Using Altmetrics to Highlight Academic Research: Innovative Possibilities

Rajiv Nariani, Science Librarian York University

4:AM -- 27th Sep. 2017

ORK

VERSITÉ



The process....in a nutshell

- Run/Refine a PubMed affiliation search: YU & RU
 Same search in Altmetric Explorer for Librarians
- Download the data in Excel: Refine:
 - -Locate e-mail addresses
 - -Add publication dates Open Access or subscription
 - -Include Google Scholar citations to all articles
- Plot AAS, News outlets, GS Citations in Tableau
- E-Mail Profs at YU & RU about the AAS and request to complete the online survey on Research Metrics
- Talk about possibilities...



<u>yFile</u>: Why only here?





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Safe exercise guidelines for Type 1 Diabetes developed by international team led by York U researcher

January 24, 2017 3 SHARE SHARE

An international team of researchers and clinicians led by York University Professor Michael Riddell has published a set of guidelines to help people with type 1 diabetes exercise safely to avoid fluctuations in blood sugar.

"Regular exercise can help individuals with diabetes to achieve their blood lipid, body composition, fitness and blood sugar goals, but for people living with type 1 diabetes, the fear of hypoglycemia, loss of glycemic control and inadequate knowledge around exercise management are major barriers," said Riddell, in the Faculty of Health. "This is a big struggle for both type 1 diabetes patients and their healthcare providers. This first ever set of consensus guidelines from leading experts will help them."

Patients with type 1 diabetes have to monitor their blood glucose levels before, during and after exercise, said Riddell, who led the team of 21 international experts. For two years, they reviewed observational studies and clinical trials on exercise management for people with type 1 diabetes who exercise regularly, to reach a consensus.

The guidelines on glucose targets for safe and effective exercising as well as nutritional and insulin dose adjustments to prevent exercise-related fluctuations in blood sugar, appear in the report, "Exercise management in type 1 diabetes: a consensus statement," published in *The Lancet Diabetes & Endocrinology*. This work was funded by the JDRF, a leading global organization funding type 1 diabetes research.



Exercise managemen Overview of attention for article published in The Lan SUMM 600 Pubr Auth Abs About this Attention Score The In the top 5% of all research outputs scored by Altmetric MORE ... Mentioned by 56 news outlets 206 tweeters 9 Facebook pages Readers on 34 Mendeley

Michael Riddell

The authors note that a majority of people with type 1 diabetes are now overweight or obese and tend to be at least as inactive as the rest of the population. A large percentage of patients do not maintain a healthy body weight nor do they achieve the minimum required moderate-to-vigorous aerobic activity (150 minutes per week). This is in contrast to a few decades ago when most patients with the disease were relatively slim and active.





High AAS from YU March '17: G. Scholar Citations in Red ("york university"[Affiliation]) NOT ("new york"[Affiliation] OR "1new york"[Affiliation])

