

Wikipedia, Medicine and the Cochrane Collaboration

James Heilman
MD, CCFP(EM), Wikipedian
Wiki Project Med Foundation

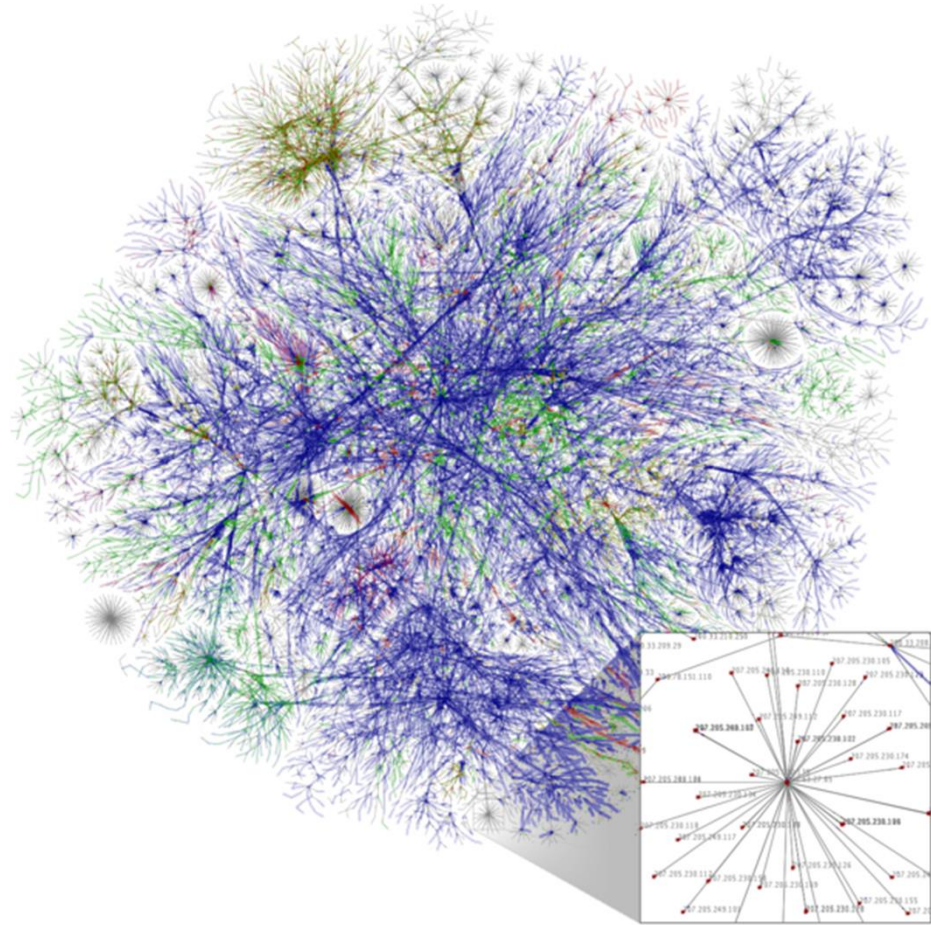


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A little about myself

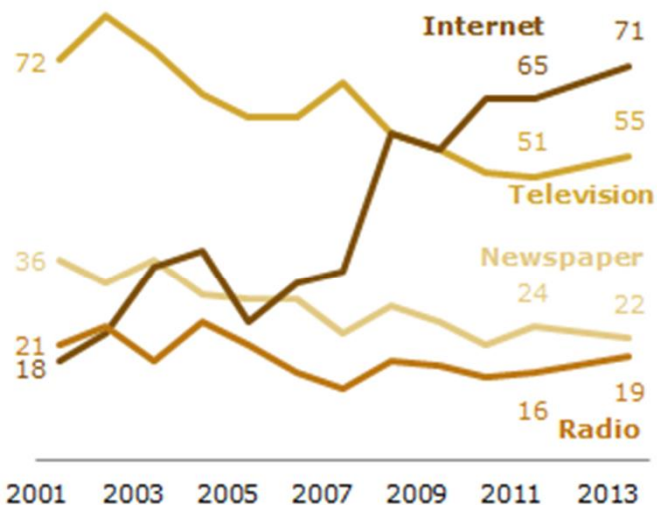
Small town ER doc
Some academic affiliation
but am a long way from
my University (~800 Km)
Became involved in
2007/2008 after coming
across a poor quality
medical articles
An active volunteer ever
since



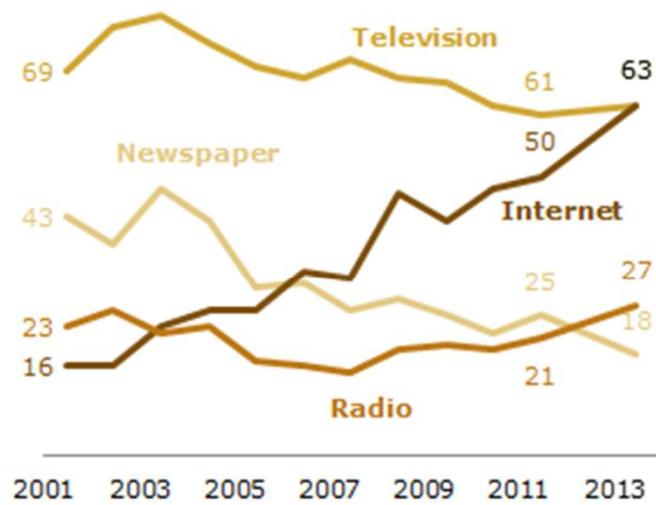


Main Source for National and International News

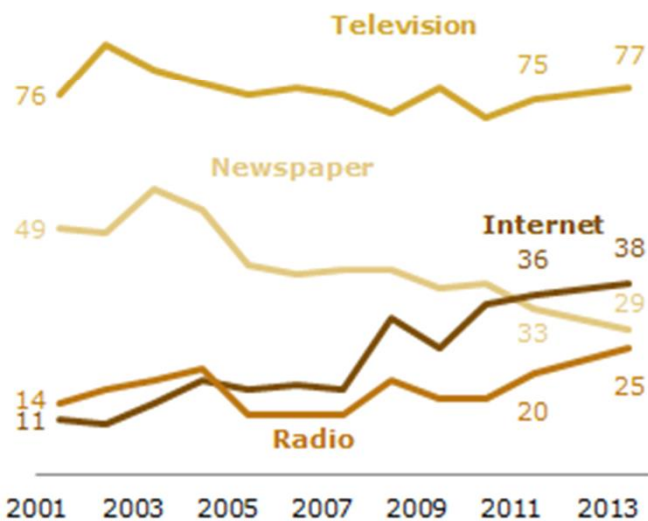
18-29



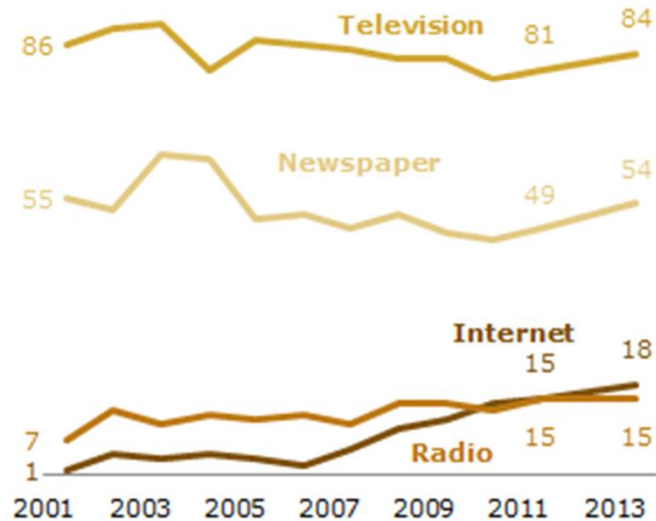
30-49



50-64



65+



STATE OF HEALTHCARE SEARCHES ONLINE



PATIENTS SPEND MORE TIME ONLINE THAN WITH THE DOCTOR

In a year, the average American visits the doctor **3 times**, but spends more than **52 hours** on the Internet looking for health information.



