PubMed

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.

This module only covers PubMed. If you would like to learn more about searching Ovid, there is an optional tutorial available, Ovid MEDLINE Search Features.
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.
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 Module

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.

Search: marfan syndrome
Search: sports OR activity OR exercise

Results by year

Related searches:
marfan syndrome
marfan syndrome aortic
marfan syndrome pregnancy
marfan syndrome genetics
PubMed Module

PubMed Advanced Search Builder

Use the builder below to create your search

Edit
Clear

Builder

AND

Search
Add to builder
Query
Items found
Time

#2 Add Search marfan syndrome 9258 12:09:53
#1 Add Search sports OR activity OR exercise 7389403 12:09:23

You can also use this page to view your search history and rerun previous searches.

History

Download history Clear history

You are here: NCBI > Literature > PubMed

Let's combine our searches.

Select the Add link next to the marfan syndrome search.
PubMed Module

PubMed Advanced Search Builder

Search

marfan syndrome

Builder

All Fields ▼ marfan syndrome

AND ▼ All Fields ▼ sports OR activity OR exercise

Search

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

History

Add to builder Query Items found Time  
#2 Add Search marfan syndrome 6258 12:09:53  
#1 Add Search sports OR activity OR exercise 22589453 12:09:23

PubMed Advanced Search Builder

(marfan syndrome) AND (sports OR activity OR exercise)

Builder

All Fields ▼ marfan syndrome

AND ▼ All Fields ▼ sports OR activity OR exercise

Search

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

History

Add to builder Query Items found Time  
#2 Add Search marfan syndrome 6258 12:09:53  
#1 Add Search sports OR activity OR exercise 22589453 12:09:23
PubMed Advanced Search Builder

(marfan syndrome) AND (sports OR activity OR exercise)

<table>
<thead>
<tr>
<th>Builder</th>
<th>Show index list</th>
</tr>
</thead>
<tbody>
<tr>
<td>All Fields</td>
<td>marfan syndrome</td>
</tr>
<tr>
<td>AND</td>
<td>All Fields</td>
</tr>
<tr>
<td>AND</td>
<td>All Fields</td>
</tr>
</tbody>
</table>

Search history:

<table>
<thead>
<tr>
<th>Search</th>
<th>Add to builder</th>
<th>Query</th>
<th>Items found</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>#2</td>
<td>Add</td>
<td>Search marfan syndrome</td>
<td>6269</td>
<td>12:09:53</td>
</tr>
<tr>
<td>#1</td>
<td>Add</td>
<td>Search sports OR activity OR exercise</td>
<td>2096453</td>
<td>12:09:23</td>
</tr>
</tbody>
</table>

PubMed Advanced Search Builder

We retrieved 216 citations.

Search results
Items: 1 to 20 of 216

1. Abnormal heart rate recovery and deficient chronotropic response after submaximal exercise in young Marfan syndrome patients
   Persi P, Carvalho AC, Parent AB, Medeiros WM
   Cardiol Young 2016;26(8):1219-1227. [Epub ahead of print]
   PMID: 25886619
   Similar articles

2. Fibrillin-1 Regulates Skeletal Stem Cell Differentiation by Modulating TGFβ
   PMID: 26186659
   Similar articles

3. Activity Within the Marfan Niche
   PMID: 26186659
   Similar articles

Inhibition of Glycoprotein VI Clustering by Collagen as a Mechanism of Inhibiting...
Looking through the first few results, many of the titles do not seem relevant to exercise recommendations.


[Advice on reading PubMed articles]

Summary of 20 pages. Sort by Most Recent. Send to: Filters: Manage Filters

Search results: 1 to 20 of 216

1. Abnormal baroreflex heart rate recovery and deficient chronotropic response after submaximal exercise in young Marfan syndrome patients. Peres P, Carvalho AC, Peres AB, Macedo WM.

2. Activity Within the Marrow Niche.


Let's look at the "Search details." The "Search details" displays how PubMed translated our search terms. Click the continue button to scroll down the page.

