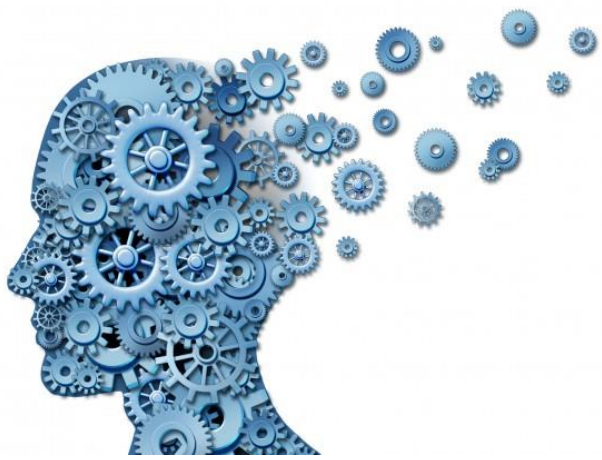
Whatsup?
@St John's Hospital

Issue 5, September 13th 2018



SIR WILLIAM OSLER

HISTORY OF Medicine

EDITORIAL TEAM:
Dr. Avinash. H. U, Dr. Sanjiv Lewin

St John's National Academy of Health Sciences
St John's Medical College Hospital, Bengaluru

MESSAGE FROM THE EDITORIAL TEAM

Hola Amigo!!!

It has been just over a month that we started the Hospital weekly newsletter. We are thankful and overwhelmed by the interest shown by all of you. A newsletter, which was started by just two people to begin with now has five people in its editorial team. We welcome Dr. Rakesh Ramesh, Dr. Saudamini Nesargi and Dr. Manu.M.K.Varma to our family.

With the new editorial team, we mark the beginning of a new chapter and we now change the name of newsletter which will be henceforth called as “Whatsup? @ St John’s Hospital”. We look forward for suggestions on a new catchy name for this Magazine. The person suggesting the selected name will be rewarded.

We announce, the start of a new section in the magazine called as “IG Nobel” from this issue onwards. We request you to feel free to provide any constructive feedbacks and criticisms.

Feel free to contact us anytime, for publishing your content.

Regards

Editorial Team

IG NOBEL 😂

The **Ig Nobel Prize** is a parody of the Nobel Prize awarded every autumn to celebrate ten unusual or trivial achievements in scientific research. Since 1991, the Ig Nobel Prizes have been awarded to "honor achievements that first make people laugh, and then make them think." The name of the award, the *Ig Nobel Prize* is a pun on the word *ignoble*, which means "characterized by baseness, lowness, or meanness", and is satirical social criticism that identifies "absurd" research (although on occasion yielding useful knowledge)

Organized by the scientific humor magazine, the Annals of Improbable Research (AIR), the Ig Nobel Prizes are presented by Nobel laureates in a ceremony at the Sanders Theater, Harvard University, and are followed by the winners' public lectures at the Massachusetts Institute of Technology.

Alan Kligerman, 1991

Deviser of digestive deliverance, vanquisher of vapor, and inventor of **Beano**, for his pioneering work with anti-gas liquids that prevent bloat, gassiness, discomfort and embarrassment

BEANO

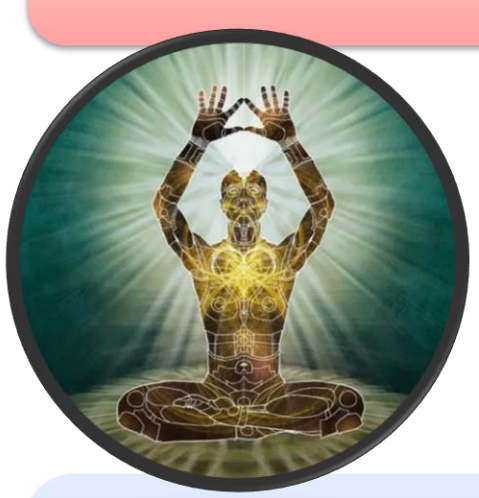
Beano is an enzyme-based dietary supplement that is used to reduce gas in the digestive tract, thereby improving digestion and reducing bloating, discomfort, and flatulence caused by gas. It contains the enzymes alpha-galactosidase (α-GAL) and invertase. It was introduced as a liquid, but that has been discontinued and it is now available only as tablets and strawberry-flavored "Meltaways".