Who here uses Wikipedia?



**What language do you use
it in?**



Is Wikipedia Read by Nearly Everyone?



Some numbers



Largest and most popular reference work on the Internet, 5th most popular website in the world (the first four being Google, Facebook, Youtube and Yahoo)

500 million unique visitors per month as of 2013 (roughly 21 billion page views)⁽⁷⁾

4.8 billion of these via mobile⁽⁷⁾

Medical stats



Wikipedia's medical content received
~5 billion pageviews for 160,000
articles in 2013

2-3% of all pageviews for Wikipedia are
for health

Half of this views were for English, the
other half were in the other 275
languages

Medical stats



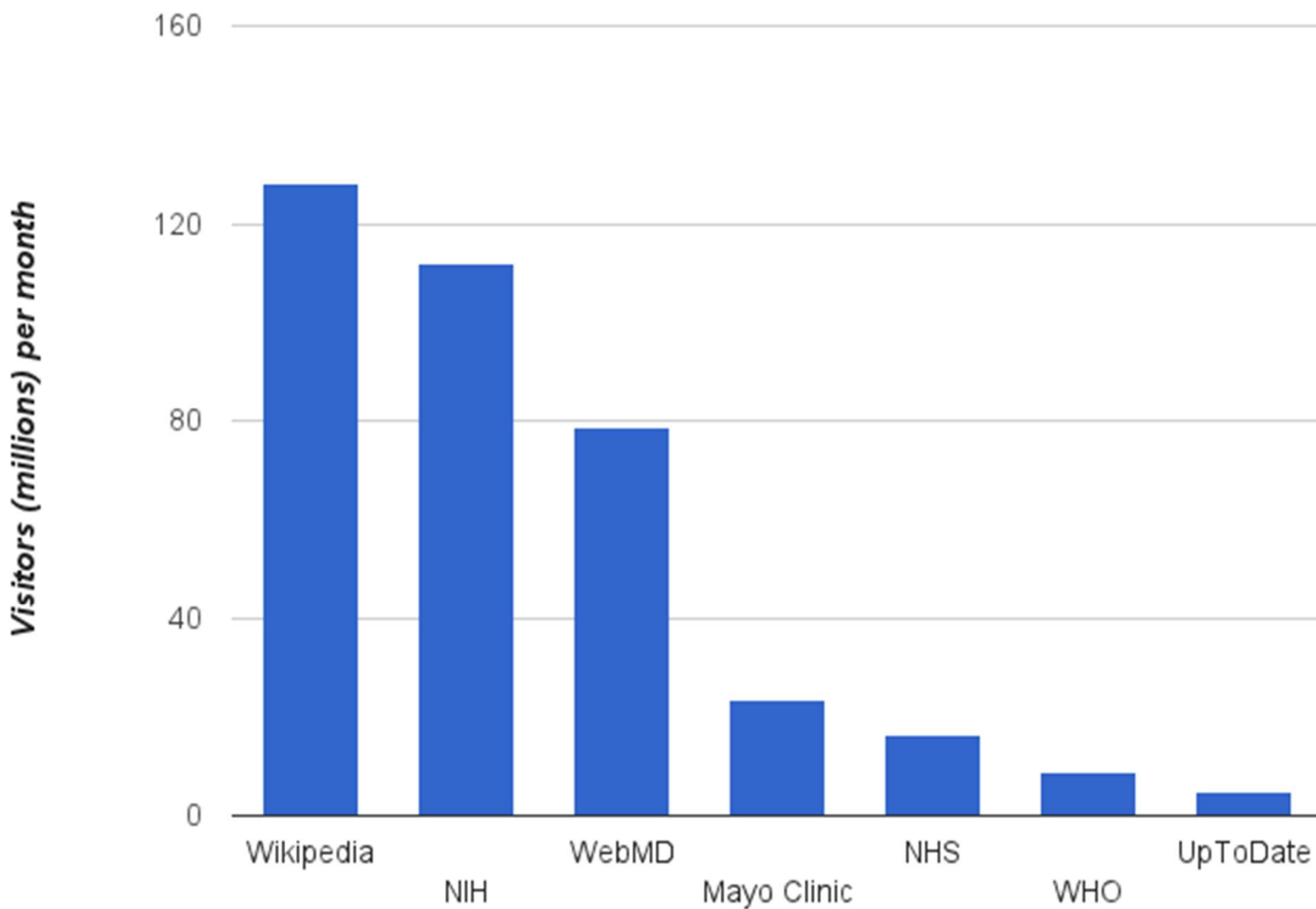
50% to 100% of **physicians** use Wikipedia

35 to 70% of **pharmacists** admit to its use⁽³⁾

Most frequently used source by **junior MDs**
(besides Google)

94% of **medical students** use Wikipedia

Most Popular Internet Health Content by Visitors, 2013/2014



Why do medical students use Wikipedia?

“The use of Wikipedia is almost ubiquitous throughout medical school for medical education. The ease of access and understanding, as well as readily usable and consumer-friendly interfaces, means students often turn to this, rather than traditional authoritative resources. While the reliance on Wikipedia reduces throughout medical school, this is likely due to confidence and ability to concurrently use other resources as well as perceived reduced reliability. Medical school administrators would benefit from embracing and developing web2.0 resources and include their use in ongoing dynamic medical education.”

Med Teach. 2013 Apr;35(4):337. doi: 10.3109/0142159X.2012.737064. Epub 2012 Nov 8.

Wikipedia use amongst medical students - new insights into the digital revolution.

