PubMed

University of South Carolina School of Medicine Library

This module will demonstrate effective ways of searching the journal literature using PubMed.
After consulting textbooks to get background/overview information, you can search journal articles for specific information. The journal literature is useful in looking for current information on treatment issues, since the majority of the articles that are published focus on therapy topics.

MEDLINE, a database from the National Library of Medicine, is a key database for identifying biomedical journal articles. It is available through two different interfaces, Ovid and PubMed. Since Ovid and PubMed work differently, it can be helpful to run your search in each because you may retrieve some different articles.

Let’s take a look at PubMed first.
Although **PubMed** is freely available, you need to use the library’s customized link to PubMed to access the full text of the journals that the library purchases.
In our first search, we’ll take a look at using the Advanced page to combine searches.

Search tip: Capitalize Boolean operators (AND, OR, NOT) when searching PubMed.

Let’s search for recommendations for physical activity for individuals with Marfan Syndrome.
First, let's search for articles about physical activity. When you are searching PubMed, use synonyms for your search terms. Think about any words an author may use for what you are looking for.

Type: sports OR activity OR exercise in the search box and click Search.

Now type: Marfan Syndrome in the search box and click Search.
PubMed Advanced Search Builder

The PubMed Advanced Search Builder page appears. You could start your search on this page by using the builder tool to combine search terms.

You are here: NCI > Literature > PubMed
PubMed Module

PubMed Advanced Search Builder

marfan syndrome

Search builder:

All Fields ▼ marfan syndrome
AND ▼ All Fields ▼ sports OR activity OR exercise

Search:

Next, select the Add link next to the sports search.

You have the option of choosing AND, OR, or NOT to combine your searches. We will leave it at the default setting, AND.

You are here: NCBI > Literature > PubMed
After scrolling down the page, the "Search details" section appears on the right. The "Search details" section lets you know what's going on in the background during a search of PubMed. Select the See more link below the "Search details" box to view all of the search terms.

Search Details

Query Translation:

```
[marsfan syndrome][MeSH Terms] OR ("marfan"[All Fields] AND "syndrome"[All Fields]) OR "marfan syndrome"[All Fields]) AND (("sports"[MeSH Terms] OR "sports"[All Fields]) OR ("motor activity"[MeSH Terms] OR ("motor"[All Fields] AND "activity" [All Fields]) OR "motor activity"[All Fields]) OR "exercise"[MeSH Terms] OR ("exercise"[All Fields]))
```

Result:

216

Translations:

- marfan syndrome: "marfan syndrome"[All Fields]
- sports: "sports"[MeSH Terms] OR "sports"[All Fields]
- activity: "motor activity"[MeSH Terms] OR ("motor"[All Fields] AND "activity"[All Fields]) OR "motor activity"[All Fields] OR "activity"[All Fields]
- exercise: "exercise"[MeSH Terms] OR "exercise"[All Fields]

Database:

PubMed
PubMed automatically mapped your search terms to medical subject headings (MeSH). When you check the search details, you want to see your search terms mapping to a MeSH Term. MeSH terms provide a consistent way to retrieve information that may use different terminology to describe the same concepts.

Our search term Marfan syndrome was mapped to “marfan syndrome” [MeSH Terms]. PubMed also searched for marfan syndrome to appear as a phrase or two separate words in the citation or abstract. PubMed took our search term marfan syndrome and ran three different searches using this one concept.
Our search term sports was mapped to "sports" [MeSH Terms].

Our search term activity was mapped to "motor activity" [MeSH Terms].

Our search term exercise was mapped to "exercise" [MeSH Terms].

Sometimes PubMed will map your search terms to concepts that you do not want.

Motor activity [MeSH] is too broad of a search term. Activity as a keyword appearing anywhere in the citation and abstract is also too broad.

Both search terms are probably the source of our irrelevant results, and we should remove them from this search.
PubMed Module

USC School of Medicine Library

Type sports OR exercise in the search box and click Search.

Select the Advanced link above, so we can combine this search with our original Marfan Syndrome search.
Select the Add link next to the "sports OR exercise" search.

