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The features marked with a star (*) are based entirely on material taken straight from standard research (and other Official and Therefore Always Correct) literature. Many of the other articles are genuine, too, but we don't know which ones.

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IMPROBABLE RESEARCH



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Where There's More

There's always new improbable — it's not what you expect! — stuff on the **Improbable Research blog** at IMPROBABLE.COM

On the Front Cover

Small animals and small animal cookies. Montage by Nan Swift.



On the Back Cover

Old children's books in which the main characters are small animals.



Some Coming Events

See IMPROBABLE.COM for details of these and other events:

NOTE: The 2020 Ig Nobel EuroTour was scheduled to occur in March and April, but was truncated after the first show, because of the COVID-19 pandemic. The cancelled events will be re-scheduled.

NOTE: Several other events, elsewhere, also will be re-scheduled.

NOTE: Because of the pandemic, the 2020 Ig Nobel Prize ceremony will be done entirely via the internet, rather than in Sanders Theatre. Please check our web site WWW.IMPROBABLE.COM for updates!

September 17, 2020 – 30th First Annual Ig Nobel Prize ceremony

Fall 2020 (Date TBD) – The Ig Informal Lectures

Fall 2020 (Date TBD, pandemic permitting) – Japan

MAR/APR 2021 (pandemic permitting) – Europe



WEAR A MASK?

Investigations pertaining to facial coverings

by Alice Shirrell Kaswell, Improbable Research staff

Wear a Mask

“Sexual Health in the SARS-CoV-2 Era,” Jack L. Turban, Alex S. Keuroghlian, and Kenneth H. Mayer, *Annals of Internal Medicine*, epub 2020. (Thanks to Ron Josephson for bringing this to our attention.) The authors, at Massachusetts General Hospital, Harvard Medicine School, The Fenway Institute, and Beth Israel Deaconess Medical Center, explain:

Sex with persons other than those with whom one is self-quarantined:

Patient should be counseled on the risk for infection from partners, as well as risk reduction techniques that include minimizing the number of sexual partners, avoiding sex partners with symptoms consistent with SARS-CoV-2, avoiding kissing and sexual behaviors with a risk for fecal–oral transmission or that involve semen or urine, wearing a mask...

Sex only with those with whom one is self-quarantined	Patient is at risk for infection from s
Sex with persons other than those with whom one is self-quarantined	Patient is at risk for infection from a Patient should be counseled on the include minimizing the number of SARS-CoV-2, avoiding kissing and semen or urine, wearing a mask,

Detail from the study “Sexual Health in the SARS-CoV-2 Era.”

Is a Mask Necessary? (1)

“Is a Mask Necessary in the Operating Theatre?” Neil WM. Orr, *Annals of the Royal College of Surgeons of England*, 63, no. 6, 1981, pp. 390-392. The author, a consulting surgeon at Severalls Surgical Unit, Colchester. UK, reports:

No masks were worn in one operating theatre for 6 months... during 1980.... Nose and throat swabs were taken from all theatre personnel monthly or when they had a cold. Wound infection rates have been compared with those of the corresponding 6 months in the previous 4 years....

There was no increase in wound infections when masks were discarded in 1980; in fact there was a significant decrease....

The finding that there was an appreciable fall in the wound infection rate when masks were not worn certainly warrants further investigation. This trial was designed only to see whether wound infection increased, as had been predicted, when masks were not worn. It did not.

Is a mask necessary in the operating theatre?

Neil W M Orr MD MChir FRCS
Consultant Surgeon, Severalls Surgical Unit, Colchester.

Key words: MASKS; WOUND INFECTION

Summary

No masks were worn in one operating theatre for 6 months. There was no increase in the incidence of wound infection.

Introduction

It has been standard practice since the beginning of the century to wear a mask in the operating theatre. At that time nasal carriers were found to be important in the spread of contagi-

staffed largely by part-time nurses, shuts daily at 5 p.m., and does not function during the weekend. During the week there is a brisk turnover of general surgery: cholecystectomies, gastrectomies, thyroidectomies, bowel resections, prostatectomies, and herniorrhaphies as well as cystoscopies, bronchoscopies, and gastroscopies. Emergencies are treated elsewhere.