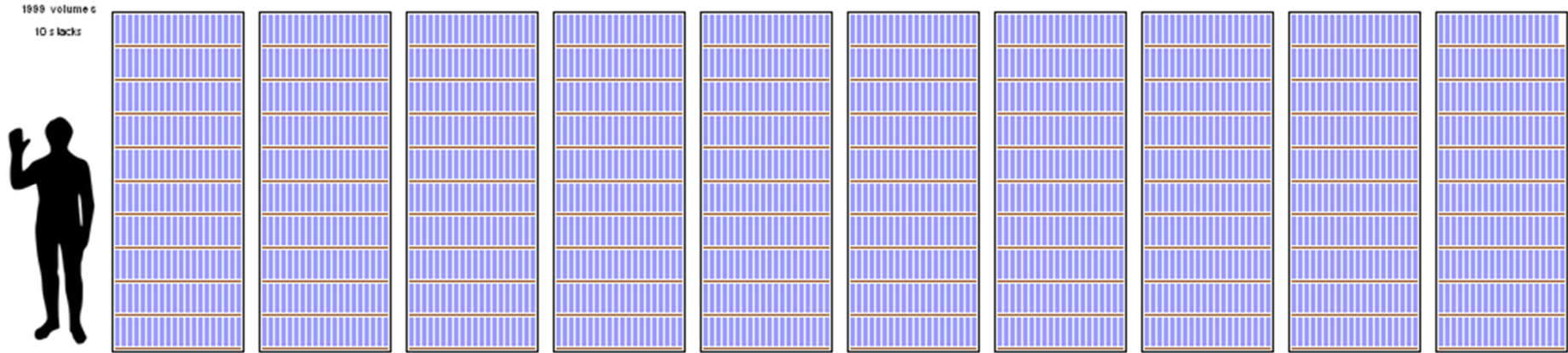
Allahwala UK, Nadkarni A, Sebaratnam DF.



Does Wikipedia Cover Nearly Everything?



Size of the English version as of May 2014⁽⁹⁾



Largest reference work on the Internet

Equivalent to ~2000 volumes of the
Encyclopedia Britannica

As of Mar 2014 ~31.2 million articles in 286
languages (4.5 million in English)

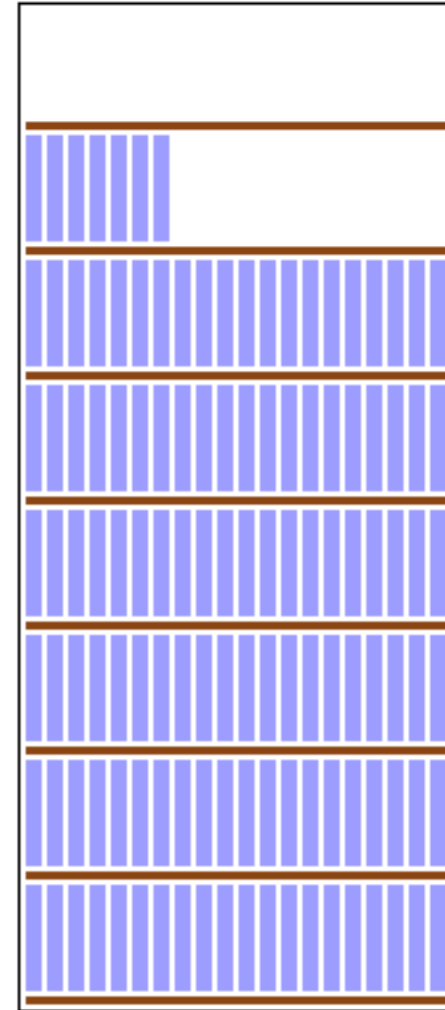
And continues to grow...

Size of the medical content across all languages



Equivalent to
~126.9 volumes of
the Encyclopedia
Britannica

126.9 volumes





Does Wikipedia Have a Huge Number of Editors?



Who has edited Wikipedia?



A few numbers



Anyone can edit (35 million registered accounts), many more editing anonymously
80,000 people contribute >5 edits a month
12,000 people contribute more than 100 edits a month
All volunteers working for free

Medical numbers



1.1M edits by 224,000 accounts.
274 editors made more than 250
edits in 2013

Who are they?

Half health care professionals

52% have either a Masters, PhD or MD

33% have a Bachelor's degree

80% male, 10% female, 10% would rather not say

Many of the non professionals are fixing grammar or doing other maintenance



Does What One Writes Matter?



Total page views for all medical pages.[1] 

List [\[edit\]](#)

Period: 2013-04-01 — 2013-04-30 (UTC)

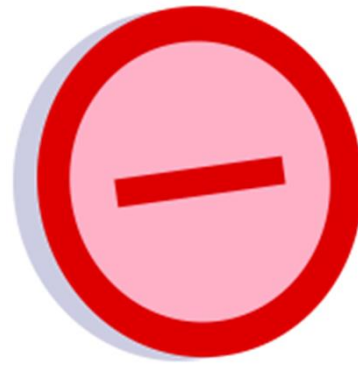
Rank	Page	Views	Views (per day average)	Assessment	Importance
1	Ricin (talk)	1326727	44224	B	Low
2	Leonardo da Vinci (talk)	650072	21669	⊕ GA	Low
3	Asperger syndrome (talk)	520627	17354	✶ FA	High
4	Bipolar disorder (talk)	509656	16988	B	Top
5	Diaper (talk)	495408	16513	B	Mid
6	Multiple sclerosis (talk)	453769	15125	✶ FA	Top
7	Autism (talk)	441114	14703	✶ FA	High
8	Meningitis (talk)	421749	14058	✶ FA	Top
9	Borderline personality disorder (talk)	397571	13252	C	High
10	Sexual intercourse (talk)	392226	13074	B	Mid
11	Tuberculosis (talk)	388969	12965	⊕ GA	Top
12	Schizophrenia (talk)	388590	12953	✶ FA	Top
13	Adderall (talk)	362539	12084	C	Mid
14	Gout (talk)	341670	11389	⊕ GA	Top
15	Crohn's disease (talk)	341054	11368	⊕ GA	Mid
16	Diabetes mellitus (talk)	330479	11015	B	Top
17	Black Death (talk)	310055	10335	B	Mid
18	Pneumonia (talk)	308285	10276	⊕ GA	Top
19	Female genital mutilation (talk)	306147	10204	B	Mid
20	Electronic cigarette (talk)	302388	10079	C	Mid
21	Parkinson's disease (talk)	300408	10013	✶ FA	Top
22	Human (talk)	296498	9883	B	High
23	Attention deficit hyperactivity disorder (talk)	294428	9814	B	Top
24	Down syndrome (talk)	286730	9557	B	Mid
25	Physical exercise (talk)	280712	9357	C	Top
26	Hypertension (talk)	279049	9301	⊕ GA	Top

Month	Hits	Pages
July 2009	142,598,369	18,831
August 2009	147,795,383	18,992
September 2009	155,748,923	19,251
October 2009	148,544,890	19,251
December 2009	132,352,902	19,682
January 2010	133,689,124	19,989
February 2010	140,750,494	20,115
March 2010	162,087,808	20,628
April 2010	157,343,696	21,123
May 2010	151,434,999	21,327
June 2010	231,816,029	21,507
July 2010	115,806,435	21,613
August 2010	167,842,126	21,841
September 2010	182,396,707	21,881
October 2010	195,936,593	22,091
November 2010	186,633,672	22,407
December 2010	178,153,053	22,622
January 2011	196,308,647	22,629
February 2011	168,827,219	23,010
March 2011	196,043,042	23,176
April 2011	176,900,097	23,355
May 2011	186,277,099	23,388
June 2011	167,176,652	23,448
July 2011	162,220,994	23,611
August 2011	157,693,069	23,735
September 2011	157,601,955	24,006
October 2011	203,597,362	24,119
November 2011	173,089,448	24,251
December 2011	165,366,535	24,570
January 2012	205,289,357	24,879
February 2012	206,672,957	25,121





Is Wikipedia Peer Reviewed?



