



May 26-30, 2020  
San Francisco,  
California USA  
#ACSM20

A large crowd of people, many wearing lanyards, walking through a conference hall. The image is overlaid with a semi-transparent blue filter.

# ACSM Annual Meeting 2020 Call for Scientific Abstracts and Clinical Case Papers

*Submission Deadline:  
November 4, 2019*



[www.acsm.org/annual-meeting/present](http://www.acsm.org/annual-meeting/present)



## Abstracts accepted early September through November 4, 2019

[www.acsmannualmeeting.org](http://www.acsmannualmeeting.org)

Dear Colleague:

It is my pleasure to share with you the abstract and clinical case information for ACSM's 67th Annual Meeting, 11th World Congress on Exercise is Medicine® and World Congress on the Basic Science of Exercise in Regenerative Medicine. Now is an excellent time to mark your calendar with the due date of **Monday, November 4, 2019**.

Free Communications, presented in slide and poster format, provide the major vehicle for "new" information exchange at these meetings.

I strongly encourage members and Fellows of the College—beginning investigators and established investigators alike—to submit abstracts of their work for consideration at these meetings.

Clinicians are also invited to submit abstracts to present in clinical case sessions.

Further details on how to submit are enclosed on the following pages.

On behalf of the 2020 Program Committee, we look forward to receiving your abstract submission. Thank you in advance for your commitment to the excellence of next year's meeting.

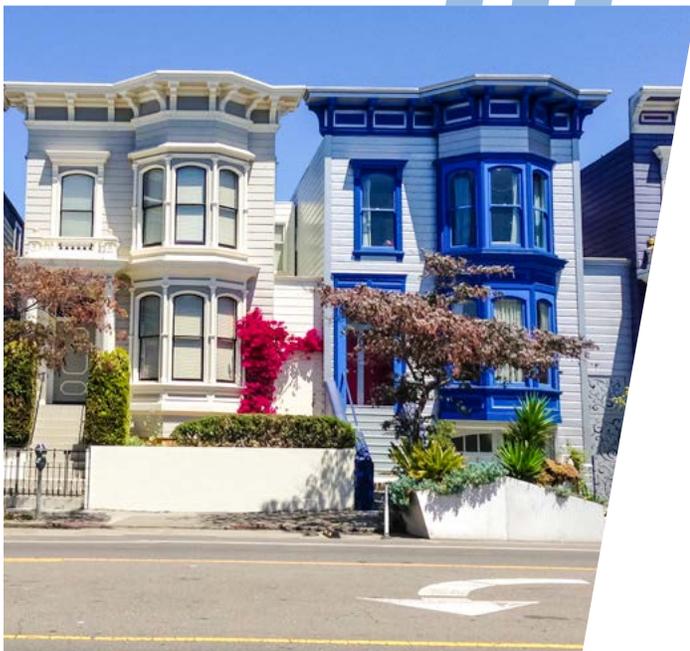
Sincerely,

NiCole R. Keith, Ph.D., FACSM  
2020 Program Committee Chair  
ACSM President-elect

## ACSM in San Francisco

Join us in the Golden Gate City of San Francisco!

San Francisco is one of the most beautiful cities in the world. With waterside views, unique architecture, exquisite cuisine and diverse culture, it's naturally photogenic to all visitors. San Francisco is known for its independent spirit and history of innovation with tons of options to explore. Located just 20 minutes from the San Francisco International Airport and Oakland International Airport, the city is thriving on its vibrant dining options, historic sceneries, museums, performances, and neighborhoods full of charm. San Francisco has a plethora of options for everyone to explore, including the Golden Gate Bridge, Painted Ladies, Fisherman's Wharf, and much more, with easy ways to get around. Come enjoy a golden experience with us in San Francisco!



## At the Conference...

Experience the wealth of distinguished experts presenting first-rate basic and applied science, current public health issues and clinical sports medicine sessions!

