



THE BEGINNER'S GUIDE TO SEARCH ENGINE OPTIMIZATION (SEO)

What is SEO?




Search engine optimization, or SEO, is the process of improving and optimizing the visibility of a website to increase the probability that users will locate the searched content and to ensure accessibility to search engines that drive traffic to the site.

Essentially, it's the process of getting online content – a website, Twitter post, PDF, article, fact sheet, blog, video, etc. – indexed and ranked by online search engines.

What are Search Engines?

Search engines are a primary way users find websites. Search engines make the Internet go; humans are the conductors, but search engines are the locomotives.

There are three major search engines:

-  The #1 search engine. An April 2010 study by comScore found that Google led the U.S. core search market with 64.4% of searches. A 2009 study of click-through traffic by EightFold Logic found Google is responsible for 74.43% of traffic in U.S. <http://www.google.com>
-  The #2 search engine that, while having a much lower traffic count, is still important. It accounted for 17.7% of traffic and 9.73% of click-through traffic, according to 2009 statistics by EightFoldLogic. <http://www.yahoo.com>
-  Formerly known as MSN, it accounts for 11.8% of traffic and 7.86 of click-through traffic according to EightFoldLogic. <http://www.bing.com>

How do Search Engines Work?

The search engine process works like stops on a city subway.

- Content is the unique stops on the subway, with their own unique links.
- Search engines “crawl” the city and find all the stops – or links – that are the best paths available. That linking structure is like a subway track; without it, trains are stuck, unable to move. **(Crawl)**
- Links bind together all of the pages to form a subway network and are critical for the flow of information.

Using those links, search engines use automated robots, also known as “crawlers” or “spiders” to reach interconnected documents. Once they find those pages, they:

1. Collect code from them and store parts of the pages on hard drives. **(Index)**
2. Recall information from billions of pages stored in data centers worldwide, often in a fraction of a second, when users have a query. **(Calculate relevancy)**
3. Search engines return relevant results. **(Produce results)**

Ultimately, the goal is to use online content to build search engine page rank for appropriate search terms.

Why Is SEO Important to Me?

If your organization has a website (and who doesn't now?) SEO has to be a primary concern.

What good is building an amazing website if no one can find it?

Statistics show that the number of Internet users who use search engines is steadily rising. Making sure your online content is properly optimized for SEO is not a want, it is a **MUST!**

Consider:

- The number of Americans who used a search engine on a typical day has risen from 52% of *all Americans* in January 2012 to 73% of *all Americans*, according to a Feb. 2012 survey by *Pew Internet & American Life*.
- On any given day in early 2012, 59% of adults using the Internet used a search engine (59%) – up from 30% of Internet users who were using search engines on a typical day in 2004.
- An April 2010 study by comScore found that Americans conducted 15.5 billion searches. Of that, Google accounted for 10 billion searches; Yahoo was 2.8 billion; and Microsoft was 1.8 billion.

Understanding the Numbers

- Search results reach billions of people worldwide, every day.
- Your goal must be to get search engines to index your online content at the top of search engine results – preferably page #1 of search results.
- Top search engine ranking = trust + traffic. Users believe your product/info is trustworthy and important, and will theoretically flock to your site.



hiv/aids



Search

About 102,000,000 results (0.18 seconds)

Everything

Images

Maps

Videos

News

Shopping

Books

More

Paid search ads

Ads for hiv/aids

Why these ads?

[Get the Facts About HIV | gethivfacts.com](#)

www.gethivfacts.com/

Understand How **HIV** Can be Treated. Learn About an **HIV** Treatment.

[HIV Treatment | HIV-Treatment.com](#)

www.hiv-treatment.com/

Learn More About A Protease Inhibitor Treatment For **HIV**.

[AIDS HIV Information - Nation's Largest AIDS Organization](#)

www.aidshealth.org/

Get the Facts & Latest News

Ads for hiv/aids - Why the

[Facts About HIV & AIDS](#)

www.globalhealth.org/

Info on What's Happening, and What You Can Do to h

[All About HIV/AIDS](#)

www.amfar.org/

Download amfAR's "Facts Protect yourself. Spread th

[AIDS Epidemic Update](#)

www.unaids.org/

New data on the **HIV** epid the latest facts and figures

[AIDS & HIV Research](#)

www.aidsresearch.org/

ARA of America: Continui Advances Against **HIV & A**

[HIV / AIDS Treatment](#)

www.healthywithhiv.com/

Get the facts from an **HIV** specialist about **HIV**.

[HIV/AIDS in Africa](#)

www.developafrica.org/

Support the Fight Against in Africa Through Educati

North Druid Hi

Change location

#1 search

[CDC HIV/AIDS](#)

www.cdc.gov/hiv/

by UF Sheet

CDC provides leadership for **HIV** prevention research and surveillance and the development and testing of effective biomedical interventions to reduce ...

[Factsheets | CDC HIV/AIDS](#)

www.cdc.gov/hiv/aids

Mar 14, 2012 – Prevention of **HIV/AIDS** CDC's Role In HIV Prevention Co-Infection: HIV and Other Diseases Risk Behaviors Transmission. By Population ...

[AIDS - Wikipedia, the free encyclopedia](#)

en.wikipedia.org/wiki/AIDS

Although treatments for **HIV/AIDS** can slow the course of the disease, there is no known cure or HIV vaccine. Antiretroviral treatment reduces both the deaths and ...