Featured articles / good articles



Must undergo semi formal peer review

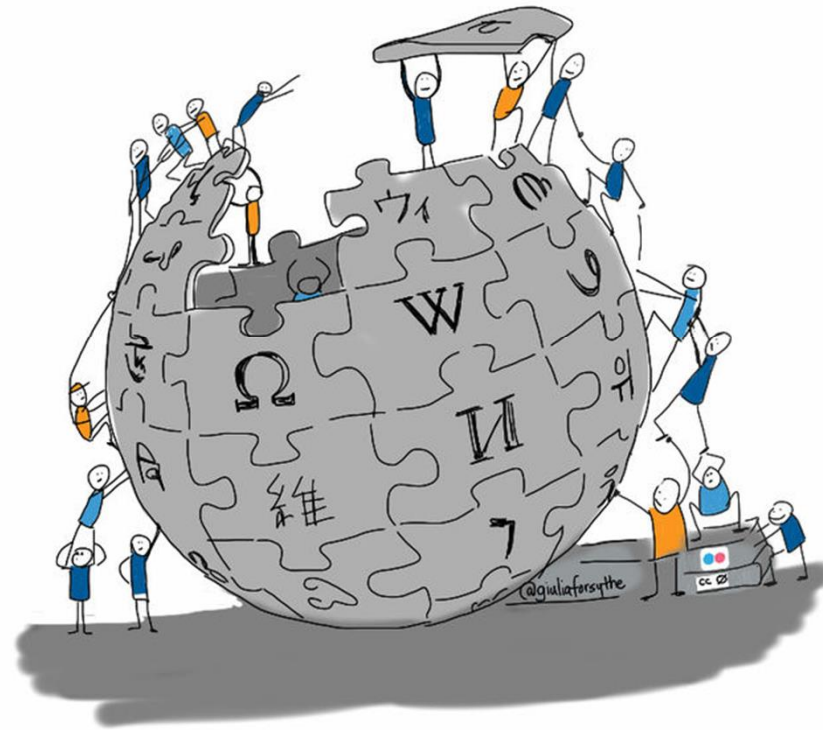
Overall 4,250 FAs and 20,000 GAs

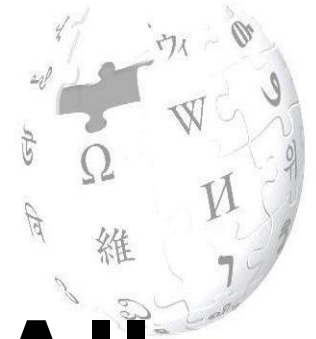
Medicine has 58 FAs and 166 GAs

(<1%)

More formal peer review and author credit in collaboration with journals

Collaborations





Health Information for All in a Language of their Choice



Who are involved?

Translators Without Borders

- An NGO founded in 1993
- Humanitarian translations into other languages

Wikiproject Medicine

- A group of volunteers within Wikipedia who are interested in improving medical content

Wikipedians in many languages



TRANSLATORS
WITHOUT BORDERS



Wiki Project Med
Foundation

What we are working on?



Creating a base set of medical topics that should exist in all languages

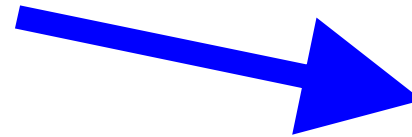
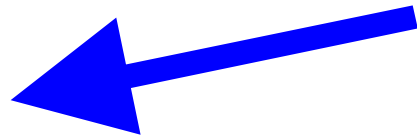
Improving them to a professional standard in English while trying keep language simple

Translating content into as many other languages as possible

Integration the translations with existing Wikipedia content

Get easy and inexpensive access for everyone (including via collaborations with cell phone companies)

Two tracks of article



Full articles
Brought to GA/FA
2500-15000
words
Goal is 100
Suitable for mid to
large languages

Short articles
3 to 4 paragraph overviews
Leads of English articles
Goal is 1,000
Suitable for small to mid languages

Rabies is a viral disease that causes acute inflammation of the brain in humans and other warm-blooded animals.^[1] The time period between contacting the disease and the start of symptoms is usually one to three months; however can be less than one week or more than one year.^[1] The time depending on the distance the virus must travel to reach the central nervous system.^[2] Early symptoms may include: fever and tingling at the site of exposure.^[1] This is then followed by either violent movements, uncontrolled excitement, and fear of water or an inability to move parts of the body and confusion that leads to loss of consciousness.^[1] In both cases once symptoms appears it nearly always results in death.^[1]

The disease is spread to humans from another animal, commonly by a bite or scratch.^[1] Infected saliva that comes into contact with any mucous membrane; is also a risk.^[1] Globally most cases are the result of a dog bite,^[1] with this being the cause in more than 90% of countries in countries were dogs commonly have rabies.^[3] In the Americas and Australia, less than 5% of cases are from dogs, with bats being the most common cause.^[3]^[1] Rodents are very rarely infected.^[3] The rabies virus travels to the brain by following the peripheral nerves. The disease can also be diagnosed after the start of symptoms.^[1]

Animal control and vaccination programs have decreased the risk of rabies from dogs in a number of regions of the world.^[1] Immunizing people before they are exposed is recommended in those who are at high risk including: those who work with bats or spend prolonged periods in areas of the world where the disease is common.^[1] In those who have been exposed to rabies, rabies vaccine and sometimes rabies immunoglobulin are effective in preventing disease if given before the start of symptoms.^[1] Washing bites and scratches for 15 minutes with soap and water also appears to be somewhat effective.^[1] Only a few people have survived a rabies infection and this was with extensive treatment.^[4]

Rabies causes about 26,000 deaths annually worldwide,^[5] more than 95% of which occur in Asia and Africa.^[1] It is present in more than 150 countries and more than 3 billion people live in regions of the world were it occurs.^[1] In most of Europe and Australia rabies is only present in bats.^[6] Many small island nations are entirely rabies free.^[7]

Rabies

Classification and external resources



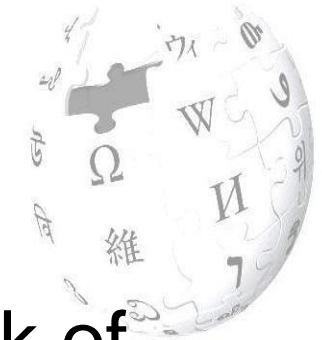
Dog with rabies in the paralytic (post-furious) stage

ICD-10	A82 ↗
DiseasesDB	11148 ↗
MedlinePlus	001334 ↗
eMedicine	med/1374 ↗ eerg/493 ↗ ped/1974 ↗
MeSH	D011818 ↗

References [edit]