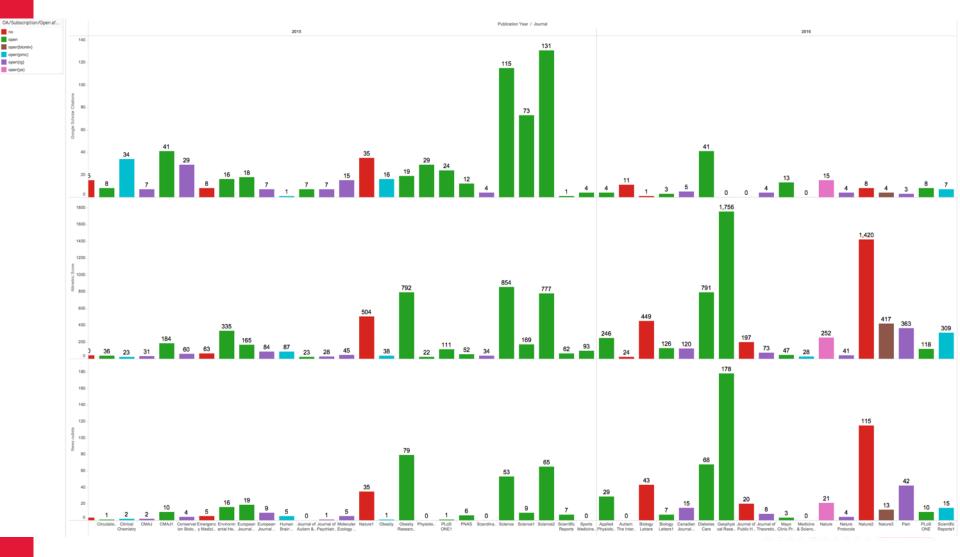
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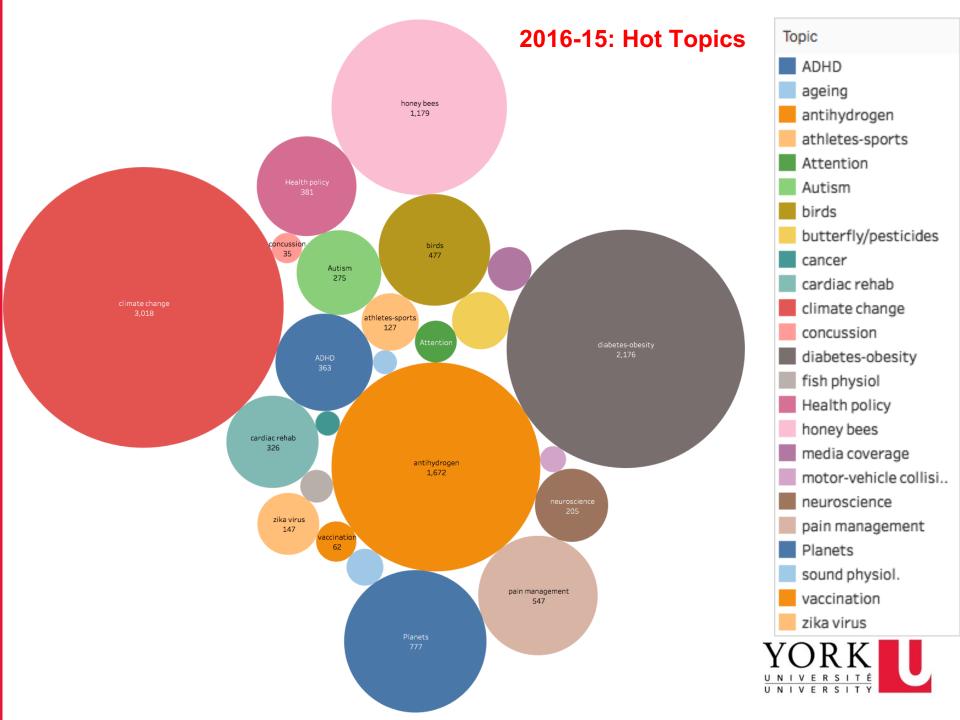
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2016-15: Google Scholar/AAS/News Outlets

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- Red: Subscription journal/Not OA
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- Light Green: Open (YorkSpace)
- Purple : Open (Research Gate)