REF: https://www.improbable.com/ig/winners/

Pearls of Wisdom

However long the night… the dawn will break.

- African Proverb



He who knows others is clever, but he who knows himself is enlightened.

- Lao Tzu

The best way to make your dreams come true is to <u>WAKE UP</u>.

- Paul Valéry

A Bird's Eye View…..

MEDICINE Dis WEEK

Dose Aspirin based on Body Weight

The optimal dose of aspirin to prevent cardiovascular events depends on bodyweight, driven more by lean body mass and height than by body-mass index. Once-daily low doses (75–100 mg) of aspirin were ineffective in people weighing 70 kg or more, particularly in those who smoke or were treated with enteric-coated formulations, whereas higher doses became more effective with increasing weight. This was the outcome of studying combined data from 10 RCTS of aspirin in primary prevention (including 117 279 participants)

- Rothwell PM et al., Lancet 2018; 392: 387–99.

Delayed Versus Immediate Cord Clamping in Preterm Infants

The preferred timing of umbilical-cord clamping in preterm infants is unclear. In a randomised study of 1566 foetuses which were born before 30 weeks of gestation, delayed cord clamping (>60seconds after delivery) did not result in a lower incidence of the combined outcome of death or major morbidity at 36 weeks of gestation than immediate cord clamping (<10seconds after delivery).

- Mordi WT et al., N Engl J Med 2017; 377:2445-2455.

Effects of aspirin on risks of vascular events and cancer according to bodyweight and dose: analysis of individual patient data from randomised trials

Peter M Rothwell, Nancy R Cook, J Michael Gaziano, Jacqueline F Price, Jill F F Belch, Maria Carla Roncaglioni, Takeshi Morimoto, Ziyah Mehta

Summary

Background A one-dose-fits-all approach to use of aspirin has yielded only modest benefits in long-term prevention of cardiovascular events, possibly due to underdosing in patients of large body size and excess dosing in patients of small body size, which might also affect other outcomes.

Methods Using individual patient data, we analysed the modifying effects of bodyweight (10 kg bands) and height (10 cm bands) on the effects of low doses (≤100 mg) and higher doses (300–325 mg or ≥500 mg) of aspirin in randomised trials of aspirin in primary prevention of cardiovascular events. We stratified the findings by age, sex, and vascular risk factors, and validated them in trials of aspirin in secondary prevention of stroke. Additionally, we assessed whether any weight or height dependence was evident for the effect of aspirin on 20-year risk of colorectal cancer or any in-trial cancer.

Results Among ten eligible trials of aspirin in primary prevention (including 117 279 participants), bodyweight varied four-fold and trial median weight ranged from 60·0 kg to 81·2 kg (p<0·0001). The ability of 75–100 mg aspirin to reduce cardiovascular events decreased with increasing weight ($p_{interaction}$=0·0072), with benefit seen in people weighing 50–69 kg (hazard ratio [HR] 0·75 [95% CI 0·65–0·85]) but not in those weighing 70 kg or more (0·95 [0·86–1·04]; 1·09 [0·93–1·29] for vascular death). Furthermore, the case fatality of a first cardiovascular event was increased by low-dose aspirin in people weighing 70 kg or more (odds ratio 1·33 [95% CI 1·08–1·64], p=0·0082). Higher doses of aspirin (≥325 mg) had the opposite interaction with bodyweight (difference $p_{interaction}$=0·0013), reducing cardiovascular events only at higher weight ($p_{interaction}$=0·017). Findings were similar in men and women, in people with diabetes, in trials of aspirin in secondary prevention, and in relation to height ($p_{interaction}$=0·0025 for cardiovascular events). Aspirin-mediated reductions in long-term risk of colorectal cancer were also weight dependent ($p_{interaction}$=0·038). Stratification by body size also revealed harms due to excess dosing: risk of sudden death was increased by aspirin in people at low weight for dose ($p_{interaction}$=0·0018) and risk of all-cause death was increased in people weighing less than 50 kg who were receiving 75–100 mg aspirin (HR 1·52 [95% CI 1·04–2·21], p=0·031). In participants aged 70 years or older, the 3-year risk of cancer was also increased by aspirin (1·20 [1·03–1·47], p=0·02), particularly in those weighing less than 70 kg (1·31 [1·07–1·61], p=0·009) and consequently in women (1·44 [1·11–1·87], p=0·0069).