- Highlighted Symposia showcasing basic and applied science in selected, topical areas featuring national and international experts
- International sessions on Exercise is Medicine®
- Special sessions on the Basic Science of Exercise in Regenerative Medicine
- Clinical lectures and hands-on workshops
- Integrative sessions spanning from bench to bedside
- Classic events and lectures created for students
- 25+ concurrent sessions offered in various formats including free communication slide, rapid fire platform, thematic poster, poster and clinical case sessions
- CME and CEC credits
- Reconnect with friends and colleagues
- State-of-the-art exhibit hall featuring emerging products and programs
- ...and more!

## Important Dates and Deadlines

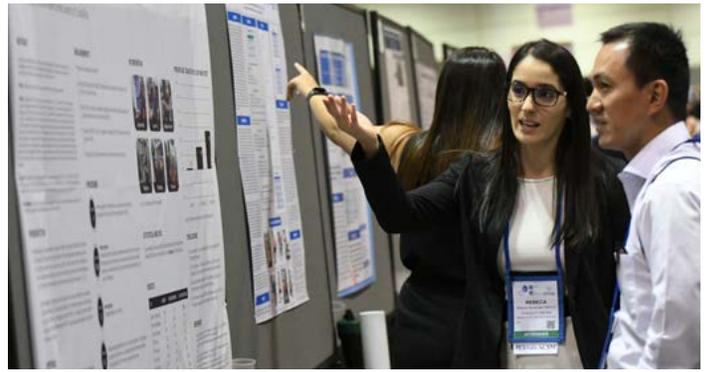
Sept. 2019	Online Registration opens
Oct. 2019	Housing Opens
Nov. 4, 2019	Scientific and Clinical Case Abstract Submission Deadline
Feb. 2020	Abstract Submitters Receive Accept/Reject Notification
March 2020	Advance Program Available and Pre-Registration Deadline
May 1, 2020	Housing Deadline
May 26-30, 2020	ACSM's 67th Annual Meeting, 11th World Congress on Exercise is Medicine®, and World Congress on the Basic Science of Exercise in Regenerative Medicine
June 22, 2020	2021 Annual Meeting Session Proposals Due

## Need More Information?

- For updates, information and early registration opportunities, go to [www.acsm.org/annualmeeting](http://www.acsm.org/annualmeeting), call (317) 637-9200, ext. 141 or email [meeting@acsm.org](mailto:meeting@acsm.org).
- For technical support during your online submission, email [support@abstractsonline.com](mailto:support@abstractsonline.com).
- For general inquiries, contact ACSM at (317) 637-9200, ext. 108 or email [dapostolidis@acsm.org](mailto:dapostolidis@acsm.org).

## Registration Information

Registration fees and form will be available in Sept. 2019 at [www.acsm.org/annualmeeting](http://www.acsm.org/annualmeeting). A receipt and confirmation will be emailed to you.



## International Registrants

ESTA is an automated system that determines the eligibility of visitors to travel to the U.S. under the Visa Waiver Program (VWP). Authorization via ESTA does not determine whether a traveler is admissible to the United States. U.S. Customs and Border Protection officers determine admissibility upon travelers' arrival. The ESTA application collects biographic information and answers to VWP eligibility questions. ESTA applications may be submitted at any time prior to travel, though it is recommended that travelers apply as soon as they begin preparing travel plans or prior to purchasing airline tickets. To obtain an application, please visit the following website: [esta.cbp.dhs.gov/esta](http://esta.cbp.dhs.gov/esta)

## Award Opportunities

### FASEB MARC Travel Awards

ACSM/FASEB Minority Access to Research Careers (MARC) Travel Awards promote the entry of underrepresented minority students, postdoctorates and scientists into the mainstream of the basic and applied science community and to encourage the participation of young scientists at ACSM's Annual Meeting. Awards are granted to abstract slide or poster presenters and faculty mentors paired with the students/trainees they mentor. Application details will be available in 2020 at [www.faseb.org](http://www.faseb.org).

