijalno mikrostrukturiran filter disk za zaštitu čestica veličine veće od 0.3 mikrona. Ove maskeThese masks are further classified:
    - nepropustivas za masti
    - otporna na masti
    - neotporna na masti
  - Bolje su maske otporne na masti,
  - Maske imaju broj koji označava njihovu filtracijsku efikasnost. Npr. Maska N95 ima 95% efikasnost u filtriranju čestica većih od 0.3 microna u odnosu na normalan broj respiracija.
- Slijedeća generacija maski Tkoje se koriste za nanočestice su one koje mogu zaustaviti nanočestice manje 0.027 mikrona.



## Handwashing Technique

Wet hands and forearms. Wash with 5ml of chlorhexidine gluconate 4% using the following handwash procedure, each step consisting of five strokes backwards and forwards.

- 1 Palm to palm
- 2 Palm to palm, fingers interlaced
- 3 Right palm over left dorsum and left palm over right dorsum
- 4 Back of fingers to opposing palm with fingers interlocking
- 5 Rotational rubbing of right thumb clasped in left palm and vice versa
- 6 Rotational rubbing backwards and forwards of tips of fingers and thumb of right hand in left palm and vice versa

## Sprječavanje - Prevencija

World Health Organisation  
NACIONALNI CENTAR SZO ZA BIH ISENICI

PREKRITE LICE DOK  
KAŠLJETE ILI KIŠETE  
PO MOGUĆNOSTI MARAMICOM  
ZA JEDNOKRATNU UPOTREBU  
ILI TO ČINITE U "LAKAT"  
A ZATIM OPERITE RUCHE

UPOTRIJEBLJENU MARAMICU  
BACITE U KOŠ ZA SMEĆE  
S POKLOPCEM

## Sprječavanje - Prevencija

World Health Organisation  
NACIONALNI CENTAR SZO ZA BIH ISENICI

PERITE RUCHE UČESTALO  
SAPUNOM  
I TEKUĆOM VODOM

U SLUČAJU SIMPTOMA GRIPE  
KONZULTIRAJTE SE S  
LIJEČNIKOM

## Sprječavanje - Prevencija

World Health Organisation  
NACIONALNI CENTAR SZO ZA BIH ISENICI

OSTANITE NA RAZDALJINI  
BAREM 1 METAR  
OD OSOBE KOJA IMA GRIPI

U SLUČAJU BOLESTI OSTANITE  
KOD KUĆE I SMANJITE KONTAKTE  
S DRUGIM LJUDIMA ŠTO VIŠE

## Sprječavanje - Prevencija



World Health Organisation  
NACIONALNI CENTAR ZA INFECIJE



**U PANDEMIJI  
IZBJEGAVAJTE RUKOVANJE  
I BLISKE KONTAKTE, ČISTITE  
PREDMETE KOJE DODIRUJE  
MNOGO LJUDI**



**NE DODIRUJTE LICE, OČI,  
NOS I USTA  
NEOPRANIM RUKAMA  
ILI NAKON RUKOVANJA**

## Sprječavanje - Prevencija

- Ručke na vratima i ostale predmete u kući i u školi koji se često dodiruju rukama povremeno prebrišite dezinfekcionim sredstvom.
- Redovno zračite prostorije



- **RAZLIKA IZMEĐU SEZONSKE I PANDEMIJSKE GRIPE?**

- SEZONSKA GRIPA
  - Javlja se godišnje i izazvana je virusom gripe
  - Pojava u jesen i zimu
  - Obično ima slabije simptome nego pandemijska jer ljudi možda već imaju imunitet prema tom virusu jer su bili izloženi istom

### Sezonska influenza: male promjene-antigeni otklon

- Javlja se među influenza A virusima rezultirajući pojavom novih varijanti preovlađujućih sojeva svake godine
- Nove varijante se javljaju u sezonskoj gripi svake zime
- Neke godine su gore od drugih - djelom zavisni od stepena genskog otklona

### ANTIGENSKI OTKLON sezonska gripa

- HA i NA dožive veliki broj mutacija  
– RNA virus
- Imuni sistem više ne štiti organizam u potpunosti
- Sporadični slučajevi, ograničene epidemije