Next, select the Add link next to the "marfan syndrome" search.
By removing "activity" from our search, we narrowed our search from 216 to 108 results.

It is important to view the "Search details" to check for two things:

- PubMed mapped your search terms to MeSH headings.
- PubMed did not add any unwanted terms/concepts to your search.
The fifth result looks promising. The information we are looking for may have been published as a practice guideline.

Practice guidelines can be useful resources because they summarize or draw conclusions based on original research.

However, when reading a practice guideline, it is necessary to look for any potential conflicts of interest. What methods did the authors use to analyze the evidence?

[Continue]
We narrowed our results to two relevant articles.

   - PMID: 24502025
   - Similar articles

2. Recommendations for physical activity and recreational sports participation for young patients with genetic cardiovascular diseases.
   - PMID: 15154217
   - Free Article
   - Similar articles
Recomendations for physical activity and recreational sports participation for young patients with genetic cardiovascular diseases.

Maron BJ, Catanzarite JR, Ackerman MJ, Bayes-Genis A, Cortiella D, Crosson J, Dalla Pozza L, Devereux RB, Dima T, El Khoury G, Genazzani D, Grossman W, Hindricks G, Kowalski M, Levine RA, Ong KC, Perlingeiro RC, Pfeffer MA, Rodeheffer RJ, Ryan T, the American Heart Association Consensus Panel on Exercise, Cardiovascular Risk Reduction, and Prevention; the American College of Cardiology; and the European Society of Cardiology; and the American Heart Association; and the American College of Cardiology; and the European Society of Cardiology.

Cardiomyopathy and Cardiovascular Disease in the Young

Abstract

A group of relatively uncommon but important genetic cardiovascular diseases (GCDs) are associated with increased risk for sudden cardiac death during exercise, including hypertrophic cardiomyopathy, long-QT syndrome, Marfan syndrome, and arrhythmogenic right ventricular cardiomyopathy. These conditions, characterized by diverse phenotypic expression and genetic substrates, account for a substantial proportion of unexpected and usually arrhythmia-based fatal events during adolescence and young adulthood. Guidelines are in place governing eligibility and disqualification criteria for competitive athletes with these GCDs (e.g., Bethesda Conference No. 26 and its update as Bethesda Conference No. 36 in 2005). However, similar systematic recommendations for the much larger population of patients with GCDs who are not trained athletes, but nevertheless wish to participate in any of a variety of recreational physical activities and sports, have not been available. The practicing clinician is frequently confronted with the dilemma of designing noncompetitive exercise programs for athletes with GCD after disqualification from competition, as well as for those patients with such conditions who do not aspire to organized sports.

Indeed, many asymptomatic (or mildly symptomatic) patients with GCDs desire a physically active lifestyle with participation in recreational and leisure-time activities to take advantage of the many documented benefits of exercise. However, to date, no reference document has been available for ascertaining which types of physical activity could be regarded as either prudent or inadvisable in those subgroups of patients. Therefore, given this clear and present need, this American Heart Association consensus document was constituted, based largely on the experience and insights of the expert panel, to offer recommendations governing recreational exercise for patients with known GCDs.


Recomendations for physical activity and recreational sports participation for young patients with genetic cardiovascular diseases.

Maron BJ, Catanzarite JR, Ackerman MJ, Bayes-Genis A, Cortiella D, Crosson J, Dalla Pozza L, Devereux RB, Dima T, El Khoury G, Genazzani D, Grossman W, Hindricks G, Kowalski M, Levine RA, Ong KC, Perlingeiro RC, Pfeffer MA, Rodeheffer RJ, Ryan T, the American Heart Association Consensus Panel on Exercise, Cardiovascular Risk Reduction, and Prevention; the American College of Cardiology; and the European Society of Cardiology; and the American Heart Association; and the American College of Cardiology; and the European Society of Cardiology.

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The first 5 citations are listed.

Select the See all link to view the full list of related citations.
This PubMed feature uses a word-weighted algorithm to compare words from the title, abstract, and medical subject headings (MeSH) headings to calculate a set of PubMed citations that are closely related to the selected article.