### ACSM Awards

By submitting an abstract to the ACSM Annual Meeting, you may have an opportunity to apply for travel awards to attend the Annual Meeting. Winning one of these awards is contingent on your abstract being accepted for presentation and a review of all applications. The specific awards are listed below. For award criteria, [click here](#).

- Tipton Student Research Award
- New Investigator Award
- International Student Award
- Steven M. Horvath Travel Award
- Michael L. Pollock Student Scholarship
- Gail E. Butterfield Nutrition Travel Award
- Dr. Lisa Krivickas Clinician/Scholar Travel Award
- Priscilla Clarkson Undergraduate Travel Award
- Jack Wilmore Legacy Travel Award
- GSSI-ACSM Young Investigator Award
- GSSI-ACSM Sport Nutrition Award
- Basic Science World Congress Student Award

## Rules for Submission

1. Each person is permitted to submit and be first author on one scientific and one clinical case abstract for the Annual Meeting (which includes the World Congress on the Basic Science of Exercise in Regenerative Medicine), and one scientific abstract for the World Congress on Exercise is Medicine®. You may co-author as many other abstracts as desired. If a person submits, as first author, on more than one abstract per meeting, only one abstract will be accepted; all others will be rejected. If submitting an abstract for both the Annual Meeting (or World Congress on the Basic Science of Exercise in Regenerative Medicine) and World Congress on Exercise is Medicine®, each submission must be two different abstracts/studies.
2. The first named author must present the abstract. To ensure proper citation in the *Medicine & Science in Sports & Exercise*® (MSSE®) author index, list your name consistently throughout all abstracts on which you appear as an author.
3. All authors must approve the submitted abstract.
4. All Fellows of the College (FACSM) who author or co-author a submitted abstract, also accept responsibility as a sponsor for that abstract, as described in Rule 5, below.
5. Abstracts can be recommended for acceptance by having a Fellow of the College (FACSM) attest to the scientific, medical, or educational merit of the work. Abstracts received without Fellow endorsement will undergo formal review. A Fellow may sponsor as many abstracts as desired. You will be required to provide the Fellow's name and e-mail address when submitting. **The final acceptance decision is the exclusive right of the Program Committee.** This may include a formal review even though an ACSM Fellow is an author or sponsor. Fellow endorsement does not automatically imply acceptance.
6. The primary focus and substance of the submitted abstract/case must be novel. The abstract must not have been published as an abstract or as a full paper in a scientific, medical, or professional publication at the time of submission. Abstract data may not be presented prior to the Annual Meeting. The only exception to this policy concerns abstracts presented at an ACSM Regional Chapter meeting.
7. Human studies must comply with the ACSM statement regarding the use of human subjects and informed consent. (MSSE®, Vol. 30, No. 7, July 1998, "Policy Statement Regarding the Use of Human Subjects and Informed Consent.") Animal studies must comply with the NIH guidelines regarding the use of animals. To access the policy, [click here](#) and scroll down to "Human & Animal Experimentation Policy Statements."
8. To ensure consistency and clarity, it is directed that authors use the terms as defined by MSSE®, "Information for Authors," while utilizing the units of measurement of the Systeme International de'Unite (SI). [Click here](#) and scroll down to "Technical Guidelines."
9. Researchers and clinicians may be employed, affiliated with, or have financial interest in commercial entities that may have a relevant bearing on the subject matter of an abstract/case presentation. The prospective audience must be made aware of the affiliation/financial interest by an acknowledgment in the final program, as well as acknowledgment in writing on posters, and in the beginning of slide presentations. If there is nothing to disclose, that must be reported by including "no relationships reported." Presentations regarding commercial products must focus on basic or applied science and not on the product or on the commercial aspects of the discovery. In addition, the format of the presentation must permit full discussion of the scientific validity and/or therapeutic benefits and risks of the discovery. The intent of this policy is not to prevent a speaker from making a presentation, but to identify any potential conflict of interest so that the listeners may form their own judgments about the presentation. If the disclosure should be noted, please check the appropriate box on the electronic abstract submission form so that it may be noted in the final program. A notation in this box will not affect whether an abstract is accepted for presentation at the meeting. Failure to comply with the published disclosure policy will result in exclusion from the program for two years.
10. Abstract submission fee: \$35. A **nonrefundable** fee must accompany each abstract submitted. Do not submit the same abstract more than once or a scientific abstract on the clinical case submission site (or vice versa). **Abstract fees will not be refunded for duplicate submissions, submissions using the wrong submission site (i.e., scientific abstract on clinical case site) or for an abstract that has to be withdrawn.**
11. Abstract submissions are only being accepted electronically and must be submitted no later than 11:59 p.m. (Pacific time zone) Nov. 4, 2019.
12. **Abstract/case presenters must pay the registration fee and all other costs associated with travel to present at the conference. Do not submit an abstract or a clinical case if your attendance at the meeting is questionable.**
13. Presenters who fail to provide notice of a reason acceptable to the Program Committee for not delivering an accepted paper will be prohibited from presenting at future Annual Meetings. A written notification should be e-mailed to Danielle Apostolidis at [dapostolidis@acsm.org](mailto:dapostolidis@acsm.org) by the primary author.



