0125. The Flu Vaccine Works—In a Way Most People Don't Appreciate 流感疫苗的作用——但大多数人不理解

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1. The Flu Vaccine Works (v.) —In a Way Most People Don't Appreciate 流感疫苗的作用——以大多数人不理解的方式运作

We tend to **take** kind of 在某种程度上,有点儿 **a black-and-white approach（待人接物或思考问题的）方式，方法，态度 to** vaccines of 'if you get vaccinated (v.)给…接种疫苗, it will **keep** you **from** 阻止（或防止、阻碍）某人做某事 getting that particular disease.
我们倾向于对疫苗采取一种非黑即白的方法，"如果你接种了疫苗，它就会阻止你患上那种特定的疾病"。

Example 1. 案例

keep sb from sth

to prevent sb from doing sth 阻止（或防止、阻碍）某人做某事

• I hope I'm not **keeping** you **from** your work. 希望我没有妨碍你工作。

The pro 赞成的意见; 赞成的理由 is that it's a very simple message; **the con 诡计；骗局；欺骗 is that** it doesn't necessarily communicate (v.)传达，传递（想法、感情、思想等） the reality of vaccines, **which is that** sometimes **you do get that disease**

even though you’re vaccinated.
优点是这是一条非常简单的消息；缺点是它不一定传达疫苗的真实情况，即有时即使您接种了疫苗，您也会患上这种疾病。

Example 2. 案例

the pros and cons

the advantages and disadvantages of sth 事物的利与弊；支持与反对

• We weighed up the pros and cons. 我们权衡了利弊得失。

主 **The amount of protection** a vaccine offers 谓 **depends on** the disease it targets.
疫苗提供的保护程度, 取决于其针对的疾病。

For some shots 注射, **such as** those for measles 麻疹 and polio 脊髓灰质炎；小儿麻痹症, the black-and-white approach **is essentially 本质上；根本上；基本上 true**.
对于某些注射，例如麻疹和脊髓灰质炎的注射，认为其疫苗的效果是"非黑即白"的,本质上是正确的。

Example 3. 案例

measles

[U] an infectious disease, especially of children, that causes fever and small red spots that cover the whole body 麻疹

"麻疹", 是因感染"麻疹病毒"的一種急性、高度傳染性之病毒性疾病，常見於兒童，**为儿童常见的急性呼吸道传染病之一。**初期临床表现为发热、上呼吸道炎症（咳嗽、鼻炎）、眼角结膜炎（充血、流泪、畏光）等，后续**皮肤出现红色斑丘疹、**颊黏膜上有细小白点（麻疹黏膜斑，柯普力克氏斑，Koplik’s spots），疹退后遗留色素沉着伴糠麸样脱屑。严重者可并发脑炎、肺炎。

麻疹是空氣傳播疾病的一種，所以可輕易藉由已感染者的咳嗽和打噴嚏而傳染給他人，也可藉著唾液或鼻腔分泌物傳播。

人類是麻疹病毒在自然界的唯一宿主，迄今據知在其他的動物身上並未發現此病毒。

polio

(also formal polio·my·el·itis /ˌpəʊliəʊˌmaɪəˈlaɪtɪs/) [U] an infectious disease that affects the central nervous system and can cause temporary or permanent paralysis (= loss of control or feeling in part or most of the body)
脊髓灰质炎；小儿麻痹症

是由"脊髓灰质炎病毒"引起. 大约有90%到95%的感染并没有任何症状。剩下5%到10%有发烧、头痛、呕吐、腹泻、颈部僵硬以及四肢疼痛等轻微症状。大多数的人可以自行复原，但**少数的人会造成终生残疾。** 随着病情发展，**四肢逐渐出现各种畸形。早期的畸形可以矫正，后遗症后期瘫痪肌肉不再恢复，肌纤维逐渐萎缩变小，甚至消失。因肌肉萎缩，肌力不平衡和身体的负重，产生组织挛缩，骨关节畸形。**
在感染此病毒造成肌力变弱的患者中，有2%到5%的幼年患者, 与15%到30%成年患者, 会导致死亡。

一旦感染后，目前尚无特效药或疗法。 脊髓灰质炎, 可以藉著"脊髓灰质炎疫苗"来预防感染.
脊髓灰质炎病毒, 通常经"粪口"传播。也有可能经由被粪便污染的水或食物传染，经由唾液传染是较为少见的状况。
到今天为止，在其他动物上, 并未发现感染"小儿麻痹症"的情形。

If you received **the standard vaccine regimen** (n.)生活规则；养生之道；养生法 as a child, **your odds（事物发生的）可能性，概率，几率，机会 of** ever **catching those particular diseases** are tiny: around 1 percent for each.