### ▪ Pandemijska gripa

- Pojava širom svijeta novog soja virusa gripe koji se lako prenosi sa osobe na osobu
- virus gripe prolazi kroz mutacije i naše tijelo se ne može odbraniti
- Mnogo teža nego sezonska gripa

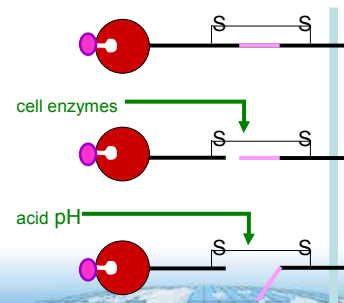
### Pandemija influence: velike promjene–antigeni pomak

- Velike promjene se javljaju na površini antigena influenza A virusa mutacijom ili preraspodjelom
- Promjene su mnogo značajnije od onih vezanih za antigeni otklon
- Promjene dovode do pojave potencijalno pandemijskih sojeva stvaranjem virusa koji se upadljivo razlikuje od sojeva koji momentalno cirkuliraju među oboljelima tako da skoro niko od ljudi na svijetu ne posjeduje imunitet

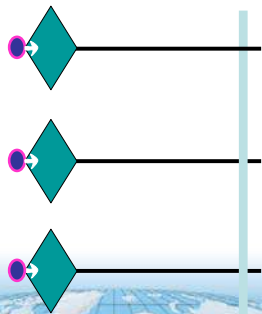
## ANTIGENSKI POMAK pandemijska gripa

- “Novi” HA ili NA proteini
- već postojeća antitijela ne štite
- Može doći do pandemije

## HA protein - attachment, fusion



## NA protein - neuraminidase



## Liječenje pandemične gripe?

### Tretman sličan kao kod sezonske gripe

- Ostati kod kuće te ne prenositi na druge
- Piti mnogo tečnosti
- Odmarati se





## Liječenje pandemične gripe?

### Tretman sličan kao kod sezonske gripe

- Uzimati lijekove protiv bolova ali nikada ne davati aspirin djeci i tinejđerima koji imaju simptome groznice ili bolesti slične gripi
- Uzeti antiviralni lijek ako Vaš doktor misli da treba???????

## Antiviralni lijekovi

- Moguće da bude jedina medicinska protivmjera dostupna u ranoj fazi pandemije
- **Učinak lijeka upitan?** Za liječenje i tretman
- U.S. Cilj je da ima dovoljno ovog lijeka u skladištima da može da liječi 25% američke nacije



Reproduced with permission from Roche Products Ltd. Tamiflu®

## Influenza A(H1N1) Tretman

- Nema dostupne vakcine
- Daju se antivirusni lijekovi za liječenje i /ili prevenciju infekcije:
  - Oseltamivir (Tamiflu) ili
  - Zanamivir (Relenza)
- Upotreba antivirusnih lijekova može rublažiti kliničku sliku ili ubrza oporavak
- Oni mogu takođe prevenirati razvoj ozbiljnih komplikacija
- Za liječenje, antivirusne lijekove treba primijeniti odmah nakon pojave kliničke slike ili prva 2 dana nakon pojave simptoma
- **Upozorenje!** Ne davati aspirin (*acetilsalicilnu kiselinu*) ili proizvode koji sadrže aspirin (*npr. bismuth subsalicylate – Pepto Bismol*) djeci ili *adolescentima* (dobi do 18 godina) kojima je potvrđena ili suspektna svinjska influenza A (H1N1) virusna infekcija; to može uzrokovati ozbiljnu bolest- Reye-ev sindrom. Za kontrolu temperature koristiti druge antipiretike kao što je acetaminophen ili nesteroidni antiniflamatorni lijekovi.