## General Information

### Notification of Programming

You will be notified electronically of the acceptance/rejection of your abstract/case in Feb. 2020. This notification will include the date and time of session/presentation as well as type of presentation if accepted.

If you do not receive your notification by the end of February, you should contact the ACSM Education Department in early March at [dapostolidis@acsm.org](mailto:dapostolidis@acsm.org).

### Accessing the Abstract Submission Site

To access the submission site, visit [www.acsm.org/annual-meeting/present](http://www.acsm.org/annual-meeting/present). The submission site will be available beginning early Sept. 2019. If you have previously submitted an abstract or session proposal, please use your established login and password. Contact [support@abstractsonline.com](mailto:support@abstractsonline.com) if you need your login or password. NOTE: The login and password is not the one used to access your account on [www.acsm.org](http://www.acsm.org).

### Withdrawals

You can withdraw your abstract on-line prior to Nov. 1, 2019 by going to the electronic submission site in the “Review My Work” page. Click on the red “X” at the bottom of this page. After that date, withdrawals must be made in writing. Email a letter stating the reason for withdrawal to [dapostolidis@acsm.org](mailto:dapostolidis@acsm.org).

## Scientific Abstract Submission Information

### Preparing the Abstract

Accepted abstracts will be published in the May supplement issue of *MSSE*<sup>®</sup>, and limited to 2,000 characters (not including spaces, title, or author block). Including a table, chart or graph uses 300 characters of that limit

Do not use brand names in the abstract.

Indicate grant funding information at the bottom of the abstract.

**Title:** The title should be brief (limit to 15 words).

**Authors:** The first and last names of the authors will be included in the author block. **Do not include degrees**, as this affects online search functions.

**Institutions:** Institutions of all authors will be included. **Do not include departments**.

**Sponsored Fellow Notation:** If a Fellow sponsors without authoring or co-authoring the abstract, you will need to provide the Fellow’s name and email address in your on-line submission.

**Text:** The abstract must be informative, including a statement of the study’s specific PURPOSE, METHODS, summary of RESULTS, and CONCLUSION statement using these headings. It is unsatisfactory to state, “The results will be discussed.”

Abstracts of experimental, observational, and meta-analytic studies must include data to substantiate the conclusions being drawn. Systematic reviews without meta-analyses are not acceptable. It is not satisfactory to simply describe what was found (such as, “the treatment group increased their fitness more than the control group”) or to only include statistical results (such as, “associations were significant at  $p < .05$ .”) **The lack of inclusion of experimental data may result in the abstract being rejected.** This applies to abstracts that are sponsored by fellows, as well as those that undergo full review.

The abstract must be written in English and grammatically correct.

**Do not include** abstract title or author information in the abstract body.

See the sample on page 7.