- ¹ [^] [a](#) [b](#) [c](#) [d](#) [e](#) [f](#) [g](#) [h](#) [i](#) [j](#) [k](#) [l](#) [m](#) [n](#) [o](#) [p](#) "Rabies Fact Sheet N°99" [↗](#). *World Health Organization*. July 2013. Retrieved 28 February 2014.
- ² [^] Cotran RS, Kumar V, Fausto N (2005). *Robbins and Cotran Pathologic Basis of Disease* (7th ed.). St. Louis: Elsevier/Saunders. p. 1375. ISBN 0-7216-0187-1.
- ³ [^] [a](#) [b](#) [c](#) Tintinalli, Judith E. (2010). *Emergency Medicine: A Comprehensive Study Guide (Emergency Medicine (Tintinalli))*. New York: McGraw-Hill Companies. pp. Chapter 152. ISBN 0-07-148480-9.
- ⁴ [^] Hemachudha, T; Ugolini, G; Wacharapluesadee, S; Sungkarat, W; Shuangshoti, S; Laothamatas, J (2013 May). "Human rabies: neuropathogenesis, diagnosis, and management.". *Lancet neurology* **12** (5): 498–513. PMID 23602163 [↗](#).
- ⁵ [^] Lozano, R (Dec 15, 2012). "Global and regional mortality from 235 causes of death for 20 age groups in 1990 and 2010: a systematic analysis for the Global Burden of Disease Study 2010.". *Lancet* **380** (9859): 2095–128. doi:10.1016/S0140-6736(12)61728-0 [↗](#). PMID 23245604 [↗](#).
- ⁶ [^] "Presence / absence of rabies in 2007" [↗](#). *World Health Organization*. 2007. Retrieved 1 March 2014.
- ⁷ [^] "Rabies-Free Countries and Political Units" [↗](#). *CDC*. Retrieved 1 March 2014.

Why do we need this?



Every day tens of thousands die for lack of low cost health care. Per HIFA 2015, a major factor is poor access to information⁽⁵⁾

- 8 of 10 caregivers do not know the key symptoms of pneumonia
- 4 of 10 mothers believe fluids should be withheld if their child has diarrhea
- More than 60% of Africans said that a friend or family member could have been saved if they had information in their own language

Wikipedia is a viable way to address this knowledge gap.

Why other languages?



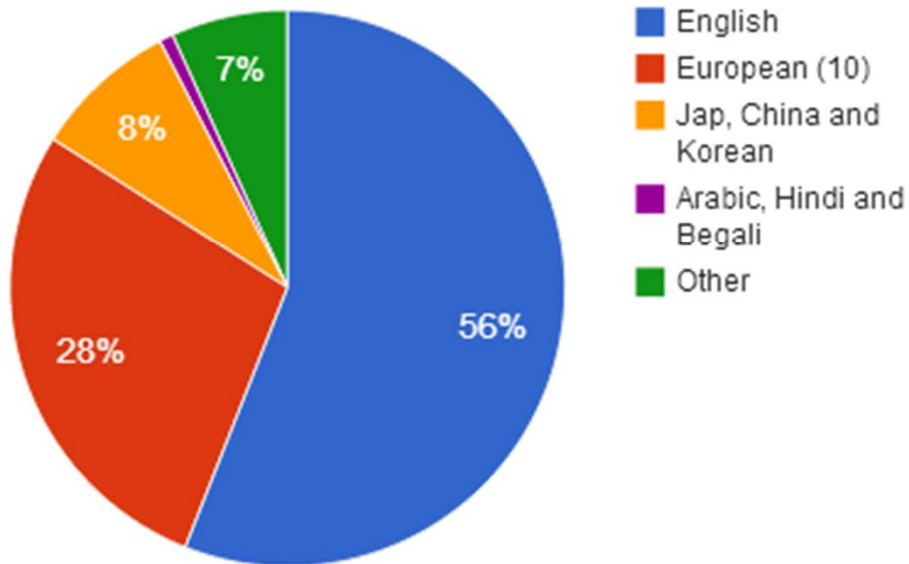
What languages do you publish in?

Issue: Little health care content exists in many languages

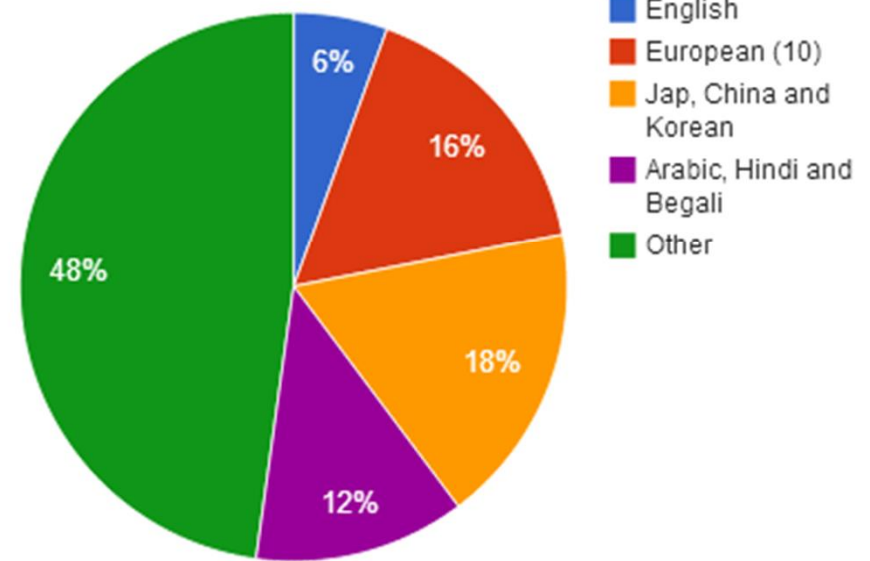
Problem: Partly because majority of medical research/publications in English

Solution: Translate from English into other languages

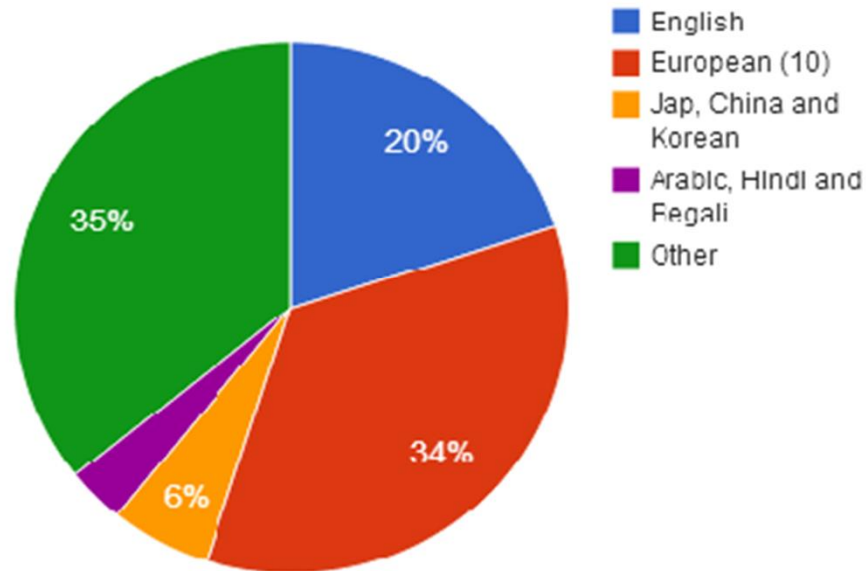
Internet by Language



World By Language



Wikipedia by Language



European: German, French, Italian, Spanish, Dutch, Polish, Russian, Portuguese, Swedish

The Digital Last Mile



Those in the developing world have poor access to computers / the Internet

Problem: Cell phones widespread but data charges are expensive

Solution: Convince cell phone companies to allow Wikipedia access without data charges

The WMF has signed agreements with cellphone companies to give access free of data charges to ~750 million people in Africa, the Middle East, Asia and Eastern Europe.