如果您小时候接受了标准疫苗接种，那么您感染这些特定疾病的几率很小：每种疾病的几率约为 1%。

Example 4. 案例

regimen

(n.)(also re·gime) (medical 医 or formal) a set of rules about food and exercise or medical treatment that you follow in order to stay healthy or to improve your health 生活规则；养生之道；养生法

-→ 来自拉丁语 regere,统治，管理，词源同 regulate.-men,名词后缀。引申词义养生之道，养生法。

But flu **doesn't work (v.) the same way**.
但流感的作用却不同。

Measles and polio are **static viruses**, whereas （用以比较或对比两个事实）然而，但是，尽管 influenza **mutates (v.) regularly**, allowing it **to evade (v.) our immune system** even if **it's been trained** (v.) to identify (v.) the pathogen **via** prior infection or vaccination.
麻疹和脊髓灰质炎是静态病毒，而流感会定期变异，使其能够逃避我们的免疫系统，即使我们的免疫系统先前已经被训练过, 来识别病原体—借助"感染"或"接种疫苗"的方法。

In addition, influenza is **a family of viruses**, and typically 主 **the flu vaccine** 后定 administered (v.)施行；执行;给予；提供 in the U.S. 谓 targets (v.) only four strains （动、植物的）系，品系，品种；（疾病的）类型.
此外，流感是一个病毒家族，通常在美国接种的流感疫苗, 只针对四种病毒。

Example 5. 案例

administer

-→ 前缀ad-, 去，往。minister, 部长,来自词根min, 小的,同minute。指国王的仆人，后指大臣。

(v.) ~ **sth (to sb)** : (formal) to give or to provide sth, especially in a formal way 给予；提供

• The teacher has the authority **to administer punishment**. 老师有权处罚。

4.[often passive] ~ **sth (to sb)** : (formal) to give drugs, medicine, etc. to sb 给予，施用（药物等）
• The dose **was administered to** the child intravenously. 已给那孩子静脉注射了这一剂量。

These strains are selected **based on the ones** that are circulating **in the Southern Hemisphere** more than six months **before flu season begins in the North**.
这些毒株, 是根据北半球流感季节开始前六个月, 在南半球流行的毒株, 选择的。

Selecting which strains to target is a guessing game — one 后定 **that scientists can't always win**.
选择目标菌株是一场猜谜游戏，科学家们并不总是能赢。

These factors **give** the influenza vaccine **a spotty 质量不一的，有好有坏的;多丘疹的；多粉刺的 record** in preventing (v.) disease.
这些因素导致, 流感疫苗在"预防疾病"效力方面的记录, 参差不齐。

During well-matched seasons, we see **[risk reduction] numbers** pretty consistently 一贯地，始终；一致地 **within the range of 40 to 60 percent** among the vaccinated.
在匹配良好的季节中，我们看到接种疫苗的人的[风险降低]数字, 始终保持在 40% 至 60% 的范围内。

The perceived "low" protection can cause (v.) people **to hesitate (v.)（对某事）犹豫，迟疑不决 about** receiving the vaccine.
被认为"低效"的保护作用, 可能会导致人们对接种疫苗犹豫不决。

People think that if they get vaccinated, and then they **get sick**, the vaccine has failed.
人们认为，如果他们接种了疫苗，然后生病了，那么疫苗就失效了。

But that's not **an accurate view** of what **public health experts** expect (v.) the flu vaccine **to accomplish** (v.)完成.
但这并不是公共卫生专家对"流感疫苗预期要实现的目的"的准确看法。

Mild influenza **occurs (v.) mostly in the respiratory tract**, where **vaccine-induced 劝说；诱使;引起；导致 defenses** (n.) aren't **as effective** because they can't reach **the surface of the mucus 黏液；鼻涕 membranes** 膜 in, for example, your nose.
轻度流感主要发生在呼吸道，疫苗诱导的防御作用, 就并不那么有效，因为它们无法到达鼻子等粘膜表面。

Example 6. 案例

> *they can't reach the surface of the mucus membranes in, for example, your nose.*
>
> 中的 in, 应该是接着后面的 your nose 的. 即连起来应该是 the mucus membranes **in your nose**.

