Consulting 'Dr. Google': Study finds much Internet-based sports medicine information is incorrect or incomplete

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The quality of online information about the most common sports medicine diagnoses varies widely, according to a study published in the July 2010 issue of the Journal of Bone and Joint Surgery (JBJS). Therefore, patients who use the Internet to help make medical decisions need to know that the web may not be giving the whole picture.

"The reason that we decided to undertake this study is that patients are presenting to their physicians office with increasing frequency armed with printouts of information obtained from the Internet," said Madhav A. Karunakar, MD, an orthopaedic surgeon at Carolinas Medical Center in Charlotte, N.C., and one of the study's authors. "Physicians and patients should be aware that the quality of information available online varies greatly. Additionally, physicians should be prepared to discuss this information with their patients in order to ensure that it is not misinterpreted."

Nearly three-quarters of the U.S. population has access to the Internet, and more than half of those people go online for health-related information at least once a month. However, quality controls over the health information found on the web have not grown at the same rate that Internet use has.

The study's authors chose ten of the most common sports medicine diagnoses and reviewed the online information available on them. The diagnoses reviewed were:

- Anterior cruciate ligament (ACL) tear
- Medial collateral ligament (MCL) tear
- Posterior cruciate ligament (PCL) tear
- Rotator cuff tear
- Meniscal tear
- Labral tear (shoulder ligament injury)
- Tennis elbow
- Acromioclavicular joint separation (shoulder separation)
- Patellofemoral syndrome (knee pain)
- Osteochondral defect (joint defect)

Using the two most frequently used search engines (Google and Yahoo), the authors reviewed the top ten search results for each diagnosis, looking for completeness, correctness, and clarity of the information. They also recorded the source of the information—whether the site's owner was a nonprofit organization, news source, academic institution, individual, physician, or commercial enterprise.

In terms of content, Dr. Karunakar says, nonprofit sites scored the highest, then academic sites (including medical journal sites), and then certain non-sales-oriented commercial sites (such as WebMD and eMedicine). The least accurate information sources were newspaper articles and personal web sites. Commercial sites with a financial interest in the diagnosis, such as those sponsored by companies selling a drug or treatment device, were very common but frequently incomplete.

"About 20 percent of the sites that turned up in the top ten results were sponsored sites," Dr. Karunakar says. "These site owners are motivated to promote their product, so the information found
there may be biased. We also found that these sites rarely mentioned the risks or complications associated with treatment as they are trying to represent their product in the best possible light."

The study's authors suggest that patients be counseled to avoid commercial Web sites, with the exception of the most reputable sites, such as WebMD and eMedicine, and look for the seal of compliance for transparency and accountability from the Health On the Net Foundation (HON). Orthopaedic residents and any health-care professional who may use the Internet as a reference tool during their education are similarly cautioned. The AAOS recommends Your Orthopaedic Connection, or orthoinfo.org, as a resource for patient education information, or if specific to sports medicine, the American Orthopaedic Society for Sports Medicine (AOSSM).

"Despite its shortcomings, the Internet is the future of how patients will obtain information to make their healthcare decisions," says Dr. Karunakar. "Therefore, patients and physicians need to make sure they are getting that information from reputable, accurate sources."

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