### Method of Presentation

The Program Committee will determine the method of presentation, which is based on submitter’s preference. Submitters will be given the presentation preference options of slide preferred, poster preferred, or indifferent. **Abstracts submitted in the Exercise is Medicine<sup>®</sup> category will only be presented in a poster format.** Due to the tremendous growth in the size of the program, the majority of the presentations will be organized into poster format. Your preference may not be able to be accepted.

### Slide Sessions

Presentation of the scientific papers in a slide session will be limited to 10 minutes, followed by a five-minute discussion period. Time limits will be strictly enforced.

### Rapid Fire Platform Slide Sessions

Presentation of scientific papers in a rapid fire platform session will be limited to 5 minutes for an oral presentation, plus an additional 5 minutes for questions and answers.

### Poster Sessions

Scientific poster sessions will be one of two types:

**Poster:** Posters are grouped by topic and available for viewing 3.5-5 hours, with the author required to be present at the poster for 1.5 hours of the viewing time.

**Thematic poster:** Thematic poster sessions are presented in two parts. During the first part, the poster is available for viewing by attendees. During the second part, the poster is presented and discussed during a moderator-led session with attendees and other presenters.

### Abstract Category

Abstract review and program fit is largely determined by the category you select. Select the category that represents the intended focus of your abstract. These categories are listed on the next page.

## Topical Categories for Abstracts

### Fitness Assessment, Exercise Training, and Performance of Athletes and Healthy People

- 101 fitness assessment of healthy people
- 102 exercise training interventions in healthy people
- 103 sport science
- 104 disability
- 105 pregnancy/prenatal/post-partum
- 106 other

### Cardiovascular, Renal and Respiratory Physiology

- 201 cellular/molecular
- 202 cardiac
- 203 vascular function
- 204 acute exercise
- 205 disease
- 206 blood flow
- 207 rehabilitation
- 208 renal
- 209 respiratory
- 210 disability
- 211 oxygen uptake kinetics
- 212 other

### Skeletal Muscle, Bone and Connective Tissue

- 301 skeletal muscle physiology
- 302 physiology and mechanics of bone and connective tissue
- 303 cellular and molecular physiology related to these systems
- 304 disability
- 305 other

### Biomechanics and Neural Control of Movement

- 401 gait analysis
- 402 sport biomechanics
- 403 musculoskeletal mechanics/modeling
- 404 sports equipment
- 405 motor control
- 406 movement disorders
- 407 posture/balance
- 408 other

### Epidemiology and Biostatistics

- 501 epidemiology of physical activity and health
- 502 epidemiology of injury and illness
- 503 physical activity assessment
- 504 population-based surveillance
- 505 biostatistics/research methodology
- 506 disability
- 507 meta-analysis
- 508 other

## Physical Activity/Health Promotion Interventions

- 5501 physical activity interventions
- 5502 physical activity promotion programming
- 5503 intervention strategies
- 5504 disability
- 5505 pregnancy/prenatal/post-partum
- 5506 other

## Metabolism and Nutrition

- 601 carbohydrate metabolism
- 602 fat metabolism
- 603 protein and amino acid metabolism
- 604 energy balance and weight control
- 605 dietary analysis
- 606 nutritional intervention – micro and macronutrients
- 607 supplements, drugs and ergogenic aids
- 608 disability
- 609 obesity/diabetes/cardiovascular disease
- 610 pregnancy/prenatal/post-partum
- 611 other

## Psychology, Behavior and Neurobiology

- 701 mental health
- 702 cognition and emotion
- 703 perception (RPE, pain, fatigue)
- 704 behavioral aspects of exercise (correlates, predictors)
- 705 behavioral aspects of sport
- 706 neuroscience
- 707 pedagogy related to exercise physiology
- 708 disability
- 709 other

## Environmental and Occupational Physiology

- 801 heat stress and fluid balance
- 802 cold stress
- 803 hyperbaria
- 804 altitude and hypoxia
- 805 space physiology and microgravity
- 806 occupational or military physiology and medicine
- 807 disability
- 808 other

## Immunology/Genetics/Endocrinology

- 901 exercise immunology
- 902 exercise immunology – supplement use
- 903 endocrinology, not including reproductive
- 904 reproductive endocrinology and physiology
- 905 genetics
- 906 other