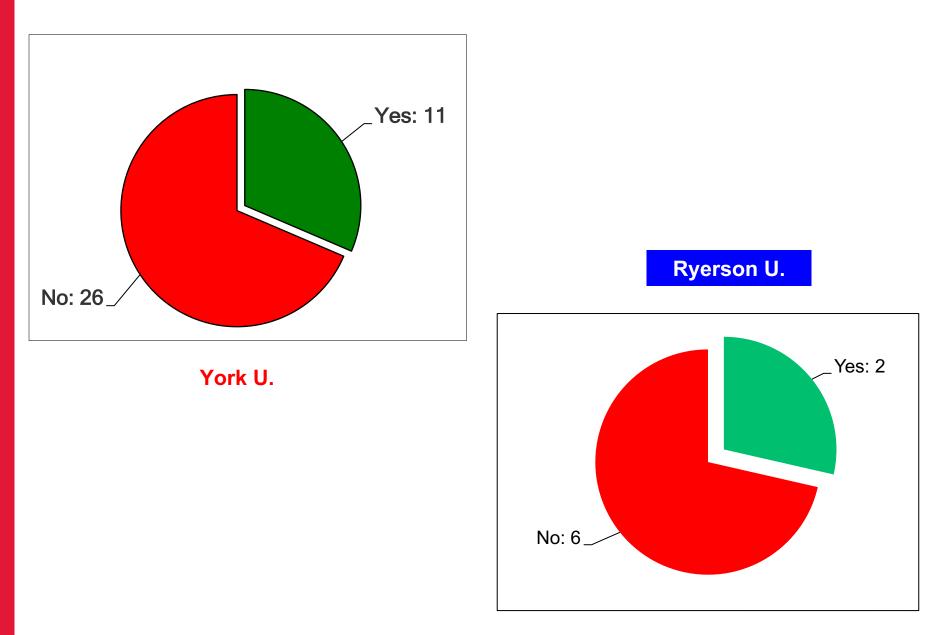




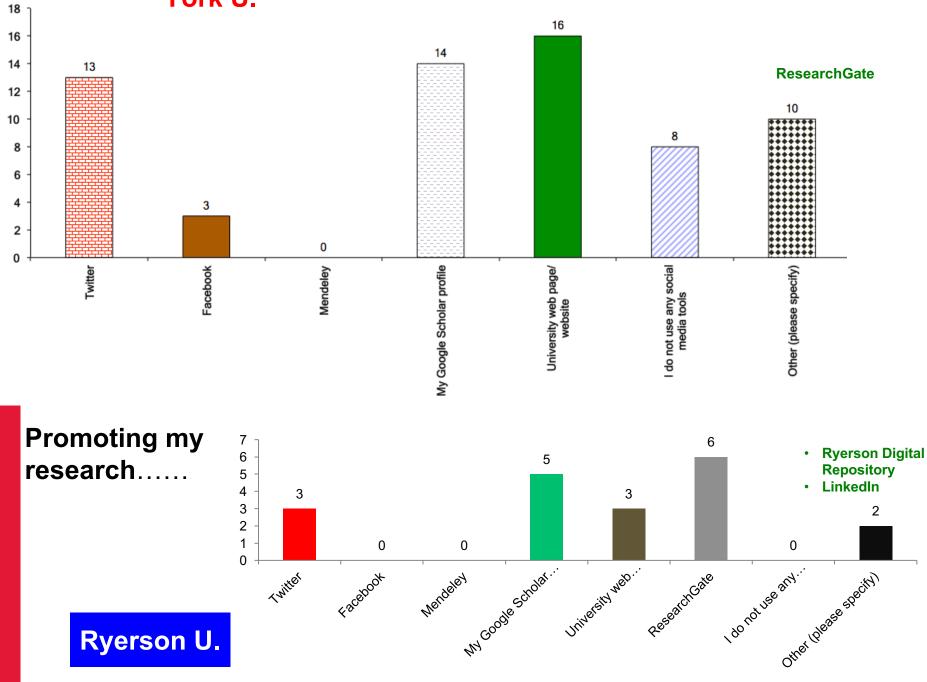
Helping Connect with Faculty: Research Metrics



Were you aware: You are famous!!

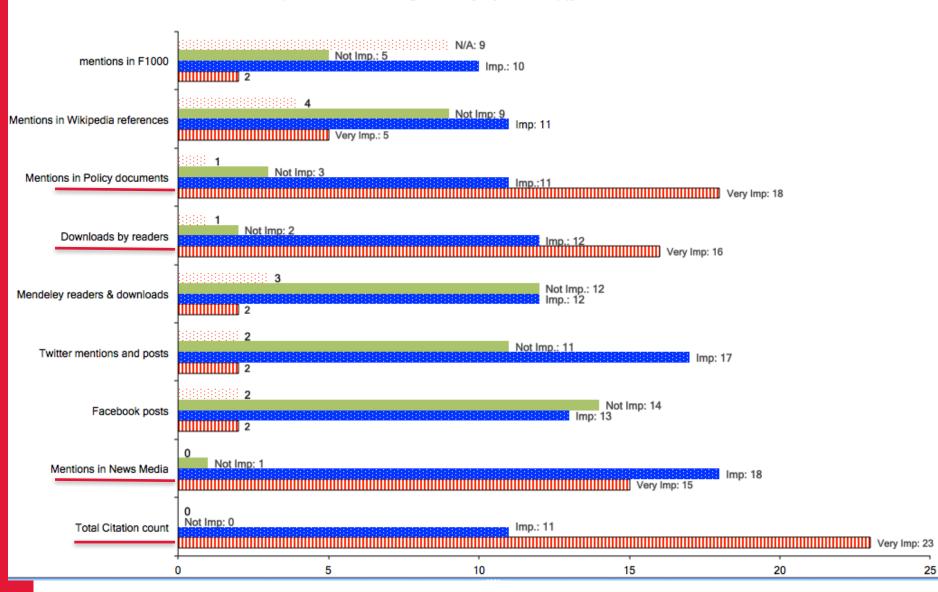


York U.