[Advice on searching for related data]
Exercise and the Marfan syndrome
Effect of a physical exercise program in a patient with M (Key: Braxton Cardiac, 2012)
Proteomic analysis in aortic media of patients with Marfan (Circulation, 2006)

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.

PubMed Module
USC School of Medicine Library
In the Translations box below, you can see that PubMed automatically mapped our 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.

<table>
<thead>
<tr>
<th>Query Translation:</th>
</tr>
</thead>
<tbody>
<tr>
<td>marfan syndrome[MeSH Terms] OR (marfan[All Fields] AND syndrome[All Fields]) OR marfan syndrome[All Fields]</td>
</tr>
<tr>
<td>sports[MeSH Terms] OR sports[All Fields]</td>
</tr>
<tr>
<td>motor activity[MeSH Terms] OR (motor[All Fields] AND activity[All Fields]) OR motor activity[All Fields]</td>
</tr>
<tr>
<td>exercise[MeSH Terms] OR exercise[All Fields]</td>
</tr>
</tbody>
</table>

Database:
PubMed

User query:
(marfan syndrome) AND (sports OR activity OR exercise)

---

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.
### Query Translation:

```
```

- **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].**

### Translations:

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

### Database:
- PubMed

### User query:
- (marfan syndrome) AND (sports OR activity OR exercise)

### Query Translation:

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

- 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.**

### Translations:

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

### Database:
- PubMed

### User query:
- (marfan syndrome) AND (sports OR activity OR exercise)
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.

Omega-3 fatty acids for the primary prevention of cardiovascular disease.

Feeding, Activity and Nutrition Trial (INfANT) Program.

PMID: 25671210

A balance training exercise program reduced injurious falls in at-risk older community-dwelling women.

PMID: 25671255
Select the Add link next to the sports OR exercise search.

Next, select the Add link next to the marfan syndrome search.
PubMed Advanced Search Builder

(sports OR exercise) AND marfan syndrome

Search

Finally, click the Search button.

PubMed.gov

(sports OR exercise) AND marfan syndrome

Search results

Items: 1 to 20 of 106

By removing "activity" from our search, we narrowed our search from 216 to 106 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?
We narrowed our results to two relevant articles:

1. **Canadian Cardiovascular Society position statement on the management of thoracic aortic disease.**
   - Boudrieau M, Ardolfini G, Leipsic J, Lindsay T, McMurray JS, Therrien J, Sai SG, Canadian Cardiovascular Society.
   - PMID: 24492528
   - Similar articles

2. **Recommendations for physical activity and recreational sports participation for young patients with genetic cardiovascular diseases.**
   - PMID: 15184207
   - Free Article
   - Similar articles

Let's look at the second result. Click on the title below to view the abstract.
Recommendations for physical activity and recreational sports participation for young patients with genetic cardiovascular diseases.


Abstract
A group of relatively uncommon but important genetic cardiovascular diseases (GCVs) 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 GCVs (eg, 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 GCVD 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 GCVD after disqualification from competition, as well as for those patients who do not aspire to organized sports.

Indeed, many asymptomatic (or mildly symptomatic) patients with GCVD 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 forms of physical activity could be regarded as either prudent or inadvisable in these subgroup 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 GCVDs.

PMD: 15184297 (PubMed - indexed for MEDLINE) Free full text

Cited by 29 PubMed Central articles
Cardiac, sudden cardiac death, and competitive sports: a critical review of current guidelines and recommendations for practice.

Sudden cardiac death (SCD) is a leading cause of death in young athletes. The diagnosis and management of individuals at risk for SCD require a multidisciplinary approach involving cardiologists, sports medicine specialists, and team physicians. This review provides an overview of the current guidelines and recommendations for the prevention and management of SCD in athletes.