Our original citation is listed first, followed by the most similar articles.

Recommendations for physical activity and recreational
1. Cardiac rehabilitation, and prevention; Councils on Clinical Cardiology and Cardiovascular Disease in the Young.
PMID: 15186429 Free Article
Similar articles

Recommendations for participation in competitive sport and leisure-time physical activity in
2. individuals with cardiomyopathies, myocardium and pericardium.
PMID: 1743118 Free Article
Similar articles

Arrhythmias and sudden cardiac death in elite athletes. American College of Cardiology, 16th
PMID: 3303835 Free Article

Recommendations for participation in leisure-time physical activity and competitive sports in patients
4. with arrhythmias and potentially arrhythmogenic conditions Part I: Supraventricular arrhythmias and
pancardiomyopathies.
the European Association for Cardiovascular Prevention and Rehabilitation.
PMID: 16874135
Similar articles

Recommendations and considerations related to preparticipation screening for cardiovascular
5. abnormalities in competitive athletes. 2007 update: a scientific statement from the American Heart
Association Council on Nutrition, Physical Activity, and Metabolism; endorsed by the American College of Cardiology Foundation.
Association Council on Nutrition, Physical Activity, and Metabolism; Council on Cardiac Rehabilitation; Council on Cardiovascular Disease in the Young; and Council on Cardiovascular
PMID: 17628185
Similar articles

Here are some other citations we retrieved.

Recommendations for the management of individuals with acquired valvular heart disease who are
6. involved in leisure-time physical activities or competitive sports.
PMID: 10861375 Free Article
Similar articles

Recommendations for physical activity and recreational
diseases.


Cardiac Rehabilitation, and Prevention; Councils on Clinical Cardiology and Cardiovascular Disease in the Young.
PMID: 15186429 Free Article
Similar articles

Recommendations for participation in competitive sport and leisure-time physical activity in
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PMID: 1743118 Free Article
Similar articles

Arrhythmias and sudden cardiac death in elite athletes. American College of Cardiology, 16th
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PMID: 3303835 Free Article

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Recommendations for the management of individuals with acquired valvular heart disease who are
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PMID: 10861375 Free Article
Similar articles
PubMed has some built in search filters you can use to help focus your search results.

Under PubMed Tools, select Clinical Queries.

There are three different types of search filters available on this page:

Clinical Study Categories
Systematic Reviews
Medical Genetics
PubMed Clinical Queries

Results of searches on this page are limited to specific clinical research areas. For comprehensive searches, use PubMed directly.

Please enter search term(s)

Search

Clinical Study Categories

This column displays citations filtered to a specific clinical study category and scope. These search filters were developed by Haynes RB et al. See more filter information.

Systematic Reviews

This column displays citations for systematic reviews, meta-analyses, reviews of clinical trials, evidence-based medicine, consensus development conferences, and guidelines. See more filter information.

Medical Genetics

This column displays citations pertaining to genetic studies. See more filter information.

Literature

Proteins

Sequence Analysis

Taxonomy

Variant

Gene

Protein

PubChem

Influenza Virus

Primer-BLAST

Sequence Read Archive

You are here: NCB! > Literature > PubMed

GETTING STARTED

NCE Education

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NCBI Handbook

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RESOURCES

Chemical

Data & Tools

DNA & RNA

Demos & Exams

Genes & Genomes

Genomics & Maps

Homology

Literature

Proteins

Sequence Analysis

Taxonomy

Varient

Genome

SNP

Mouse Genome

Influenza Virus

Primer-BLAST

Sequence Read Archive

This tutorial will demonstrate how to use the Clinical Study Categories and the Systematic Reviews limit.

Continue

The Clinical Study Categories are specialized search queries that have a built-in search filter based on the research of Dr. R. Brian Haynes at McMaster University in Canada.

These search filters limit your results to articles reporting research conducted with specific methodologies, including those that report applied clinical research.

Continue
PubMed Clinical Queries

Results of searches on this page are limited to specific clinical research areas. For comprehensive searches, use PubMed directly.