Interpretation Low doses of aspirin (75–100 mg) were only effective in preventing vascular events in patients weighing less than 70 kg, and had no benefit in the 80% of men and nearly 50% of all women weighing 70 kg or more. By contrast, higher doses of aspirin were only effective in patients weighing 70 kg or more. Given that aspirin's effects on other outcomes, including cancer, also showed interactions with body size, a one-dose-fits-all approach to aspirin is unlikely to be optimal, and a more tailored strategy is required.

Funding Wellcome Trust and National Institute for Health Research Oxford Biomedical Research Centre.

Lancet 2018; 392: 387–99

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See Comment page 361

Centre for Prevention of Stroke and Dementia, Nuffield Department of Clinical Neuroscience, University of Oxford, Oxford, UK (Prof P M Rothwell FMedSci, Z Mehta DPhil); **Division of Preventive Medicine, Department of Medicine, Brigham and Women's Hospital, Boston, MA, USA** (Prof N R Cook ScD); **Harvard Medical School, Boston, MA, USA** (Prof N R Cook, Prof J M Gaziano MD); **Usher Institute of Population Health Sciences and Informatics, University of Edinburgh, Edinburgh, UK** (Prof J F Price PhD); **Institute of Cardiovascular Research, Vascular and Inflammatory Diseases Research Unit, University Division of Medicine and Therapeutics, Ninewells Hospital and Medical School, Dundee, UK** (Prof J F F Belch MD); **Istituto di Ricerche Farmacologiche Mario Negri, Milan, Italy** (M C Roncaglioni PhD); **and Department of Clinical Epidemiology, Hyogo College of Medicine, Nishinomiya, Japan** (T Morimoto MD)

Correspondence to:
Prof Peter M Rothwell, Centre for Prevention of Stroke and Dementia, Nuffield Department of Clinical Neuroscience, University of Oxford, John Radcliffe Hospital
Oxford OX3 9DU, UK
peter.rothwell@clneuro.ox.ac.uk

Introduction

Aspirin inhibits platelet aggregation by irreversible acetylation of the cyclo-oxygenase-1 (COX-1) enzyme, resulting in almost complete inhibition of thromboxane production by platelets.[1] However, aspirin yields only modest long-term reductions in vascular events,[2,3] which has led investigators to develop alternative antiplatelet drugs and to study the effects of their combination with aspirin and of dual treatment with anticoagulant drugs. Yet the disparity between the effect of aspirin on thromboxane production and its clinical benefits might be due, at least in part, to the one-dose-fits-all approach used in trials and clinical practice, particularly the use of low doses in individuals with higher bodyweight. Obesity and increased body-mass index (BMI) are associated with reduced inhibition of COX-1 by low doses of aspirin, probably due to increased platelet activation or turnover,[4,5] but high lean body mass could also reduce the systemic bioavailability of aspirin. Aspirin is rapidly de-acetylated by esterases in the intestinal wall, plasma, red blood cells,

The NEW ENGLAND JOURNAL of MEDICINE

REFERENCE 2: MEDICINE DIS WEEK

ORIGINAL ARTICLE

Delayed versus Immediate Cord Clamping in Preterm Infants

W. Tarnow-Mordi, J. Morris, A. Kirby, K. Robledo, L. Askie, R. Brown, N. Evans, S. Finlayson, M. Fogarty, V. Gebski, A. Ghadge, W. Hague, D. Isaacs, M. Jeffery, A. Keech, M. Kluckow, H. Popat, L. Sebastian, K. Aagaard, M. Belfort, M. Pammi, M. Abdel-Latif, G. Reynolds, S. Ariff, L. Sheikh, Y. Chen, P. Colditz, H. Liley, M. Pritchard, D. de Luca, K. de Waal, P. Forder, L. Duley, W. El-Naggar, A. Gill, J. Newnham, K. Simmer, K. Groom, P. Weston, J. Gullam, H. Patel, G. Koh, K. Lui, N. Marlow, S. Morris, A. Sehgal, E. Wallace, R. Soll, L. Young, D. Sweet, S. Walker, A. Watkins, I. Wright, D. Osborn, and J. Simes, for the Australian Placental Transfusion Study Collaborative Group*

ABSTRACT

BACKGROUND

The preferred timing of umbilical-cord clamping in preterm infants is unclear.