## Athlete Care and Clinical Medicine

- 1001 athlete medical evaluation and care
- 1002 athlete trauma evaluation and care
- 1003 age group and gender issues
- 1004 chronic illness and special populations
- 1005 adaptive sports/disability
- 1006 clinical translation - sessions in this category should focus on improving health outcomes through the integration of evidence-based medicine and quality improvement initiatives
- 1007 other

## Clinical Exercise Physiology

- 1101 clinical exercise testing
- 1102 cardiovascular diseases
- 1103 pulmonary/respiratory diseases
- 1104 obesity/diabetes
- 1105 musculoskeletal/neuromuscular diseases
- 1106 disability
- 1107 other

## Exercise is Medicine

- 1200 Exercise is Medicine focuses on the impact of physical activity on health and the prevention and treatment of disease and disability for clinical application.

## Basic Science World Congress

- 1400 World Congress on the Basic Science of Exercise in Regenerative Medicine

## Cancer

- 1501 implementation science
- 1502 epidemiology, surveillance, survival
- 1503 mechanisms and biomarkers
- 1504 risk prevention (primary and secondary)
- 1505 exercise programming and prescriptions
- 1506 cancer biology (tumor microenvironment)
- 1507 triage and referral into exercise programming
- 1508 symptoms, side effects, and adverse effects of treatment (short and long term)
- 1509 psychosocial and behavioral research
- 1510 health economics/health services research
- 1511 disability
- 1512 other

## Healthy Equity

- 1601 aging
- 1602 pediatric
- 1603 rural/urban
- 1604 race/ethnicity
- 1605 socioeconomic status
- 1606 ability status
- 1607 other

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## Scientific Abstract Sample

### Mechanisms Underlying Age-Related Changes in Skin Vasodilation During Local Heating

Christopher T. Minson, Lacy A. Holowatz, W. Larry Kenney, FACSM, Brett J. Wong, Brad W. Wilkins.  
University of Oregon, Eugene, OR, Penn State University, University Park, PA

The skin blood flow (SkBF) response to local heating is reduced in healthy older (O) vs. young (Y) subjects; however, the mechanisms that underlie these age-related changes are unclear. Local skin heating causes a bimodal rise in SkBF involving at least two independent mechanisms: an initial peak mediated by axon reflexes and a secondary slower rise to a plateau which is mediated by the local production of nitric oxide (NO).

**PURPOSE:** To determine the altered mechanism(s) underlying the attenuated SkBF response to local heating in aged skin. **METHODS:** Two microdialysis fibers were placed in the ventral skin of the forearm of 10 Y (22±2 yrs) and 10 O (77±5 yrs) subjects. SkBF over each site was measured by laser-Doppler flowmetry as the skin over both sites was heated to 42° C for ~60 min. At one site, 10mM L-NAME was infused throughout the protocol to inhibit NO-synthase (NOS). At the second site L-NAME was infused after 40 min of local heating. Cutaneous vascular conductance (CVC) was calculated as flux/mean arterial pressure and scaled as % maximal CVC (infusion of 50mM sodium nitroprusside). Age comparisons were made using two-way ANOVA with repeated measures. **RESULTS:** Maximal CVC was reduced in the O (156±15 vs. 192±12 mV/mmHg, p<0.05), as were the initial peak (46±4 vs. 61±2% max, p<0.05) and plateau (82±5 vs. 93±2%, p<0.05) responses. The decline in CVC with NOS inhibition during the plateau phase was similar in the Y and O groups but the initial peak was significantly lower in O when NOS was inhibited prior to local heating (38±5 vs. 52±4%, p<0.05). **CONCLUSION:** Age-related changes in both axon reflex-mediated and NO-mediated vasodilation contribute to the diminished vasodilator response to local heating in aged skin.

Supported by NIH Grant ROI AG07004.