Source: CDC

## Influenza A(H1N1) Tretman

	Oseltamivir (Tamiflu)		Zanamivir (Relenza)	
	Tretman	Profilaksa	Tretman	Profilaksa
Odrasli	2X 75 mg, 5 dana	1x 75 mg, kapsule	Inhalirati 2x 5 mg ili 10 mg x2 dnevno	Inhalirati 2x 5 mg ili 10 mg x 1 dnevno
Djeca	15 kg or less: 2X 60 mg dnevno	1x 30 mg dnevno	Inhalirati 2x 5 mg ili 2 x 10 mg ukupno dnevno (dobi 7 godina ili stariji)	Two 5 mg inhalations (10 mg total) once per day (age, 5 years or older)
	15–23 kg: 2X 90 mg dnevno	1x 45 mg dnevno		
	24–40 kg: 2X 120mg dnevno	1x 60 mg dnevno		
	>40 kg: 2X 150 mg dnevno	1X 75 mg dnevno		

Preporuke o dozama za dojenčad (djecu mlađu od 1 godinu) : Koristi se oseltamivir . Recommended treatment doza preporučeni tretman provodi 5 dana- <3 mjeseca: 2X 12 mg dnevno; 3-5 mjeseci: 2X20 mg dnevno; 6-11 mjeseci : 2X 25 mg dnevno

Preporuke o dozama za antivirusnu hemiprofilaksu za dojenčad i upotrebu oseltamivir. Preporučuju se provođenje profilakse 10 dana u dozama: <3 months: Ne provodi zbog limitiranih podataka o upotrebi; 3-5 mjeseci : 1X 20 mg dnevno; 6-11 mjeseci : 1X25 mg dnevno

Source: CDC

## Vakcina

- Pošto je virus totalno novi, ne bi bilo moguće da vakcina bude spremna da zaštiti protiv pandemije gripe u ranoj fazi
- Specifična vakcina ne može biti proizvedena dok se novi soj ne identificira i to bi trajalo najmanje 4-6 mjeseci da bi se nova vakcina proizvela

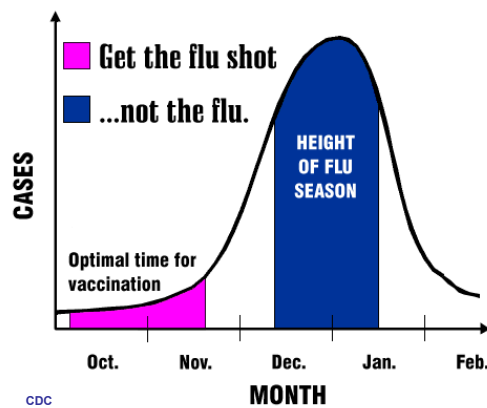


## VAKCINA

- 'najbolja pretpostavka' od glavnih antigenskih vrsta
  - MOMENTALNO
    - tip A - H1N1
    - tip A - H3N2
    - tip B
  - Svake godine treba izabrati koja varijanta od svakog podtipa je najbolja da se upotrijebi za optimalnu zaštitu

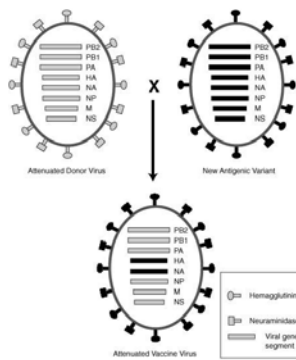
## VAKCINA

- umrtvljena
- posebna vakcina za djecu
- preuređena živa vakcina dozvoljena 2003
  - Za zdrave ljude (one koji nisu u riziku od komplikacija od gripe) od 5-49 godine





## Razvoj žive vakcine



adapted from Treanor JJ Infect. Med. 15:714

## Historija pandemijske gripe

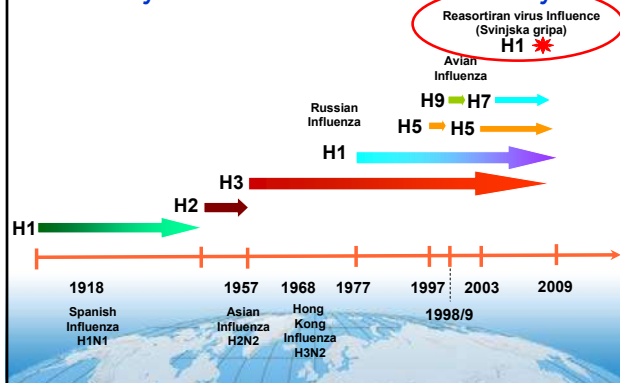


- 412 p.n.e. – prvi put spomenuo Hipokrat
- 1580 – prvi put opisana pandemija
- 1580-1900 – 28 pandemija