Please enter search terms:

Clinical Study Categories

This column displays citations filtered by specific clinical study category and scope. These search filters were developed by Hayes RB et al. See more filter information.

Select the filter information link on the left to see what PubMed adds behind the scenes to your search terms.

You are here: NCBI > Literature > PubMed

GEOETARTED

NCBI Education
NCBI Help Manual
NCBI Handbook
Training & Tutorials
Submit Data

RESOURCES

Chemicals & Biosseays
DNA & RHA
Domains & Structures
Genetics & Medicine
Homology
Literature
Proteins
Sequence Analysis
Taxonomy

POPULAR

PubMed
Bookshelf
PubMed Central
GenBank

FEATURED

Genetic Testing Registry
PubMed Health
PubMed Central
BLAST
Reference Sequences
NCBI

Medical Genetics Filters

Systematic Reviews Search Filter

Clinical Queries using Research Methodology Filters

Category | Optimized for | Sensitive/Specific | PubMed Equivalent
---|---|---|---
therapy | | | (clinical trial) AND (randomized) OR (clinical trial:randomized) OR (clinical trial:randomized) OR (clinical trial:randomized) OR (clinical trial:randomized) OR (clinical trial:randomized) OR (clinical trial:randomized) OR (clinical trial:randomized) OR (clinical trial:randomized) OR (clinical trial:randomized) OR (clinical trial:randomized) OR (clinical trial:randomized) OR (clinical trial:randomized) OR (clinical trial:randomized) OR (clinical trial:randomized) OR (clinical trial:randomized) OR (clinical trial:randomized) OR (clinical trial:randomized) OR (clinical trial:randomized) OR (clinical trial:randomized)

diagnosis | | | (clinical trial) AND (randomized) OR (clinical trial:randomized) OR (clinical trial:randomized) OR (clinical trial:randomized) OR (clinical trial:randomized) OR (clinical trial:randomized) OR (clinical trial:randomized) OR (clinical trial:randomized) OR (clinical trial:randomized) OR (clinical trial:randomized) OR (clinical trial:randomized) OR (clinical trial:randomized) OR (clinical trial:randomized) OR (clinical trial:randomized) OR (clinical trial:randomized) OR (clinical trial:randomized) OR (clinical trial:randomized) OR (clinical trial:randomized) OR (clinical trial:randomized)

There are five filter categories available: therapy, diagnosis, etiology, prognosis, and clinical prediction guides.

Continue
### Medical Genetics Filters

#### Systematic Reviews Search Filter

<table>
<thead>
<tr>
<th>Clinical Queries using Research Methodology Filters</th>
<th>PubMed Equivalent</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Category</strong></td>
<td><strong>Sensitive/Specific</strong></td>
</tr>
</tbody>
</table>
| Therapy                                           | (Clinical)[Title/Abstract] AND [[Title/Abstract] OR clinical trial][MeSH Terms] OR clinical trial[Publication Type] OR randomized[Title/Abstract] OR random allocation[MeSH Terms] OR therapeutic use[MeSH Subheading] |}

For example, the therapy category adds search terms such as clinical trial, random allocation, and therapeutic use to your search terms.

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### Medical Genetics Filters

#### Systematic Reviews Search Filter

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Plus, there are 2 scope options available, sensitive/broad or specific/narrow, which you can use to increase or decrease the number of results. Sensitive/Broad retrieves more relevant articles and some less relevant articles. Specific/Narrow retrieves mostly relevant articles, possibly omitting a few relevant articles.
PubMed Clinical Queries

Results of searches on this page are limited to specific clinical research areas. For comprehensive searches, use PubMed directly.

Search tip: Use parentheses to help organize your search terms.

Type (aortic OR aneurysm) AND marfan syndrome in the search box and click Search.

PubMed Clinical Queries

Results of searches on this page are limited to specific clinical research areas. For comprehensive searches, use PubMed directly.