1. Recommendations for physical activity and competitive sports participation for young patients with neoplastic cardiovascular diseases.
   PMID: 15104587
   Free Article
   Similar articles

2. Recommendations for participation in competitive sport and leisure-time physical activity in individuals with cardiomyopathies, myocarditis, and periocarditis.
   Pelliccia A, Corrado D, Bjornstad HH, Fanhuizen-Godkoop N, Linhartová A, Carre F, Anastasiou-Daniels M, Vanhauwa L, Aubertin E, Probst S.
   PMID: 17265111
   Similar articles

3. The Bethesda Conference.
   Garson A Jr.
Links from PubMed

Items: 13

Filters activated: Practice Guideline, Clear all


Here are some other citations we retrieved.


Continue
PubMed has some built-in search filters you can use to help focus your search results. Under PubMed Tools, select Clinical Queries.

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: [Search]

Clinical Study Categories | Systematic Reviews | Medical Genetics
--- | --- | ---
This column displays citations filtered to a specific clinical study category and scope. These search filters were developed by [Haynes RS et al. See more filter information.]

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

- **Clinical Study Categories**
- **Systematic Reviews**
- **Medical Genetics**

Continue
### PubMed Clinical Queries

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

#### 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 conference, and guidelines. See filter information or additional related sources.

#### Medical Genetics

This column displays citations per medical genetics. See more filter information.

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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.

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**Please enter search term(s)**
PubMed Clinical Queries

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

Clinical Study Categories

This column displays citations filtered by specific clinical study category and scope. These search strings were developed by Neumann RE et al. See more filter information.

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

<table>
<thead>
<tr>
<th>Category</th>
<th>Optimized For</th>
<th>Sensitive Specific</th>
<th>PubMed Equivalent</th>
</tr>
</thead>
</table>
For example, the therapy category adds search terms such as clinical trial, random allocation, and therapeutic use to your search terms.

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.

(aortic OR aneurysm) AND marfan syndrome

Clinical Study Categories

Category: Therapy

Scope: Narrow

Results: 5 of 23

Design and rationale of a prospective, collaborative meta-analysis of all randomized controlled trials of an ACE inhibitor receptor antagonists in Marfan syndrome, based on individual patient data. A report from the Marfan Treatment Trials Collaboration.


Marfan Sairan, a randomized, double-blind, placebo-controlled trial.


A randomized, double-blind, placebo-controlled trial to assess the effects of losartan vs. atenolol on the biophysical properties of the aorta in patients with Marfan and Loeys-Dietz syndromes.

PubMed also has a filter for identifying systematic reviews and similar articles.

It is located next to the Clinical Study Categories on the Clinical Queries page.

Systematic Reviews

After selecting the narrow scope, the new results are automatically displayed.

Using the narrow scope, we retrieved 23 citations.

Medical Genetics

Topic: All

Results: 5 of 621


Clinical utility gene variants in Marfan and dissection sequencing-based approach.


Genetics of hereditary aortic diseases.

Mousavi T, Mousavi H.

Systematic reviews are the highest quality of evidence you can find on a topic.

The Systematic Reviews filter retrieves systematic reviews, as well as meta-analyses, reviews of clinical trials, evidence-based medicine, consensus development conferences, and guidelines. Citations from journals specialized in clinical review studies are also included.

Click See all (37) to view more of the results.
A systematic review of the pharmacological management of aortic root dilatation in Marfan syndrome.

Thakur V, Rankin KN, Hanting L, Matilo AS.


PMID: 24303542

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

Thakur V, Rankin KN, Hanting L, Matilo AS.


PMID: 24303542

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.


PMID: 21597912

Similar articles


Nat Genet. 2011 Sep;43(9):996-1000. doi: 10.1038/ng.934.

PMID: 21700107

Similar articles

Search results
Items: 1 to 20 of 37

1. Aortic dilation, genetic testing, and associated diagnoses.
   Zorate YA, Sellars E, Lepard T, Tang X, Collins RT 2nd.
   Genet Med. 2015 Jul 2; doi: 10.1038/gim.2015.58. [Epub ahead of print]
   PMID: 26132593

2. Design and analysis of randomized controlled trials of angiotensin-converting enzyme inhibitor in patient data: a report from the Marfan Foundation.
   PMID: 26095674

   PMID: 25893974

4. Prognostic value of ejection fraction and left ventricular size in congenital heart disease: results from a systematic review and evidence curve.
   Young CC, Glassman AH, Zwinderman AH, Mulder BJ.
   PMID: 23209135

5. Aortic aneurysms and dissections in Marfan syndrome.
   Nat Genet. 2011 Sep;43(9):996-1000. doi: 10.1038/ng.934.
   PMID: 21700107

Similar articles
A systematic review of the pharmacological management of aortic root dilatation in Marfan syndrome.