## Najteže Pandemije

Pandemije	Datum	Smrtnost	Subtip virusa	Pandemic Severity Index
<a href="#">Asiatic (Russian) Flu</a>	<a href="#">1889–1890</a>	1 million	<a href="#">H2N2</a>	NA
<a href="#">1918 flu pandemic (Spanish flu)</a>	<a href="#">1918–1920</a>	20 to 100 million	<a href="#">H1N1</a>	5
<a href="#">Asian Flu</a>	<a href="#">1957–1958</a>	1 to 1.5 million	<a href="#">H2N2</a>	2
<a href="#">Hong Kong Flu</a>	<a href="#">1968–1969</a>	0.75 to 1 million	<a href="#">H3N2</a>	2
<a href="#">2009 flu pandemic</a>	<a href="#">2009–Present</a>	<a href="#">10,000 to Dec 6</a>	<a href="#">H1N1</a>	NA

## Vremenska linija Infekcije Virusom A Influenza u ljudi



## Pandemija gripe u 20-om vijeku



**1918 Španiska gripa**  
20-40 miliona mrtvih

H1N1



**1957 Azijska**  
1 milion mrtvih

H2N2



**1968 "Hong Kong"**  
1 milion mrtvih

H3N2

1920      1940      1960      1980      2000



The influenza epidemic taxed the resources of The Red Cross.

## 1918 Pandemija



Military physicians were baffled by the mysterious illness that was striking young, healthy soldiers.



As sailors and soldiers fell ill, doctors puzzled over the mystery illness they were confronting.

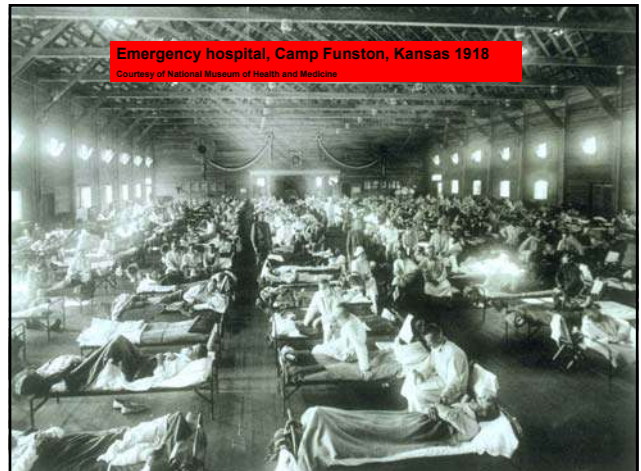
Visoki mortalitet u osoba između 20-40 godina  
- 675,000 Amerikanaca umrlo od gripe  
- 43,000 USA vojnika umrlo od influence



Public gathering places were ordered closed by the leaders of many major cities.



A nationwide casket shortage was evidence of a mounting death toll.

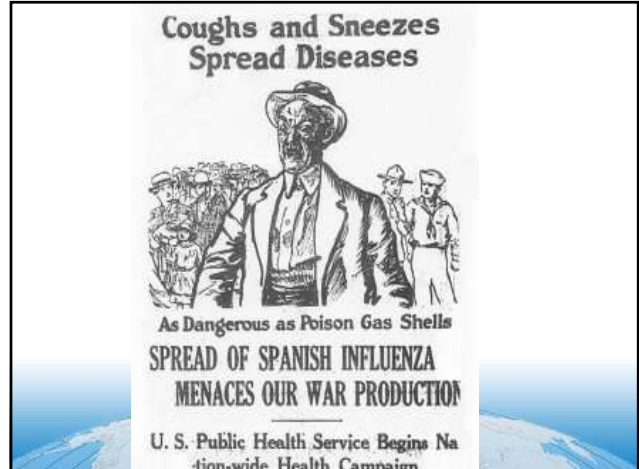


Emergency hospital, Camp Funston, Kansas 1918  
Courtesy of National Museum of Health and Medicine