Search: (aortic OR aneurysm) AND marfan syndrome

Clinical Study Categories

Category: Therapy
Scope: Effect

Results: 5 of 469

- Efficacy of losartan vs. atenolol for the prevention of aortic dilation in Marfan syndrome: a randomized clinical trial
- Aneurysm size, aneurysm neck, and Marfan syndrome type A aortic dissection during pregnancy
- Aortic dissection: aetiology, diagnosis and management
- Effect of personalized external aortic root support on aortic root motion and dissection in Marfan syndrome patients
- Surgical reconstruction of aortic root in Marfan syndrome patients: a systematic review

By searching for aortic OR aneurysm, we retrieved articles discussing aortic dilation, aortic dissection, aortic root, etc.
PubMed Clinical Queries

Results of searches on this page are limited to specific clinical research areas. For comprehensive searches, use PubMed directly.

Search: aortic OR aneurysm AND marfan syndrome

Clinical Study Categories
Category: Therapy
Scope: Blood

Results: 5 of 469

Efficacy of losartan vs. atenolol for the prevention of aortic dissection in Marfan syndrome: a randomized trial.

(Aneurysm Management of a Patient Complicated with Marfan Syndrome and Suffering from Stanford Type A Aortic Dissection during Pregnancy.)
Socci S, Meineri R, Braccesi R, De Mano A, Serio G.
World J Surg. 2015 Apr; 64;412-6.

Effect of personalized external aortic root support on aortic root motion and distension in Marfan syndrome patients.
Tapi A, Nyka N, Abboudi A, Brignone AS, Peppi J, Treasure T, Rohleder R.

The first five results are displayed for all three search filters.

Am Heart J. 2015 May; 169;505-12; J Hep 2015 Feb 12;

Bacterial infection of aortic aneurysm in Marfan's syndrome: a systematic review.
J Heart Valve Dis. 2014 Jul; 23;473-83.

Results: 5 of 621

Diagnostic Accuracy of Ankle-Brachial Index Ratio in Chronic Aortoiliac Occlusive Disease and Loeys-Dietz Syndrome.
Curr Atheroscler Rep. 2015 Oct 20;

Effects of cardiovascular risk factors on physical activity level in children.
Monskari T, Monskari H.
J Hum Genet. 2015 Oct 8; 60;1701-4.

Chest Pain in Children With Aortitis.
Am J Physiol Heart Circ Physiol. 2015 Sep 14;

This column displays citations for systematic reviews, meta-analyses, reviews of clinical trials, evidence-based medicine, consensus development conferences, and guidelines. See filter information or additional related sources.
Search results
Items: 1 to 20 of 469

1. Efficacy of losartan vs. atenolol for the prevention of aortic dilation in Marfan syndrome: a randomized clinical trial.
   PMID: 26516245
   Similar articles

2. Anesthetic Management from Stanford Type A Aortic Dissection.
   PMID: 26416107
   Similar articles

3. Effect of personalized on
   Marfan syndrome patients.
   PMID: 26134372
   Similar articles

4. Comparison of Long-Term Risk of Thoracic Aortic Aneurysm and Dissection in Patients With Bicuspid Aortic Valve and Marfan Syndrome After Aortic Valve Replacement.
   Patel HJ.
   PMID: 26046729
Search results
Items: 1 to 20 of 37

1. Aortic dilation, genetic testing, and associated diagnoses.
   PMID: 26133938
   Similar articles

2. Design and role of angiotensin-converting enzyme-2 in patient data: A report from the Marfan Foundation.
   PMID: 25647243
   Similar articles

3. Surgical reconstruction of aortic root in Marfan syndrome: patients, a systematic review.
   PMID: 25663974
   Similar articles

   PMID: 24349912
   Similar articles

   Thakur V, Rankin NN, Hartling L, Mackie AS.
   PMID: 24205342
   Similar articles

PMID: 21979128
Similar articles

   PMID: 21893107
   Free PMC Article
   Similar articles

Another approach to finding related articles (instead of using the Similar articles link) is to view the MeSH terms (Medical Subject Headings) assigned to the article.
A systematic review of the pharmacological management of aortic root dilation in Marfan syndrome.