Cochrane Wikipedia in Residence

Sydney Poore (former nurse, very experienced Wikipedian)

A resource for editing advice / general Wikipedia advice

Developing a weekly mailing list for all new / updated reviews

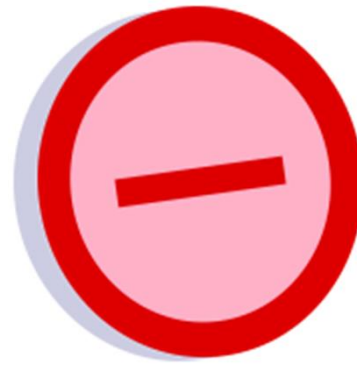
Knowledge translation

wikipedian@cochrane.org

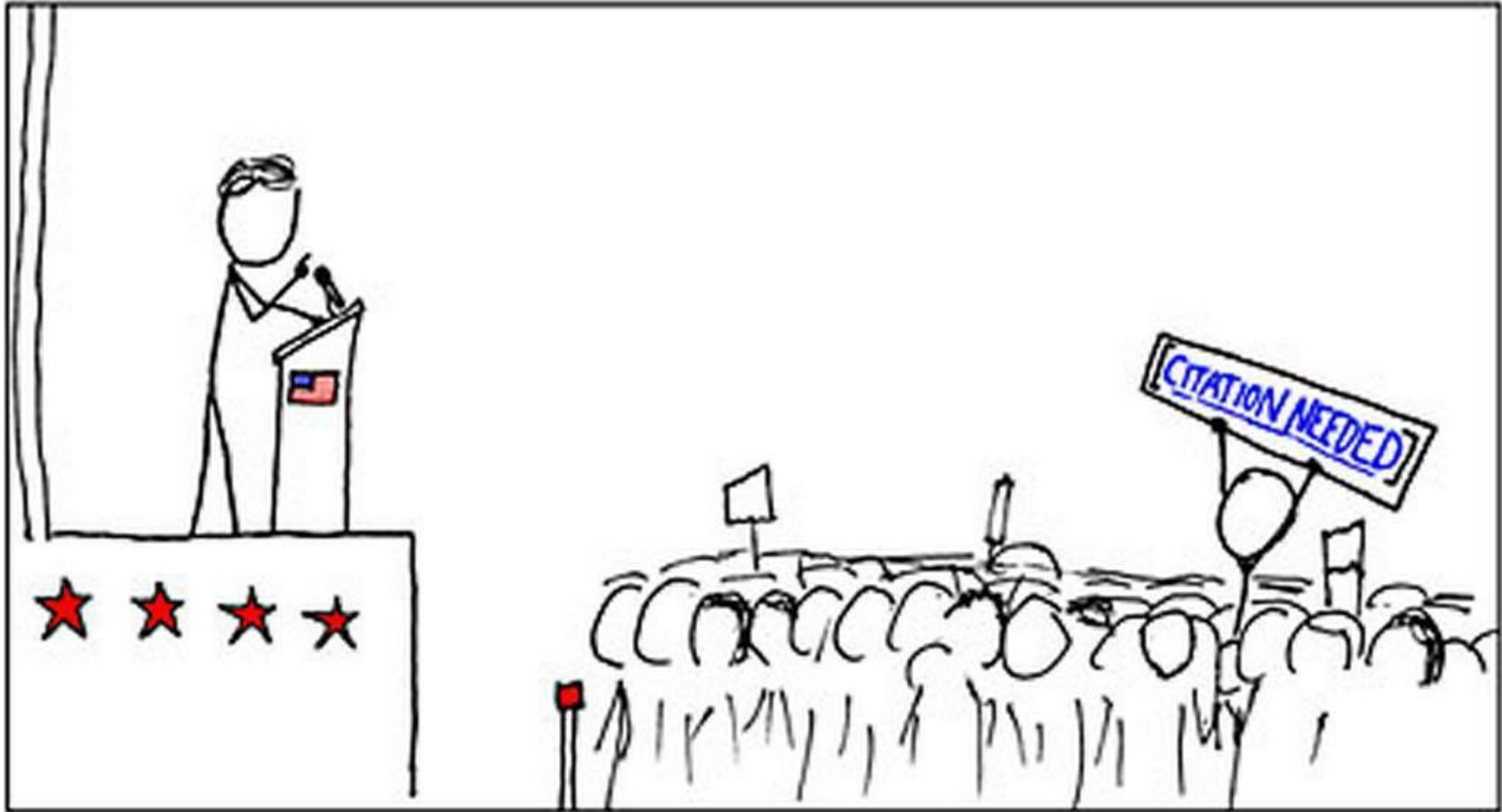




**Can One Just Come and
Write What They Want?**



Reference, Reference, Reference



Causes

[edit]

Main article: Causes of schizophrenia

A combination of genetic and environmental factors play a role in the development of schizophrenia.^{[2][3]} People with a family history of schizophrenia who suffer a transient psychosis have a 20–40% chance of being diagnosed one year later.^[23]

Genetic

[edit]

Estimates of heritability vary because of the difficulty in separating the effects of genetics and the environment.^[24] The greatest risk for developing schizophrenia is having a first-degree relative with the disease (risk is 6.5%); more than 40% of monozygotic twins of those with schizophrenia are also affected.^[3] It is likely that many genes are involved, each of small effect and unknown transmission and expression.^[3] Many possible candidates have been proposed, including specific copy number variations, NOTCH4, and histone protein loci.^[25] A number of genome-wide associations such as zinc finger protein 804A have also been linked.^[26] There appears to be significant overlap in the genetics of schizophrenia and bipolar disorder.^[27]

Assuming a hereditary basis, one question from evolutionary psychology is why genes that increase the likelihood of psychosis evolved, assuming the condition would have been maladaptive from an evolutionary point of view. One idea is that genes are involved in the evolution of language and human nature, but to date such ideas remain little more than hypothetical in nature.^{[28][29]}

Environment

[edit]

Environmental factors associated with the development of schizophrenia include the living environment, drug use and prenatal stressors.^[2] Parenting style seems to have no major effect, although people with supportive parents do better than those with critical or hostile parents.^[3] Living in an urban environment during childhood or as an adult has consistently been found to increase the risk of schizophrenia by a factor of two,^{[2][3]} even after taking into account drug use, ethnic group, and size of social group.^[30] Other factors that play an important role include social isolation and immigration related to social adversity, racial discrimination, family dysfunction, unemployment, and poor housing conditions.^{[3][31]}

Drug use

[edit]