Employees of Stewart & Holmes Wholesale Drug Co. Seattle, 1918

Courtesy of Grace London Mc Adam



## Šta izaziva pandemije?

- Pandemije se dešavaju kada novi soj ptičjeg gripa stekne sposobnost da zarazi ljude te da se lako prenosi sa osobe na osobu

Ovo se može javiti na dva načina:

- Preraspoređivanjem (promjenom sezonskog i ptičjeg gena influence kod oboljele osobe ili svinje inficirane sa oba soja)
- Mutacijom (ptičiji soj gripe postaje lakše prenosiv putem adaptivne mutacije virusa tokom infekcije ptičije gripe kod ljudi



## Šta smo naučili od prijašnjih pandemija

- Pojavi se neočekivano, i **nije uvijek tokom zime**
- **Velike varijacije u smrtnosti**, Težini i obliku bolesti kao godine pacijenata koji su najteže zaraženi
- Brzo pojavljivanje **velikog broja slučajeva u kratkom vremenu**, često u nekoliko sedmica
- Tendencija da se javlja **u talasima od 6 - 8 sedmica**, kasniji talasi mogu biti više ili manje teški

**Glavna karakteristika - nepredvidljivost**

## Zašto postoji zabrinutost vezana za sadašnju pandemiju influence?

- Visoko patogen soj ptičije gripe (A/H5N1) pojavio se u Hong Kongu 1997, ponovno se pojavio kod ptica i ljudi 2003, i sada uveliko kruži u pticama u mnogim zemljama
- Od 2003, ovaj soj se proširio sa ptica na ljude i od Augusta 23, 2006 je inficirao 241 čovjeka (141 umrli) u 10 zemalja
- Dokazano je (istina do sada rijetko) da se ovaj soj širi sa čovjeka na čovjeka
- Preraspodjela ili mutacija može pomoći ovom soju gripe da postane lako prenosiva među ljudima – nema načina da to znamo da li i hoće li se to dogoditi

## Šta se može dogoditi tokom pandemije gripe?

- U Americi, oko 1.9 milion ljudi bi mogao umrijeti, oko 9.9 miliona bi mogao biti hospitaliziran, i oko 90 miliona može biti bolesno
- Veliki pritisak na zdravstveni sistem
- Poremećaj svih aspekata dnevne rutine

## Pandemični talasi

Iz iskustva učimo da sljedeće može da se javi ako dođe do pandemije:

- Više od jednog talasa gripe možemo očekivati
- Talasi obično traju 6-8 sedmica
- Mirno stanje između talasa može trajati sedmicama ili mjesecima
- Sljedeći nadolazeći talas može biti gori nego prvi

## Šta bi moglo da uspori širenje pandemije?

- Vakcina:
  - Ne očekuje se da bude dostupna odmah, nego mnogo kasnije tokom pandemije
- Antiviralni lijekovi:
  - Veoma moguće da ne bude dovoljno ovih lijekova
- Mjere suzbijanja bolesti:
  - Moguće da budu jedine ostvarljive u ranoj fazi pandemije
  - Moguće da budu od pomoći u usporavanju pandemije tako da bude više vremena za proizvodnju vakcine

## Zaštita protiv RE-INFEKCIJE

- IgG i IgA
  - IgG manje efikasan ali duže traje
- antitijela za HA i NA su važna
  - Antitijela za HA su važnija (mogu neutralizirati)

## Zaključak

	TIP A	TIP B	TIP C
Težina bolesti	++++	++	+
Život. rezervoar	da	ne	ne
Pandemije kod ljudi	da	ne	ne
Epidemije kod ljudi	da	da	ne (sporadično)
antigenske promjene	otklon, pomak	otklon	otklon
segmentirani genom	da	da	da
amantadine, rimantidine	osjetljiv	neefektan	nema efekta
zanamivir	osjetljiv	osjetljiv	
površni glikoproteini	2	2	(1)

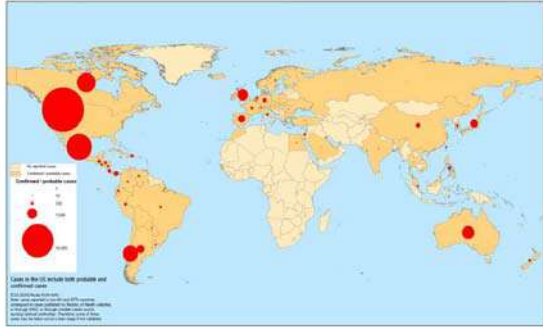
- Šta svijet misli o “sadašnjoj” pandemiji

There is no  
pandemic  
influenza  
anywhere  
in the  
world  
right now.