Thukur V, Rankin KN, Hartling L, Mackie AS.


PMID: 23063542

Abstract

BACKGROUND: Marfan syndrome causes aortic dissection related to aortic root dilatation. There are many options for drug therapy, including beta-blockers, angiotensin-converting enzyme inhibitors, and angiotensin receptor blockers. The aim of this study was to examine the utility of beta-blockers, angiotensin-converting enzyme inhibitors, and angiotensin receptor blockers in the treatment of Marfan patients with aortic dissection.

METHODS: We searched four databases: Medline, Embase, Scopus, and ClinicalTrials.gov, and we included studies published from 1950 to 2013. We also searched conference proceedings, references of retrieved articles, and a web-based trial registry. The primary outcomes were mortality, the secondary outcomes were aortic dissection, need for elective surgical repair, change in aortic dilatation, and adverse events. Two reviewers selected studies, abstracted data, and assessed study quality. Meta-analyses were performed because of study heterogeneity.

RESULTS: A total of 19 studies were included. Most of the completed studies showed that beta-blockers, angiotensin-converting enzyme inhibitors, and angiotensin receptor blockers were associated with a decrease in the rate of aortic dilatation (angiotensin-converting enzyme inhibitors or angiotensin II receptor blockers). However, 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 may slow the progression of aortic dilatation in Marfan syndrome. Angiotensin-converting enzyme inhibitors and angiotensin II receptor blockers may have a more beneficial effect than beta-blockers; however, more methodologically rigorous studies currently in progress are needed to evaluate the impact of drug therapy on clinical outcomes.
A systematic review of the pharmacological management of aortic root dilation in Marfan syndrome.

Thompson, K. H., Reisin, R. H., Martin, L. B., et al.

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, changes in aortic dilation, and adverse events. Two reviewers selected studies, abstracted data, and assessed study quality.

RESULTS: A total of 10 studies were included. One prospective cohort, three retrospective cohorts, two meta-analyses, and one randomised trial examined angiotensin-converting enzyme inhibitors. No randomised and one non-randomised trial examined angiotensin II receptor blockers. Studies in progress are all randomised. All trials were underpowered with respect to this outcome. All drug classes had similar efficacy. In general, beta-blockers or angiotensin II receptor blockers were better tolerated.

CONCLUSIONS: On the basis of existing evidence, beta-blockers slow the progression of aortic dilation, whereas angiotensin II receptor blockers may have more effect than beta-blockers. Long-term follow-up is needed to evaluate the impact of drug therapy on clinical outcomes.

PMID: 23985542 [PubMed - indexed for MEDLINE]

Below the abstract, there is a link for Publication Types, MeSH Terms, and Substances.

Select Publication Types, MeSH Terms, Substances to display the MeSH Terms assigned to this article.

Publication Types

Research Support, Non-U.S. Gov't

MeSH Terms

- Adrenergic beta-antagonists/therapeutic use
- Angiotensin Receptor Antagonists/therapeutic use
- Angiotensin-Converting Enzyme Inhibitors/therapeutic use
- Aortic Aneurysm, Aortic Aneurysm, Aortic Dissection/therapeutic use
- Aortic Aneurysm, Aortic Dissection/thec theraputic use
- Aortic Dissection Pathophysiology therapy
- Aortic Dissection therapy
- Marfan Syndrome/complications
- Marfan Syndrome/therapy
- Treatment Outcome

Substances

- Adrenergic beta-antagonists
- Angiotensin Receptor Antagonists
- Angiotensin-Converting Enzyme Inhibitors

Viewing the MeSH terms can give you ideas of other search terms to use to retrieve similar articles.
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.