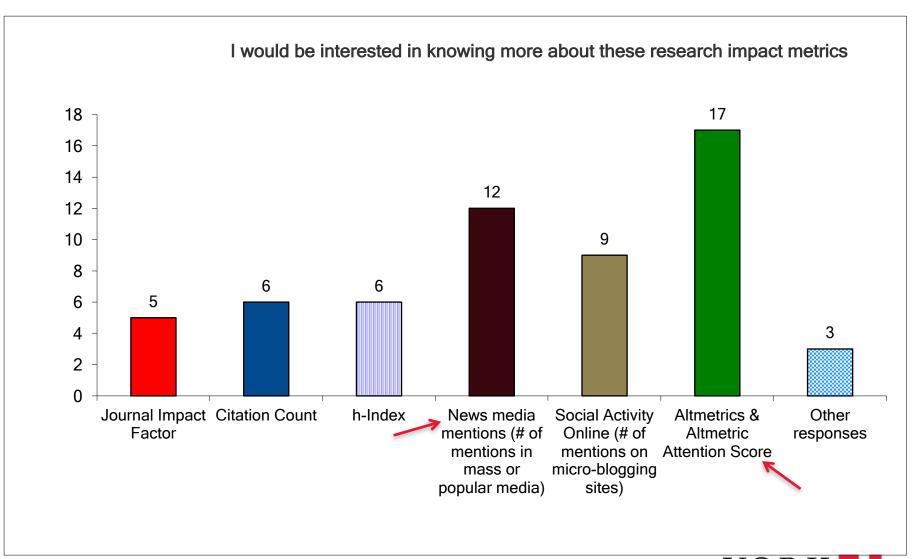


YU: After knowing about AAS: Importance of statistics

How important are the following statistics [for your article(s)]



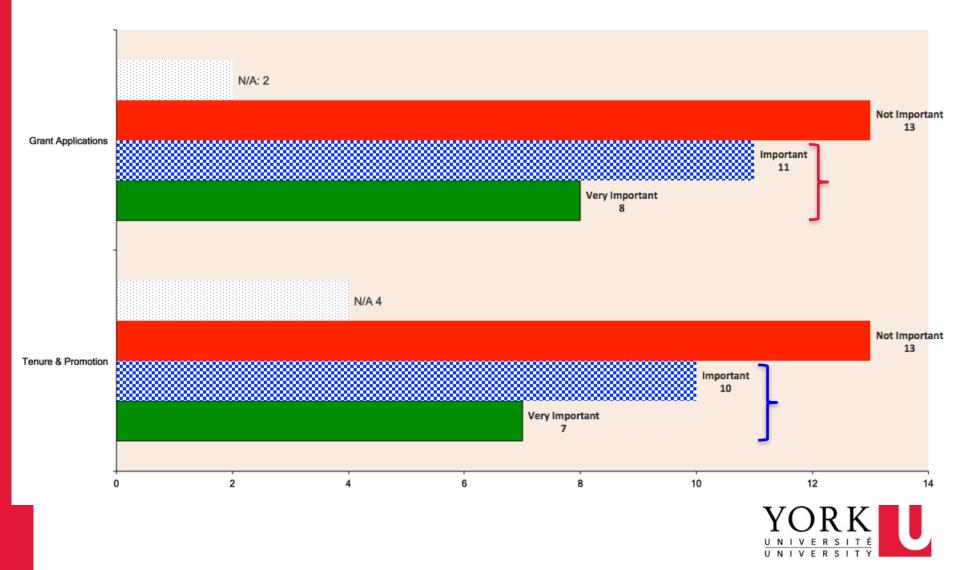
YU: What metrics do they want to know about





YU: Altmetrics and Career Advancement

How important do you think are Altmetrics/alternative metrics for career advancement (One skipped)



I learned a lot - good luck with this research :)!