[Origin of AIDS - List of HIV-positive people - Timeline of AIDS - Mucous membrane](#)

Any time

Past hour

Past 24 hours

Past 2 days

Past week

Past month

Past year

Custom range...

All results

Sites with images

Why Do I Need SEO?

Though search engine usage has evolved over time, the basics remain the same. Primarily, people use search engines to find information or an answer to a problem.

Here's a basic breakdown of how humans use search engines. A user:

1. Needs an answer, a solution or wants more information
2. Formulates a string of words or phrases, also known as a query, on a search engine
3. Executes the query on a search engine
4. Browses through search engine results for relevant matches
5. Clicks on a result
6. Scans result for a solution or link
7. Returns to search engine results and looks for other links if unable to find a solution
8. Performs a new or refined search to find information

Source: SEOmoz

The Impact on Public Health

- When it comes to public health, SEO is **critical**. Billions of dollars are spent every year researching, compiling, assembling and disseminating information online; we want our information to be found by our target audiences.
- According to proprietary information from Google, **10 searches** occur on Google **every second of each day** in the **U.S. for health conditions and infectious diseases**.

Source: Internal Google Data, based on user queries from 2006-2012

Top Health Condition Searches on Google/YouTube.com

Top infectious disease searches on Google

- ☐ Herpes
- ☐ Norovirus
- ☐ MRSA
- ☐ Chlamydia
- ☐ Genital Warts
- ☐ Gonorrhea
- ☐ Meningitis
- ☐ Flu symptoms
- ☐ Staph infections

Increasingly, YouTube.com is also being positioned as a search engine and ranks #2 in search after Google.

Top health video searches on YouTube:

- ☐ Pregnancy
- ☐ Depression
- ☐ Diabetes
- ☐ Teen Pregnancy
- ☐ Obesity
- ☐ Herpes
- ☐ MRSA
- ☐ Nutrition
- ☐ Lupus
- ☐ Gout

Source: Internal Google data, based on user queries from 2006-2012

Implementing SEO Basics

- **Searchable content** -- Search engines must “see” your content in order to index it and your site must have a linking structure that permits “crawling.” (Limit the use of Flash and your site must have clear site navigation).
- **Keywords** – Keywords are at the heart of the search process. They are what your users and search engines utilize to find your content. When a search is performed, search engines use keywords to retrieve data. If you want your website indexed for the word “HIV,” you must make sure “HIV” is part of your website that can be indexed.
- **Title tags** – The title element of a page should tell the search engines – and humans – what your page is about. It is critical to SEO. Use keywords in the title tags to get more users – and search engine results – to your page.
- **Meta descriptions** – The meta description is a short description of page content. It is particularly important, not only for users to know what your page is about in page results, but also for SEO purposes.



META DESCRIPTION TAG

SEO Dos and Don'ts

- **Focus on content.** Content is KING! Write unique content for humans first, search engines second. Search engines value content that is authoritative and provides information to users. Focus on providing an information-rich site to users, with pages that clearly and accurately describe content.
- **Do keyword research.** Use free tools such as [Google keyword tools](#). Generally, SEO best practices indicate that keywords in online content should be used naturally, as if you were having a conversation.
- **Avoid “black hat” SEO tactics.** Black hat SEO was used by some in the ‘90s to build page rank – putting hundreds of keywords on a website, buying links from link farms and building secret pages for search engines. These tactics do not work – and could get you blacklisted by Google.
- **Educate yourself about SEO.** SEO is constantly changing; what worked in 2011 may not work now. Learn the basics and keep educating yourself. Study webmaster guidelines (available for free) on [Google](#), [Bing](#) and [Yahoo!](#) for tips and tricks to help search engines find, index and rank your site.

SEO How-To

The good thing about SEO is that it requires basic techniques.

Keywords: For optimal results, keywords should be:

- On title tags of a website page
- In the header, (H1) tag of a page, and in subsequent parts throughout the page
- Once in bold
- Once in image alt tags
- Once in the meta description
- Sprinkled naturally throughout your content, but do not force keyword usage
- Appropriately used in text links or image alt tags

Site Structure:

- Take into account redirects - does your site redirect to another URL?
- Review the page title for keywords. Page title and meta tag descriptions are critical. (They should be unique on each page to rank for different terms.) **Example: Sexual Health on NCHHSTP.gov: <meta name="description" content="<"Sexual Health, Advancing sexual health, NCHHSTP" /> <**
- Review URLs for SEO-friendliness – path names, file names, length, how far away from the root are they, hyphenation?
- Include a site map page. Spiders cannot index pages that cannot be crawled.

Content:

- Create good, usable, SEO-friendly content.

Source: MediaCollege.com

Conclusions

- SEO is a constantly changing field. You must keep up-to-date on SEO trends, practices and techniques.
- Content matters – particularly new, fresh content. The more new content you can create on your site, the better your SEO results should be.
- Think about SEO strategy at the beginning of your online marketing cycle – not the end. SEO requires a long-term commitment and outlook; it is not a “one-time and you are done” kind of activity.
- Proactive SEO planning and execution produces results!

Questions?

Tenisha Mercer, Web Content Specialist, Danya Intl.
for the National Center for HIV/AIDS, Viral Hepatitis,
STD, and TB Prevention (NCHHSTP)
Health Communication Science Office (HCSO)/Office
of the Director (OD)/Office of Infectious Diseases
Centers for Disease Control and Prevention

Email: wdx4@cdc.gov