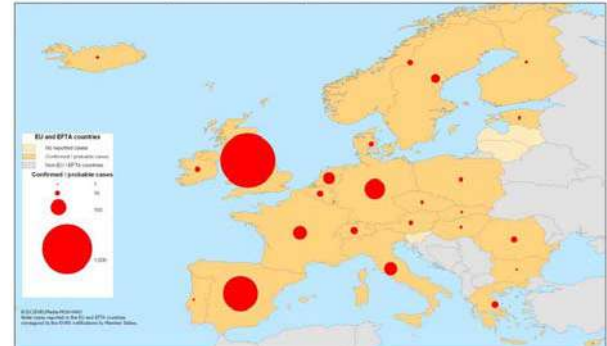


## Pandemija 2009?

Reported cumulative number of confirmed cases of influenza A(H1N1)v by country, as of 14 June 2009, 17:00 hours CEST



Reported cumulative number of confirmed cases of influenza A(H1N1)v in EU and EFTA countries, as of 14 June 2009, 17:00 hours CEST



## Farmaceutska mafija???



Dr Swine Flu Pope

## Farmaceutska mafija

- WHO 'Swine Flu Pope' under investigation for gross conflict of interest by F. William Engdahl\*
- The man with the nickname "Dr Flu", Professor Albert Osterhaus, of the Erasmus University in Rotterdam Holland has been named by Dutch media researchers as the person at the center of the worldwide Swine Flu H1N1 Influenza A 2009 pandemic hysteria. Not only is Osterhaus the connecting person in an international network that has been described as the pharma Mafia, he is THE key advisor to WHO on influenza and is intimately positioned to personally profit from the billions of euros in vaccines allegedly aimed at H1N1.



## Doktorica iz Kvibeka

Dr [Ghislaine Lanctôt](#)



A Eugenics Weapon for "Massive & Targeted Reduction of the World Population"

## Canadian Doctor. H1N1 Vaccination: A Eugenics Weapon for

"Massive & Targeted Reduction of the World Population."

- Canadian doctor [Ghislaine Lanctôt](#), author of the Medical Mafia, has underscored the lawsuit recently filed by Austrian journalist [Jane Bürgermeister](#) against the WHO, the UN, and several high ranking government and corporate officials. Bürgermeister has documented how an international corporate criminal syndicate plans to unleash a deadly flu virus and institute a forced vaccination program.
- "I am emerging from a long silence on the subject of vaccination, because I feel that, this time, the stakes involved are huge. The consequences may spread much further than anticipated," writes Lanctôt, who believes the A(H1N1) virus will be used in a pandemic concocted and orchestrated by the WHO, an international organization that serves military, political and industrial interests.
- Lanctôt warns that the elite and their minions will introduce a compulsory vaccination that will contain a deadly virus and this will be used specifically as a eugenics weapon for "massive and targeted reduction of the world population." Moreover, a pandemic will also be used to further establish martial law and a police state, according to Lanctôt, and activate concentration camps "built to accommodate the rebellious" and eventually transfer power from all nations to a single United Nations government and thus fulfill the sinister plans of the [New World Order](#).

## Farmaceutska mafija

- the Danish daily newspaper *Information* has confirmed that the newest member of the elite SAGE, Finnish Professor Juhani Eskola, an advisor managed not to reveal the fact that his Finnish research laboratory, THL, a WHO research center, got 6.3 million Euros (about \$9 million) from swine flu vaccine maker, GlaxoSmithKline (GSK) in 2009. GSK produces the H1N1 swine flu vaccine, 'Pandemix' which the Finnish and many other governments, following the recommendations of THL and WHO, purchased in large volumes as a national pandemic reserve. <sup>1</sup>

## Farmaceutska mafija

- [Retired Vax Scientist Would Never Vaccinate His Kids](#)
- By *ID Admin* on August 11, 2009 9:03 PM | [Permalink](#)
- "If I had a child now, the last thing I would allow is vaccination."  
-Retired Vaccine Researcher to Jon Rappoport

Editor's Note -- This interview was posted by Jon Rappoport in early January 2002. You will discover by reading it that the very issues we now face of FORCED vaccination of a laboratory-created vaccine to "protect" us against a laboratory-created "disease" (Swine Flu, Bird flu, etc.) was set into motion a long time ago.