3/7/2017 11:50 AM View respondent's answers Categorize as... •



I am gratified that efforts are being made to develop this tool to quantify the impact of research. The h-index can be very misleading.

1/23/2017 6:05 PM View respondent's answers Categorize as... •

Interesting, important and contentious topic to explore...the landscape is changing quickly too which makes it hard for academics

1/10/2017 4:01 PM View respondent's answers Categorize as... ▼

i appreciate that the librarians teach us how us faculty can determine the impact of our work in these traditional and non-traditional ways

I like the idea, but it should be used carefully. Tweets and FB posts can be done by the general public without a scientific background and it can be amplified as a hype ("get viral") without real scientific relevance.

3/7/2017 1:00 PM View respondent's answers Categorize as... •

I wonder if something like altmetrics could serve as an alternative indicator of the interest and reach of my work to help sell a book proposal? Do you have any ideas about the kind of alternative metrics that could be assembled to help me in this regard. For example can altmetrics generate a score for a researcher not just an individual paper?

As you can see I don't really pay any attention to it. Sorry, I'm probably just too old! 12/27/2016 1:34 PM View respondent's answers Categorize as... •



They can be over-rated (over-inflated) and should be used with caution. Some scientists are better at "marketing/advertising" than others.

Creating a Canadian Research Impact Portal



Altmetrics Portal for Canadian Universities?



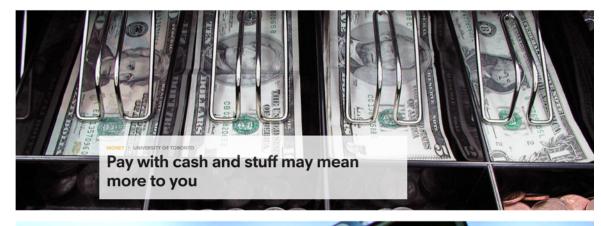
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Scholar's book offers nonconformist way to look at life... starting with death

September 7, 2017

York University Professor Emeritus Alan Blum produces new book in burgeoning field of medical humanities, proposes novel and empowering lens through which to look at life.

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New computer cluster drives rapid output for public health strategies

September 6, 2017

Faculty of Science Professor Seyed Moghadas has acquired some flashy hardware for his lab. The hardware is a cluster of high-capacity computers that can perform mathematical simulations at high speeds.

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York psychology professors to deliver keynotes at international workshop

August 30, 2017

York Professors Thomas Teo and Alexandra Rutherford will deliver invited keynotes at an international workshop in Germany that focuses on "Territories of Critique."

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Oxidants, antioxidants and the current incurability of me	tostatio concora	h May 2015. Of these 53 drugs, 23	reen 2003 and 2013, 53 were appraised by English, French, or 8 (43%) increased OS by 3 months or longer, 6 (11%) by less than 3 dence to suggest that the remaining 16 (30%) increased OS over best
Watson, J. (2013) Oxidants, antioxidants and the current incurability of metastatic cancers. Open Biology, 3 (1). pp. 2046-2441. PDF (Paper) Watson Open Biology 2013 pdf - Published Version Available under License <u>Creative Commons Attribution</u> . Download (460Kb) I Preview URL: http://www.ncbi.nlm.nih.gov/pubmed/23303309 DOI: 10.1098/rsob.120144 Abstract The vast majority of all agents used to directly kill cancer cells (ionizing radiation, most cherotherapeutic agents and some targeted merapies) work through either directly or inal cancer sorts to be the understanding is why and how the end-tableshead to be work here works from their epithesia doll progenitors they almost for used hereities why and how the end-tableshead to be works more works for why and now the end-tableshead to be works more works for why and how the end-tableshead to be works more works for why and how the end-tableshead to be works more works for why and how the end-tableshead to be works more stragetes. Also ke to be better understanding is why and how the end-tableshead to work for works for works for works for works for works for works may and how the end-tableshead to works for w	Altmetric 590 Twestec by 419 Feddited by 1 Biogaed by 14 Biogaed by 14 Biog	erall survival gains could be quan nths over the treatments that were utic targets—ranging between 0 (ata, indirect or nonactive comparis an increase in QoL, 24 (45%) were y with at least some improvement market has contributed to improve asons to doubt that claims of effic ecision-making and value-based p g jamanetwork.com/journals/jamaon 17 American Medical Association dicine > RA Public aspects of meredicine > RA Public aspects of meredicine dicine > RA Public aspects of meredicine > RA Public	tified, all new cancer drugs were associated with a mean (SE) total e available in 2003. Drug-related improvements in OS were, however, (thyroid, ascites) and 8.48 months (breast cancers)—and were sons, or nonvalidated evidence. Although 22 (42%) of 53 new e also associated with reduced patient safety. Of the 53 new cancer in OS, QoL, or safety. Conclusions and Relevance: Although ments in therapy, the magnitude and dimension of clinical benefits acy reflect real-world effectiveness exactly. These findings raise policy.
Item Type: Paper <u>diseases & disorders > cancer</u> <u>Subjects:</u> therapies	View details on Altmetric's website	or 2017 12:48	