TITLE HAS A 15 WORD LIMIT

ABSTRACT TITLE AND AUTHOR BLOCK IS NOT TO BE INCLUDED IN ABSTRACT BODY AT TIME OF SUBMISSION

ABSTRACT BODY HAS A 2,000 CHARACTER COUNT LIMIT (NOT INCLUDING SPACES, TITLE, OR AUTHOR BLOCK)

THIS SAMPLE IS ONLY FOR VISUAL REFERENCE OF A COMPLETED ABSTRACT. YOU WILL BE PROMPTED FOR REQUIRED FIELDS DURING THE ON-LINE DATA ENTRY PROCESS.

# Clinical Case Abstract Submission Information

## Preparing the Case Abstract

Case abstracts are limited to 2,000 characters (not including spaces, title or author block). Accepted case abstracts will be published in the May supplement issue of *MSSE*®.

Your clinical case abstract should include a synopsis of your case which includes the History and Physical Exam of the case to be discussed, an outline of the Differential Diagnosis, Test and Results, Final/Working Diagnosis, and Treatment/Outcomes as it pertains to the case. Clinical case presentations will be presented in discussion format. It is recommended that the necessary data (i.e., EKG, X-rays, ECHOS, etc.) be in slide form.

Do not use brand names in the case abstract.

Indicate grant funding information at the bottom of the case abstract.

**Title:** The title should be brief (limited to 15 words) and should be succinct and descriptive. The first part of the title should reflect the area of the problem and the second part, the sport or activity of the athlete, but should not include the diagnosis (example: Neck Injury—Football).

**Authors:** First and last names of authors will be listed on the case abstract. If a Fellow sponsors without authoring or co-authoring the case abstract, you will provide the Fellow's name

and e-mail address in your on-line submission.

**The presenting author must have been involved with significant evaluation and treatment of the patient and have a thorough understanding of the entire case and the outcome.**

Do not include degrees, as this affects online search functions.

**Institutions:** Institutions of all authors will be included. Do not include departments.

**Text:** The first paragraph should state the history of the case; the second paragraph should outline the physical exam, then list:

- Differential Diagnosis
- Final/Working Diagnosis
- Tests and Results
- Treatment and Outcomes

See clinical case abstract sample below.

## Case Topical Categories

There are five types:

- Cardiovascular
- General Medicine
- Head, Neck and Spine
- Musculoskeletal
- Age and Gender Specific Issues

**Note:** Clinical case abstracts may be chosen by the Program Committee for either slide or poster presentation.

## Clinical Case Abstract Sample

Neck Injury — Football

Suzanne M. Tanner, University of Colorado Sports Medicine Center, Denver, CO. (Sponsor: William O. Roberts, FACSM)

**HISTORY:** A 17-year-old senior high school football defensive cornerback sustained a neck injury while tackling. During the third quarter of a midseason game, he unintentionally used a spearing technique for a successful tackle. As he drove his head into a ball carrier's chest, his neck was forced into flexion and he developed moderate posterior neck pain. There was no numbness, tingling, weakness or radiation of pain into his upper extremities. Three tackles later, 11 plays later, and during the fourth quarter, he reported his neck pain to the athletic trainer.

**PHYSICAL EXAMINATION:** Examination on the sidelines revealed moderate tenderness over the spinous processes of C6-T1, mild tenderness of the adjacent paraspinal muscles bilaterally and normal sensation, reflexes and strength of his upper extremities. There was full active range of motion of his neck but flexion and extension were painful. Over the next hour, his neck progressively became stiffer, but he had no neurological symptoms or signs.