Since the appointment of a control of infection sister in 1975 wound infections have been carefully monitored both from the ward and from

[continued >](#)

WEAR A MASK? [CONTINUED]

Is a Mask Necessary? (2)

“Postoperative Wound Infections and Surgical Face Masks: A Controlled Study,”
Th. Göran Tunevall, *World Journal of Surgery*, vol. 15, no. 3, 1991, pp. 383-387.
The author, at the Karolinska Institutet, Sweden, reports:

During 1,537 operations, face masks were worn by everyone in the operating room according to the “normal” routine. During 1,551 operations, masks were not worn, except on 277 occasions when they were worn by 1 or 2 persons because of a common cold or an allergic rhinitis....

As can be seen, no statistically significant differences in wound infection rates were reached comparing “masked” and “unmasked” operations....

In most hospitals, no one is allowed to even enter an operating room without wearing a face mask, although the scientific background to this routine is lacking. In studies of surgical face masks, different designs and materials and ways of wearing the face masks have been compared in regards to fall-out, but not in regards to the effect on wound infection rates....

It has not been possible to demonstrate any advantages for the patient when the surgical team wears face masks. Therefore, the routine use of face masks ought to be reconsidered.

Postoperative Wound Infections and Surgical Face Masks: A Controlled Study

Th. Göran Tunevall, M.D.
Department of Surgery, Karolinska Institutet, Danderyd Hospital, Danderyd, Sweden

It has never been shown that wearing surgical face masks decreases postoperative wound infections. On the contrary, a 50% decrease has been reported after omitting face masks. The present study was designed to reveal any 30% or greater difference in general surgery wound infection rates by using face masks or not.
During 115 weeks, a total of 3,088 patients were included in the study. Weeks were denoted as “masked” or “unmasked” according to a random list. After 1,537 operations performed with face masks, 73 (4.7%)

Later, Orr [12] reported a 50% decrease of wound infections after omitting face masks; however, this report was not based on a controlled study. Chamberlain and Houang [13] made a controlled study during gynecological operations to test the results reported by Orr. Their study was discontinued after 3 infections in the unmasked group, although they found no correlation between bacteria found in the infected wounds and

Masked and Un-Masked Spittle Produced When One Says “Stay Healthy”

“Visualizing Speech-Generated Oral Fluid Droplets with Laser Light Scattering,” Philip Anfinrud, Valentyn Stadnytskyi, Christina E. Bax, and Adriaan Bax, *New England Journal of Medicine*, April 15, 2020. (Thanks to Andrea DeMeter for bringing this to our attention.) The authors, at the National Institutes of Health and the University of Pennsylvania, report:

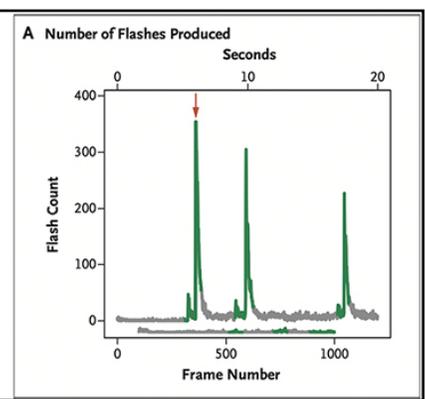
Aerosols and droplets generated during speech have been implicated in the person-to-person transmission of viruses, and there is current interest in understanding the mechanisms responsible for the spread of Covid-19 by these means. The act of speaking generates oral fluid droplets that vary widely in size, and these droplets can harbor infectious virus particles....

We report the results of a laser light-scattering experiment in which speech-generated droplets and their trajectories were visualized. We found that when the person said “stay healthy,” numerous droplets ranging from 20 to 500 μm were generated....

We found that when the person said “stay healthy,” numerous droplets ranging from 20 to 500 μm were generated.... When the same phrase was uttered three times through a slightly damp washcloth over the speaker’s mouth, the flash count remained close to the background level (mean, 0.1 flashes); this showed a decrease in the number of forward-moving droplets.

small droplets can dehydrate and linger as “droplet nuclei” in the air, where they behave like an aerosol and thereby expand the spatial extent of emitted infectious particles.² We report the results of a laser light-scattering experiment in which

Figure 1. Emission of Droplets While a Person Said “Stay Healthy.”
Droplets generated during speech produced flashes as they passed through the light sheet in this experiment. Panel A shows the flash count during each frame of a video produced at a rate of 60 frames per second, with and without a damp cloth covering the speaker’s mouth. Green indicates spoken words. The number of flashes was highest (arrow) when the “th” sound in the word “healthy” was pronounced. The trace offset below the graph shows that when the speaker’s mouth was covered with a damp cloth, there



Detail from the study “Visualizing Speech-Generated Oral Fluid Droplets with Laser Light Scattering.”