CSHL Authors:

herapies

therapies > cancer drugs - see diseases-cancer-drugs and therapies

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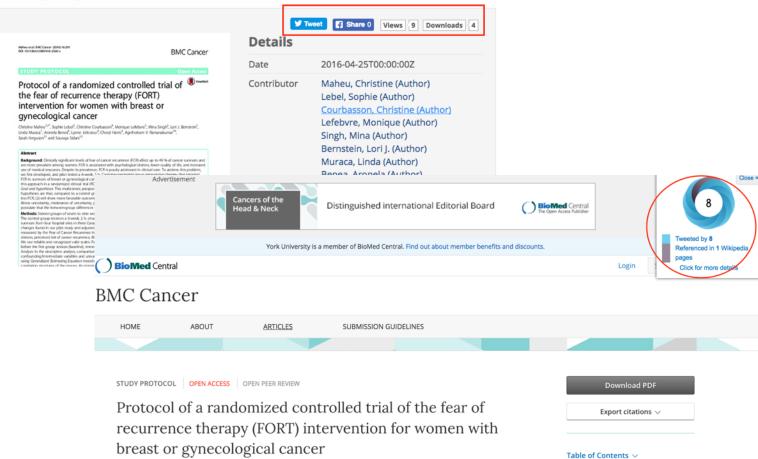
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BMC Cancer 2016 16:291 https://doi.org/10.1186/s12885-016-2326-2 Affiliated with Received: 6 August 2015 Accepted: 20 April 2016 Published: 25 Apr Open Peer Review reports

1. Daphne Cockwell School of Nursing, Ryerson University

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Abstract

Background Methods/design

Discussion

Declarations

References

Can basic AAS data show up in Web of Science? For institutions subscribing to WoS?



Volume: 10 Issue: 3 Pages: 243-255 DOI: 10.1016/j.orcp.2015.08.007 Published: MAY-JUN 2016 View Journal Impact

Abstract

Background: To determine whether the relationship between caloric intake, macronutrient intake, and physica

Methods: Dietary data from 36,377 U.S. adults from the National Health and Nutrition Survey (NHANES) betv frequency data was only available in 14,419 adults between 1988 and 2006. Generalised linear models were caloric intake, percent dietary macronutrient intake and physical activity with body mass index (BMI) was diffe

Results: Between 1971 and 2008, BMI, total caloric intake and carbohydrate intake increased 10-14%, and fa 1988 and 2006, frequency of leisure time physical activity increased 47-120%. However, for a given amount c time physical activity, the predicted BMI was up to 2.3 kg/m(2) higher in 2006 that in 1988 in the mutually adju

Conclusions: Factors other than diet and physical activity may be contributing to the increase in BMI over time factors and to determine the mechanisms through which they affect body weight. (C) 2015 Asia Oceania Asso Elsevier Ltd. All rights reserved.

Keywords

Author Keywords: Body mass index; Epidemiology; Etiology; NHANES; Energy intake KeyWords Plus: DIETARY SELF-REPORT; UNITED-STATES; ENERGY-INTAKE; PUTATIVE CONTRIBUTC SLEEP; WEIGHT CHANGE; US ADULTS; TRENDS; FAT

Author Information

Reprint Address: Kuk, JL (reprint author)

+ York Univ, Sch Kinesiol & Hlth Sci, 4700 Keele St, Toronto, ON M3J 1P3, Canada.