That's where **the virus might first enter your body** and **cause flu's mild symptoms**, such as **a runny (a.)流鼻涕的；流眼泪的;太稀的；水分过多的 nose** — so vaccination doesn't **do much against** these infections.
这就是病毒首先可能进入您的身体的地方 (即上文说的"鼻子中的黏膜" the mucus membranes in your nose), 并引起流感轻微症状，例如流鼻涕，因此疫苗接种对这些感染没有多大作用。

Instead 代替；顶替；反而；却 the vaccine **produces (v.) defenses** 后定 that are active (v.) deeper in the body — in the heart, liver and kidney, for example — and can **stop** the virus **from** sneaking (v.)偷偷地走；溜 into organs, where it can cause (v.) a **severe** (a.) to **possibly (ad.) life-threatening** (a.) infection.
相反，疫苗产生的防御作用在身体更深处（例如心脏、肝脏和肾脏）活跃，并且可以阻止病毒潜入器官，从而导致"严重的"到甚至"可能危及生命的"感染。

For the flu, vaccination **isn't about** reducing infections overall **but instead about** reducing **the hundreds of thousands of** hospitalizations 住院治疗 and **tens of thousands of** deaths 后定 the disease causes (v.) in the U.S. each year.
对于流感来说，疫苗接种并不是为了减少"总体感染人数"，而是为了减少该疾病每年在美国造成的数十万人住院和数万人死亡。

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2. The Flu Vaccine Works—In a Way Most People Don't Appreciate

We tend to take kind of a black-and-white approach to vaccines of 'if you get vaccinated, it will keep you from getting that particular disease. The pro is that it's a very simple message; the con is that it doesn't necessarily communicate the reality of vaccines, which is that sometimes you do get that disease even though you're vaccinated.

The amount of protection a vaccine offers depends on the disease it targets. For some shots, such as those for measles and polio, the black-and-white approach is essentially true. If you received the standard vaccine regimen as a child, your odds of ever catching those particular diseases are tiny: around 1 percent for each.

But flu doesn't work the same way. Measles and polio are static viruses, whereas influenza mutates regularly, allowing it to evade our immune system even if it's been trained to identify the pathogen via prior infection or vaccination. In addition, influenza is a family of viruses, and typically the flu vaccine administered in the U.S. targets only four strains. These strains are selected based on the ones that are circulating in the Southern Hemisphere more than six months before flu season begins in the North. Selecting which strains to target is a guessing game—one that scientists can't always win.

These factors give the influenza vaccine a spotty record in preventing disease. During well-matched seasons, we see [risk reduction] numbers pretty consistently within the range of 40 to 60 percent among the vaccinated.

The perceived "low" protection can cause people to hesitate about receiving the vaccine. People think that if they get vaccinated, and then they get sick, the vaccine has failed.

But that's not an accurate view of what public health experts expect the flu vaccine to accomplish. Mild influenza occurs mostly in the respiratory tract, where vaccine-induced defenses aren't as effective because they can't reach the surface of the

mucus membranes in, for example, your nose. That's where the virus might first enter your body and cause flu's mild symptoms, such as a runny nose—so vaccination doesn't do much against these infections.

Instead the vaccine produces defenses that are active deeper in the body—in the heart, liver and kidney, for example—and can stop the virus from sneaking into organs, where it can cause a severe to possibly life-threatening infection. For the flu, vaccination isn't about reducing infections overall but instead about reducing the hundreds of thousands of hospitalizations and tens of thousands of deaths the disease causes in the U.S. each year.