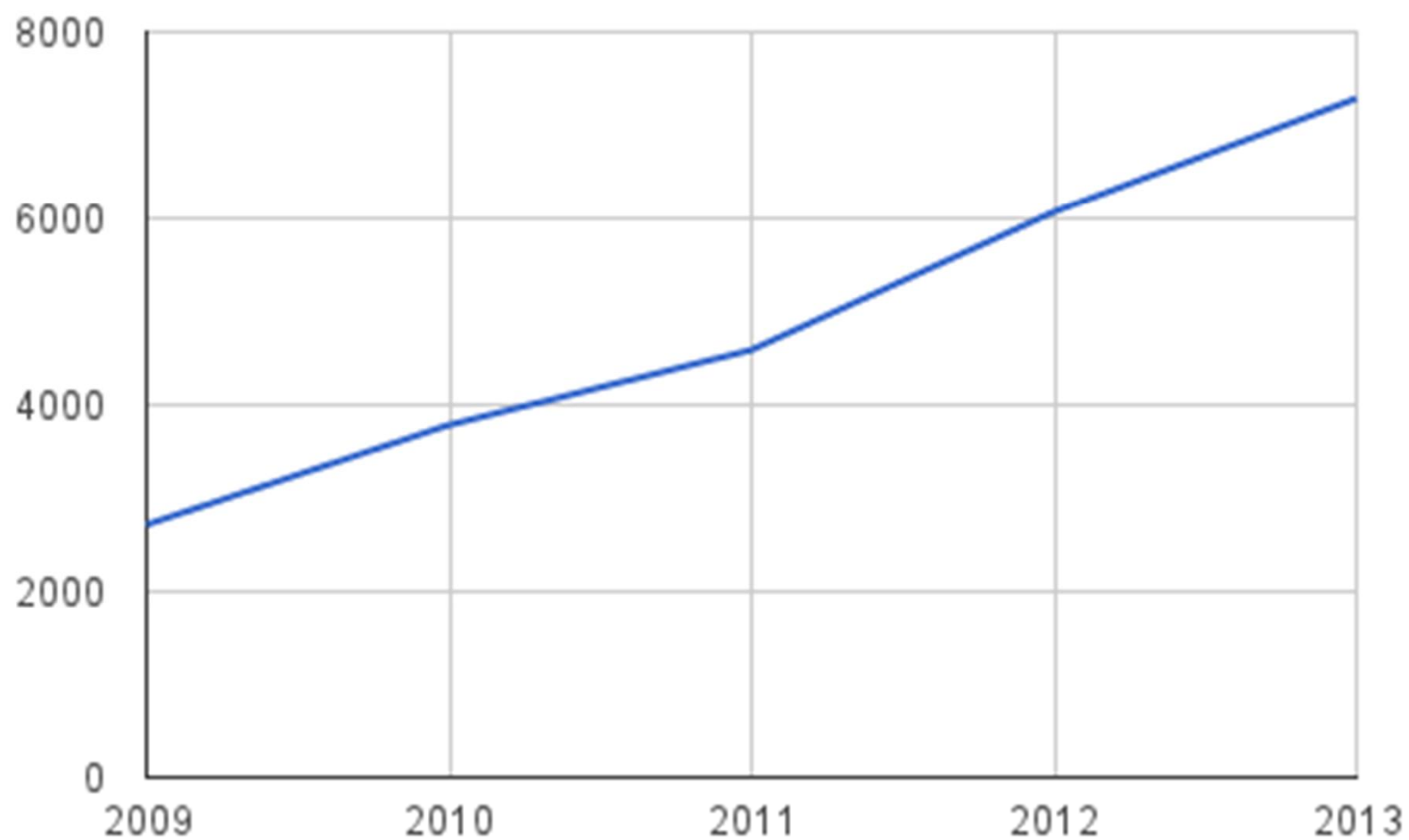
Amphetamine, cocaine, and to a lesser extent alcohol, can result in psychosis that presents very similarly to schizophrenia.^{[3][32]} Although not generally believed to be a cause of the illness, people with schizophrenia use nicotine at much greater rates than the general population.^[33] About half of those with schizophrenia use drugs or alcohol excessively.^[34] Evidence supports a link between earlier onset of psychotic illness and cannabis use; alcohol use is not associated with an earlier onset of psychosis.^[35] Other drugs may be used only as coping mechanisms by individuals who have schizophrenia to deal with depression, anxiety, boredom, and loneliness.^{[34][36]} There is evidence that alcohol abuse via a kindling mechanism can occasionally cause the development of a chronic substance induced psychotic disorder, i.e. schizophrenia.^[37] A small number of people withdrawing from benzodiazepines experience a severe protracted withdrawal syndrome which can resemble schizophrenia and be misdiagnosed as such.^[38] The more often cannabis is abused, the more likely a person is to develop a psychotic illness,^[39] with frequent use being correlated with twice the risk of psychosis and schizophrenia.^[40] Whether cannabis use is a contributory cause of schizophrenia, rather than a behavior that does not actually cause the disease, remains controversial.^{[25][41]}

Developmental factors

[edit]

Factors such as hypoxia and infection, or stress and malnutrition in the mother during fetal development, may result in a slight increase in the risk of schizophrenia later in life.^[2] People diagnosed with schizophrenia are more likely to have been born in winter or spring (at least in the northern hemisphere), which may be a result of increased rates of viral exposures in utero.^[3] This difference is about 5 to 8%.^[42]

Number of times "Cochrane" is referred to on Wikipedia





Who Are We Writing For?



(14)

Manual of style

- Write for the average reader
- Write for a global audience
- Just state the facts
- The general public does not care about confidence intervals+

Conference in 2009 with the goal of focusing national attention on the obesity epidemic.^[136]

Comprehensive approaches are being looked at to address the rising rates of obesity. The Obesity Policy Action (OPA) framework divides measure into 'upstream' policies, 'midstream' policies, 'downstream' policies. 'Upstream' policies look at changing society, 'midstream' policies try to alter individuals' behavior to prevent obesity, and 'downstream' policies try to treat currently afflicted people.^[137]

Management

Main article: Management of obesity

The main treatment for obesity consists of dieting and physical exercise.^[62] Diet programs may produce weight loss over the short term,^[138] but maintaining this weight loss is frequently difficult and often requires making exercise and a lower food energy diet a permanent part of a person's lifestyle.^{[139][140]} Success rates of long-term weight loss maintenance with lifestyle changes are low ranging from 2–20%.^[141]

One medication, orlistat (Xenical), is current widely available and approved for long term use. Weight loss however is modest with an average of 2.9 kg (6.4 lb) at 1 to 4 years and there is little information on how these drugs affect longer-term complications of obesity.^[142] It use is associated with high rates of gastrointestinal side effects^[142] and concerns have been raised about negative effects on the kidneys.^[143]

The most effective treatment for obesity is bariatric surgery. Surgery for severe obesity is associated with long-term weight loss and decreased overall mortality. One study found a weight loss of between 14% and 25% (depending on the type of procedure performed) at 10 years, and a 29% reduction in all cause mortality when compared to standard weight loss measures.^[144]

However, due to its cost and the risk of complications, researchers are searching for other effective yet less invasive treatments.