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Secular differences in the association between caloric intake, macronutrient intake, Overview of attention for article published in Obesity Research & Clinical Practice, September 2015

SUMMARY	News	Blogs	Twitter	Facebook	Google+	Reddit	Research highlights	Video
Title	Secular differences	in the associatior	n between caloric i	ntake, macronutrient	intake, and physical	activity with obesit	у	
Published in	Obesity Research &	Clinical Practice,	September 2015					
DOI	10.1016/j.orcp.2015	.08.007 🖸						
Pubmed ID	26383959 🖸							
Authors	Brown, Ruth E, Shar	ma, Arya M, Arde	rn, Chris I, Mirdam	nadi, Pedi, Mirdamadi	, Paul, Kuk, Jennifer I	[show]		
Abstract	To determine wheth	er the relationsh	ip between calorio	intake, macronutrier	t intake, and physic	al [show]		
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Secular differences in the association between caloric intake, macronutrient intake, and physical activity with obesity

<u>RE Brown</u>, AM Sharma, CI Ardern, P Mirdamadi... - Obesity research & ..., 2016 - Elsevier Background To determine whether the relationship between caloric intake, macronutrient intake, and physical activity with obesity has changed over time. Methods Dietary data from 36,377 US adults from the National Health and Nutrition Survey (NHANES) between 1971 and 2008 was used. Physical activity frequency data was only available in 14,419 adults between 1988 and 2006. Generalised linear models were used to examine if the ...

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Sei Bio-IT

Punjani A¹, Rubinstein JL^{2,3,4}, Fleet DJ¹, Brubaker MA⁵.

Nat Methods. 2017 Mar;14(3):290-296. doi: 10.1038/nmeth.4169. Epub 2017 Feb 6.

Author information

determination.

- Department of Computer Science, The University of Toronto, Toronto, Ontario, Canada.
- 2 Molecular Structure and Function Program, The Hospital for Sick Children Research Institute, Toronto, Ontario, Canada,

crvoSPARC: algorithms for rapid unsupervised crvo-EM structure

- Department of Biochemistry, The University of Toronto, Toronto, Ontario, Canada. 3
- 4 Department of Medical Biophysics, The University of Toronto, Toronto, Ontario, Canada.
- 5 Department of Electrical Engineering and Computer Science, York University, Toronto, Ontario, Canada.

Abstract

Single-particle electron cryomicroscopy (cryo-EM) is a powerful method for determining the structures of biological macromolecules. With automated microscopes, cryo-EM data can often be obtained in a few days. However, processing cryo-EM image data to reveal heterogeneity in the protein structure and to refine 3D maps to high resolution frequently becomes a severe bottleneck, requiring expert intervention, prior structural knowledge, and weeks of calculations on expensive computer clusters. Here we show that stochastic gradient descent (SGD) and branch-and-bound Crvo-EM is unique because it uses high-power microscopes to take tens of thousands of determination to be perform low-resolution images of a frozen protein sample from different positions. The Furthermore, SGD with Baye computational problem is to then piece together the correct high-resolution 3D automated analysis and disc structure from the low-resolution 2D images.

These algorithms are combined (http://www.crvosparc.com).



"Our approach solves some of the major problems in terms of speed and number of structures you can determine," says Professor David Fleet, chair of the Computer and Mathematical Sciences Department at U of T Scarborough and Punjani's PhD supervisor

Newly Developed Algorithms May Revolutionize Drug Discoveries

A new set of machine learning algorithms developed at U of T Scarborough that can generate 3-D structures of tiny protein molecules may re for a range of diseases. Image: Structura Biotechnology Inc

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Scicasts Staff 🔮 🛛 @scicasts

O Bioinformatics Feb 07, 2017 O 3 minutes read

Toronto, ON, Canada (Scicasts) – A new set of machine learning algorithms developed by U of T researchers that can generate 3D structures of tiny protein molecules may revolutionize the development of drug therapies for a range of diseases, from Alzheimer's to cancer. [Video]

"Designing successful drugs is like solving a puzzle," says U of T PhD student Ali Punjani, who helped develop the algorithms.

"Without knowing the three-dimensional shape of a protein, it would be like trying to solve that puzzle with a blindfold on."

Altmetrics: Making Inroads

- Collection Development & research landscape
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- Altmetric: University Research Office & Media Communications
- Altmetric: Scholars Portal & OCUL
- Altmetric: Funding Agencies