The vaccine researcher quoted here flat out says that the [World Homicide Organization, WHO](#), is driven by a DEPOPULATION agenda, and that many African leaders know full well that the explosive spread of HIV and AIDS in Africa was caused by WHO-sponsored vaccinations of the 1970s.



## Farmaceutska mafija

- [Children Who Get Flu Vaccine Have Three Times Risk Of Hospitalization For Flu, Study Suggests](#)
- By *ID Admin* on May 20, 2009 11:32 AM | [Permalink](#) | [Comments \(0\)](#)
- *ScienceDaily* (May 20, 2009) – The inactivated flu vaccine does not appear to be effective in preventing influenza-related hospitalizations in children, especially the ones with asthma. In fact, children who get the flu vaccine are more at risk for hospitalization than their peers who do not get the vaccine, according to new research that will be presented on May 19, at the 105th International Conference of the American Thoracic Society in San Diego.
- Flu vaccine (trivalent inactivated flu vaccine--TIV) has unknown effects on asthmatics.
- "The concerns that vaccination maybe associated with asthma exacerbations have been disproved with multiple studies in the past, but the vaccine's effectiveness has not been well-established," said Avni Joshi, M.D., of the Mayo Clinic in Rochester, MN. "This study was aimed at evaluating the effectiveness of the TIV in children overall, as well as the children with asthma, to prevent influenza-related hospitalization."

- [The Gardasil Scam: HPV Does NOT Cause Cancer](#)
- By *ID Admin* on March 9, 2009 9:38 PM | [Permalink](#)
- Some time ago at Matewan I expressed doubts about Gardasil, the vaccination that was being forced on teenage girls supposedly because it acted to prevent cervical cancer. I suggested then that there was something fishy about all the political wheeling and dealing behind the scenes that had resulted in various governors - Texas' Rick Perry for one - making Gardasil vaccinations mandatory.
- It all sounded cooked. To begin with, Perry had very heavy connections with the pharmaceutical industry, including the companies that manufacture and distribute Gardasil. Secondly, studies show that some 94% of sexually active women have some form of HPV and in almost all those cases, **it goes away by itself**. Why, I wondered, would we be making the injections mandatory for a disease that cures itself without troubling the patient for the sake of *maybe* protecting the small slice of the population that *might* develop cervical cancer from HPV?
- It sounded like another Bog Pharma scam but it may be far worse. Turns out that studies actually show that **not only does HPV NOT cause cervical cancer, the Gardasil itself does**.
- This revelation should be quite shocking to anyone who has been following the debate over Gardasil and mandatory vaccinations of teenage girls. First, it reveals that **Gardasil appears to increase disease by 44.6 percent in certain people** – namely, those who were already carriers of the same HPV strains used in the vaccine.
- In other words, it appears that **if the vaccine is given to a young woman who already carries HPV in a "harmless" state, it may "activate" the infection and directly cause precancerous lesions to appear**. The vaccine, in other words, may accelerate the development of precancerous lesions in women.

- [WHO pushed dangerous flu vaccine](#)
- From the [Daily Mail](#):
- "The swine flu outbreak was a 'false pandemic' driven by drug companies that stood to make billions of pounds from a worldwide scare, a leading health expert has claimed.
- "Wolfgang Wodarg, head of health at the Council of Europe, accused the makers of flu drugs and vaccines of influencing the World Health Organisation's decision to declare a pandemic.
- "This led to the pharmaceutical firms ensuring 'enormous gains', while countries, including the UK, 'squandered' their meagre health budgets, with millions being vaccinated against a relatively mild disease.
- "But with fewer than 5,000 in England catching the disease last week and just 251 deaths overall, Dr Wodarg has branded the H1N1 outbreak as 'one of the greatest medical scandals of the century'.