Epidemiology

Main article: Epidemiology of obesity

Before the 20th century,



Orlistat (Xenical) the most commonly used medication to treat obesity and sibutramine (Meridia) a recently withdrawn medication due to cardiovascular side effects

Article Discussion

Read Edit



TW

Search



Management of obesity

From Wikipedia, the free encyclopedia

The main treatment for obesity consists of dieting and physical exercise.^[1] Diet programs may produce weight loss over the short term,^[2] but maintaining this weight loss is frequently difficult and often requires making exercise and a lower calorie diet a permanent part of a person's lifestyle.^{[3][4]} Success rates of long-term weight loss maintenance with lifestyle changes are low ranging from 2–20%.^[5]

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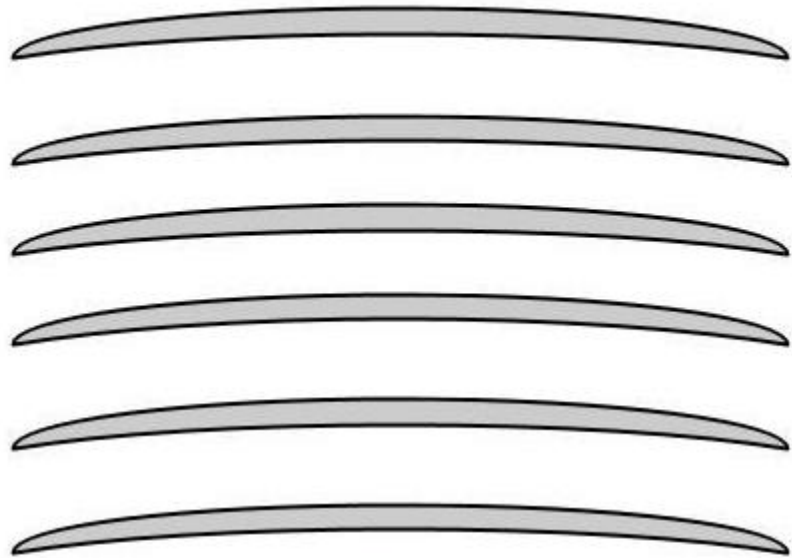
The most effective treatment for obesity is bariatric surgery.^[citation needed] Surgery for severe obesity is associated with long-term weight loss and decreased overall mortality. One study found a weight loss of between 14% and 25% (depending on the type of procedure performed) at 10 years, and a 29% reduction in all cause mortality when compared to standard weight loss measures.^[7] However, due to its cost and the risk of complications, researchers are searching for other effective yet less invasive treatments.

Studies have found significant benefits in mortality in certain populations from weight loss. In a prospective study of obese women with weight related diseases, intentional weight loss of any amount was associated with a 20% reduction in mortality. In obese women without obesity related illnesses a weight loss of greater than 9 kg (20 lb) was associated with a 25% reduction in mortality.^[8] A recent review concluded that certain subgroups such as those with type 2 diabetes and women show long term benefits in all cause mortality, while outcomes for men do not seem to be improved with weight loss.^[9] A subsequent study has found benefits in mortality from intentional weight loss in those who have severe obesity.^[10]

Contents [hide]

- 1 Dieting
- 2 Exercise
- 3 Weight loss programs
- 4 Medication
- 5 Surgery
- 6 Clinical protocols
- 7 Research
- 8 References

Layers of quality assurance



- Bots
- New change patrol
- Watch lists
- Admins
- Blacklisting links
- COI detection



So why get involved?



Wikipedia is what the world is reading
You believe all people deserve access to
high quality health information
An international group of academics and
members of the lay public with whom to
discuss medicine
There is no money, there is no fame

Editing



WIKIPEDIA
encyclopedia

Content
Help
About
Wikipedia
Shop

Wikipedia
Community portal
Changes
Page

Start here
Changes
Help
Pages
Content link
Information
Page

Jmh649 0 Talk Sandbox Preferences Beta Watchlist Contributions Log out

Article Talk

Read Edit

View history



TW

Search



Burn

From Wikipedia, the free encyclopedia

This article is about the injury. For other uses, see [Burn \(disambiguation\)](#).

A **burn** is a type of [injury](#) to [flesh](#) or [skin](#) caused by [heat](#), [electricity](#), [chemicals](#), [friction](#), or [radiation](#).^[1] Burns that affect only the superficial skin are known as superficial or first-degree burns. When damage penetrates into some of the underlying layers, it is a partial-thickness or second-degree burn. In a full-thickness or third-degree burn, the injury extends to all layers of the skin. A fourth-degree burn additionally involves injury to deeper tissues, such as [muscle](#) or [bone](#).

The treatment required depends on the severity of the burn. Superficial burns may be managed with little more than [simple pain relievers](#), while major burns may require prolonged treatment in specialized [burn centers](#). Cooling with tap water may help relieve pain and decrease damage; however, prolonged exposure may result in [low body temperature](#). Partial-thickness burns may require cleaning with soap and water, followed by dressings. It is not clear how to manage blisters, but it is probably reasonable to leave them intact. Full-thickness burns usually require surgical treatments, such as [skin grafting](#). Extensive burns often require large amounts of [intravenous fluids](#) because the subsequent inflammatory response will result in significant [capillary](#) fluid leakage and [edema](#). The most common complications of burns are related to [infection](#).

While large burns can be fatal, modern treatments developed since 1960 have significantly improved the outcomes, especially in children and young adults.^[2] Globally, about 11 million people seek medical treatment, and 300,000 die from burns each year.^[3] In the United States, approximately 4% of those admitted to a [burn center](#) die from their injuries.^[4]

The long-term outcome is primarily related to the size of burn and the age of the person affected.

Burn

Classification and external resources



Second-degree burn of the hand

ICD-10	T20 ↗ –T31 ↗
ICD-9	940 ↗ –949 ↗
DiseasesDB	1791 ↗
MedlinePlus	000030 ↗
eMedicine	article/1278244 ↗
MeSH	D002056 ↗



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Editing Cystic fibrosis

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```

{cite web disease
= Cystic fibrosis
cite news = CFtreatmentvest2.JPG
cite book =
cite journal OB = A breathing treatment for cystic fibrosis, using a mask [[nebulizer]] and a [[Th
= 334
| ICD10 = {{ICD10|E|84||e|70}}
| ICD9 = {{ICD9|277.0}}
| ICDO =
| OMIM = 219700
| MedlinePlus = 000107
| eMedicineSubj = ped
| eMedicineTopic = 535
| MeshID = D003550
| GeneReviewsID =
| GeneReviewsName =
}}

```

'''Cystic fibrosis''' (also known as '''CF''' or '''mucoviscidosis''') is an [[autosomal]] [[recessi
most critically the [[lungs]], and also the [[pancreas]], [[liver]], and [[intestine]]. It is charac
[[chloride]] and [[sodium]] across an [[epithelium]]. leading to thick, viscous secretions.<ref name



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- Featured content
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- About Wikipedia
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- Recent changes
- Contact Wikipedia
- Toolbox
- What links here
- Related changes
- User contributions
- Logs
- E-mail this user
- Upload file

User page

Talk

Read

Edit

View history

Journal citation



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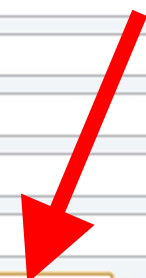
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...tissue). This irregular surface is a perfect habitat for bacteria and it can also trap debris. The heaviest bacterial loads in the oral cavity. The posterior dorsum of the tongue is the site usually the greatest contributor to oral malodor. Hence, this irregular surface usually forms a

Questions?



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Imagine a world in which every single person on the planet is given free access to the sum of all human knowledge. That's what we're doing.+

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