Thakur V, Rankin KN, Hartling L, Mackie AS


PMID: 2303542

Click on the title of the 16th citation, A systematic review of the pharmacological management... to view the abstract and related information.

Advanced in aortic root surgery.

Rankin B, Garcia-Marcia L.J.


PMID: 21979125

Similar articles

Genome-wide association study identifies a susceptibility locus for thoracic aortic aneurysms and aortic dissections spanning FEN1 at 15q21.1


Nat Genet. 2011 Sep 1;43(9):998-1000. doi: 10.1038/ng.934.

PMID: 21909107

Similar articles

Click to continue to scroll past the abstract.

A systematic review of the pharmacological management of aortic root dilation in Marfan syndrome.

Thakur V, Rankin KN, Hartling L, Mackie AS

Abstract

BACKGROUND: Marfan syndrome causes aortic dilation leading to aortic dissection and increased risk of late death due to aortic dissection. Both beta-blockers and angiotensin-converting enzyme inhibitors (ACEi) are considered the mainstay of medical therapy in this disease.

METHODS: We searched four databases—Medline, EMBASE, PubMed, and Trials—to identify all relevant studies. We included all randomized controlled trials comparing betablockers and ACEi. We included studies of any duration and all study designs. The primary outcomes were aortic dissection, need for surgical repair, change in aortic dilation, and adverse events. Two reviewers independently assessed the quality of studies.

RESULTS: A total of 18 studies were included: 12 completed and six in progress. Of the completed studies, three before-and-after treatment studies, one prospective cohort, three retrospective cohorts, and two randomised controlled trials examined beta-blockers alone or with ACEi. The remaining five randomised trials examined ACEi alone or with beta-blockers. Two randomised trials examined beta-blockers alone or with ACEi. Studies in progress are all randomised trials. Mortality was not impacted by drug therapy, although studies were underpowered with respect to this outcome. All drug classes were associated with a decrease in the rate of aortic dissection (ACEi-converting enzyme inhibitors or beta-blockers) but none had an impact on other secondary outcomes.

CONCLUSIONS: On the basis of existing evidence, beta-blockers, angiotensin-converting enzyme inhibitors, and angiotensin II receptor blockers slow the progression of aortic dilation in Marfan syndrome. Angiotensin-converting enzyme inhibitors and angiotensin II receptor blockers may have more effect than beta-blockers; however, more methodologically rigorous studies currently in progress are needed to evaluate the impact of drug therapy on clinical outcomes.

PMID: 2303542 (Published - indexed for MEDLINE)
A systematic review of the pharmacological management of aortic root dilation in Marfan syndrome.

Thomas N1, Rankin KN1, Marhan L1, Moxley AS2.

Abstract

BACKGROUND: Marfan syndrome causes aortic dilation leading to dissection and death. This systematic review examined the use of beta-blockers, angiotensin-converting enzyme inhibitors, and angiotensin II receptor blockers in the management of aortic dilation in this disease.

METHODS: We searched four databases—Medline, EMBASE, Web of Science, and The Cochrane Central Register of Controlled Trials—two conference proceedings, references of retrieved articles, and a web-based trial registry. The primary outcome was mortality. The secondary outcomes were aortic dissection, need for elective surgical repair, change in aortic dilation, and adverse events. Two reviewers selected studies, abstracted data, and assessed study quality.

RESULTS: A total of 19 studies were included, of which six were nonrandomised and one nonrandomised trial examined angiotensin II receptor blockers. Studies in progress are all in respect to this outcome. All drug classes except for angiotensin II receptor blockers showed a reduction in dissection/rupture risk. Converting enzyme inhibitors or angiotensin II receptor blockers led to a reduction in dissection/rupture risk.

CONCLUSIONS: On the basis of existing evidence, beta-blockers may be the preferred initial therapy to reduce the progression of aortic root dilation. However, more rigorously designed trials are needed to investigate the role of converting enzyme inhibitors or angiotensin II receptor blockers.
During this module, we used the Advanced Search Builder to combine searches, viewed the MeSH terms for an article, used the Similar articles tool, and applied the Clinical Queries filters to a search.