## People Who Get a Seasonal Flu Shot Are Twice as Likely to Catch Swine Flu

- As-yet-unpublished Canadian data raises concerns about whether it's a good idea to get a seasonal flu shot. A series of studies suggests that people who got a seasonal flu shot last year are about twice as likely to catch swine flu as people who didn't.
- Journals bar would-be authors from discussing their results publicly before they go through peer review, but the findings have been a poorly kept secret and many in the public health community in Canada have heard about them. In the meantime, five biopharmaceutical companies have been awarded massive contracts by the U.S. Department of Health and Human Services (HHS) for development and production of more than 195 million doses of swine flu vaccine, and health officials are urging everyone to get vaccinated against both the seasonal- and the swine flu this season.
- The companies — Novartis, GlaxoSmithKline, MedImmune, Australian drug maker CSL, and Sanofi-Pasteur — will likely make a great deal of money. CSL has contracts to supply \$180 million worth of bulk antigen to the U.S. MedImmune will supply 40 million doses of its live attenuated nasal spray swine flu vaccine for more than \$450 million. Sanofi-Pasteur is providing more than 100 million doses of monovalent swine flu vaccine, a \$690 million order.

## Kanada

- In Canada, it is GlaxoSmithKline that received the sole contract to deliver 50 million doses of the untested chemical and biological cocktail against the non-event of H1N1.

Here are a few poignant excerpts from Glaxo's FLUARIX 2009-2010 medical insert (direct quotations followed by my own comment):

1. "**FLUARIX IS NOT INDICATED FOR USE IN CHILDREN.**" (capitalized by manufacturer) Why were our government health officials and the mainstream media telling the public that the vaccine is completely safe for children as young as 6 months old?

2. "There are insufficient data to assess the concurrent administration of FLUARIX with other vaccines." But gov. and MSM were telling us that it is safe to take multiple flu shots concurrently with FLUARIX.

3. "Vaccination with FLUARIX may not protect 100% of susceptible individuals." Where are the studies that prove it can protect anyone even 10% of the time? There are none and Glaxo admits that much.

4. "**No controlled trials demonstrating a decrease in influenza disease after vaccination with FLUARIX have been performed.**" This of course speaks for itself.

5. "Animal reproduction studies have not been conducted with FLUARIX. It is not known whether FLUARIX can cause fetal harm when administered to a pregnant woman or can affect reproduction capacity." But pregnant mothers were put on the priority list for inoculation.

6. "**It is not known whether FLUARIX is excreted in human milk.**"

7. "Do not administer by intravascular injection." There are very clear-cut reasons (mentioned below) why this should not be done. However, to deliver a proper intramuscular injection, the administrator must know how to effectively aspirate the needle to confirm no vein has been punctured. This takes skill, experience and time to perform safely. How many of the nurses, administering hundreds of shots a day, do you think took the time to properly aspirate the needle?

## World Health Organisation 'Manufactured' Global Swine Flu Scare



World Health Organization

## Luj Pasteur



Pasteur's mechanistic idea of disease—finding the right cure (drug) for each germ—was the seed of the pharmaceutical empire.

**the pathogen is nothing; the terrain is everything.** — Louis Pasteur's deathbed words

Ipak se može na kraju reći da:

- Najbolji lijek protiv gripe je prevencija – sprječavanje pojave gripe**

Ili Vi imate svoj komentar????

## LITERATURA

- Teftedarija, Muhamed; Opšta i specijalna infektologija, Sarajevo 1990.
- CENTERS FOR DISEASE CONTROL: Prevention and control of influenza. Morb Mort Week Rep 40:1, 1991
- DOLIN R. i sur.: A controlled trial of amantadine and rimantadine in the prophylaxis of influenza A infection. N Engl J Med 307:580, 1982
- MURPHY BR, WEBSTER RG: Orthomyxoviruses. U Virology 2, New York, 1990.
- HARRISON, PRINCIPI INTERNE MEDICINE, Prvo hrvatsko izdanje, 2002