### DIFFERENTIAL DIAGNOSIS:

1. Strain of cervical paraspinal muscles
2. Fracture of cervical spine
3. Cervical sprain

### TEST AND RESULTS:

Cervical spine anterior-posterior and lateral radiographs:

— obliquely horizontal fracture of C7 spinous process with 1/2 cm displacement of fracture fragments

— 2 mm of forward subluxation of C6 vertebral body relative to C7 vertebral body

Lateral cervical spine radiographs with neck actively flexed and extended:

— no further subluxation of C6 vertebrae

— increased distraction of spinous fracture fragments with neck flexion

Cervical spine oblique radiographs:

— normal orientation of facets and pedicles

### FINAL/WORKING DIAGNOSIS:

Clay-shoveler's fracture (avulsion fracture of spinous process of C7)

### TREATMENT AND OUTCOMES:

1. Immobilization with Philadelphia collar for 6 weeks.
2. Repeat active extension and flexion radiographs at 3 and 6 weeks post injury showed no delayed increase in stability.
3. Neck isometric exercises started 3 weeks post injury.
4. Range of motion and neck strengthening exercises started 6 weeks post injury.
5. Returned to sports 3 months post injury when he had full, painless ROM, normal strength and able to meet the demands of his sport.

AREA OF PROBLEM

SPORT OR ACTIVITY

ABSTRACT TITLE AND AUTHOR BLOCK IS NOT TO BE INCLUDED IN ABSTRACT BODY AT TIME OF SUBMISSION

CLINICAL CASE ABSTRACT BODY HAS A 2,000 CHARACTER COUNT LIMIT (NOT INCLUDING SPACES, TITLE, OR AUTHOR BLOCK)

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# 2020 Sports Medicine Fellow Research Abstract and Clinical Case Submissions

**Deadline: March 2, 2020 (for those submissions from a physician in an accredited Sports Medicine Fellowship type program)**

Sports medicine fellows (those in an accredited sports medicine or orthopaedic sports medicine fellowship program) are invited to submit their research abstracts or clinical cases between

February 14–March 2, 2020. These can be submitted for acceptance by having an ACSM Fellow member sponsor the abstract or case. Abstracts/clinical cases without sponsorship will be reviewed by members of the ACSM Program Committee. Accepted abstracts or clinical cases will be presented as posters in a defined area of the conference center and the abstract/case first author must be present at the designated time and place. The cost of abstract submission will remain at \$35. Additional details can be found at [www.acsm.org/annual-meeting/present](http://www.acsm.org/annual-meeting/present).



## ACSM Call for Scientific and Clinical Case Abstracts

**Submission Deadline:**  
November 4, 2019

### Highlighted Symposia

#### **Athlete Care and Clinical Medicine**

*Keeping Up with the Joneses: Examining Evidence Behind Popular Treatments*

#### **Biomechanics and Neural Control of Movement**

*The Aging Neuromuscular System and the Protective Effects of Physical Activity*

#### **Cardiovascular, Renal and Respiratory Physiology**

*Understanding Breathlessness During Exercise: Mechanisms and Consequences*

#### **Clinical Exercise Physiology**

*Exercise and Medications in the Treatment of CVD Risk Factors*

#### **Environmental and Occupational Physiology**

*Environmental Pollution, Climate Change and Human Health*

#### **Epidemiology and Biostatistics/Physical Activity/Health Promotion Interventions**

*Leveraging Big Data: Using the Cloud to Advance Exercise Science*

#### **Exercise is Medicine®**

*Exercise and Dementia: Current Evidence and Opportunities in Prevention and Treatment*

#### **Fitness Assessment, Exercise Training, and Performance of Athletes and Healthy People**

*Military Human Performance Optimization and Injury Prevention: International Perspectives*

#### **Immunology/Genetics/Endocrinology**

*The Genetics of Physical Activity: Molecules to Application*

#### **Metabolism and Nutrition**

*Novel Dietary Approaches to Appetite Regulation, Health, and Performance*

#### **Psychology, Behavior and Neurobiology**

*New Findings on the Science of Pacing in Physical Activity and Sport Performance*

#### **Skeletal Muscle, Bone and Connective Tissue**

*Macronutrients and Muscle Protein Turnover During Weight Loss*

Plan to attend the 2020  
**World Congress on  
the Basic Science of Exercise  
in Regenerative Medicine**



May 26-30, 2020 • San Francisco, California USA

[www.acsm.org/annualmeeting](http://www.acsm.org/annualmeeting)