METHODS

We randomly assigned fetuses from women who were expected to deliver before 30 weeks of gestation to either immediate clamping of the umbilical cord (≤10 seconds after delivery) or delayed clamping (≥60 seconds after delivery). The primary composite outcome was death or major morbidity (defined as severe brain injury on postnatal ultrasonography, severe retinopathy of prematurity, necrotizing enterocolitis, or late-onset sepsis) by 36 weeks of postmenstrual age. Analyses were performed on an intention-to-treat basis, accounting for multiple births.

RESULTS

Of 1634 fetuses that underwent randomization, 1566 were born alive before 30 weeks of gestation; of these, 782 were assigned to immediate cord clamping and 784 to delayed cord clamping. The median time between delivery and cord clamping was 5 seconds and 60 seconds in the respective groups. Complete data on the primary outcome were available for 1497 infants (95.6%). There was no significant difference in the incidence of the primary outcome between infants assigned to delayed clamping (37.0%) and those assigned to immediate clamping (37.2%) (relative risk, 1.00; 95% confidence interval, 0.88 to 1.13; P=0.96). The mortality was 6.4% in the delayed-clamping group and 9.0% in the immediate-clamping group (P=0.03 in unadjusted analyses; P=0.39 after post hoc adjustment for multiple secondary outcomes). There were no significant differences between the two groups in the incidences of chronic lung disease or other major morbidities.

CONCLUSIONS

Among preterm infants, delayed cord clamping did not result in a lower incidence of the combined outcome of death or major morbidity at 36 weeks of gestation than immediate cord clamping. (Funded by the Australian National Health and Medical Research Council [NHMRC] and the NHMRC Clinical Trials Centre; APTS Australian and New Zealand Clinical Trials Registry number, ACTRN12610000633088.)

The authors' full names, academic degrees, and affiliations are listed in the Appendix. Address reprint requests to Dr. Tarnow-Mordi at williamtm@med.usyd.edu.au.

*A full list of investigators in the Australian Placental Transfusion Study Collaborative Group is provided in the Supplementary Appendix, available at NEJM.org.

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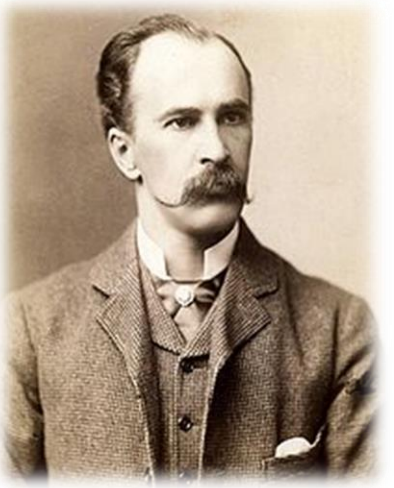
The Quotable OSLER



SIR WILLIAM OSLER

Perfection is to be Cultivated:

The artistic sense of perfection in work is another much-to-be-desired quality to be cultivated. No matter how trifling the matter on hand, do it with a feeling that it demands the best that is in you, and when done look it over with a critical eye, not sparing a strict judgement of yourself.

Exceptional Men cannot be judged by Ordinary Standards

13th September 2018

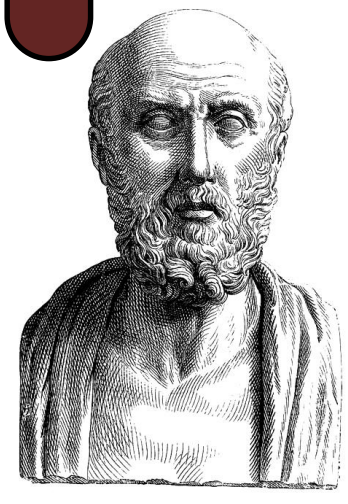
REF: The Quotable OSLER: Edited by Mark E Silverman, T. Jock Murray, Charles. S Bryan

It's story TIME

The Story of Medicine

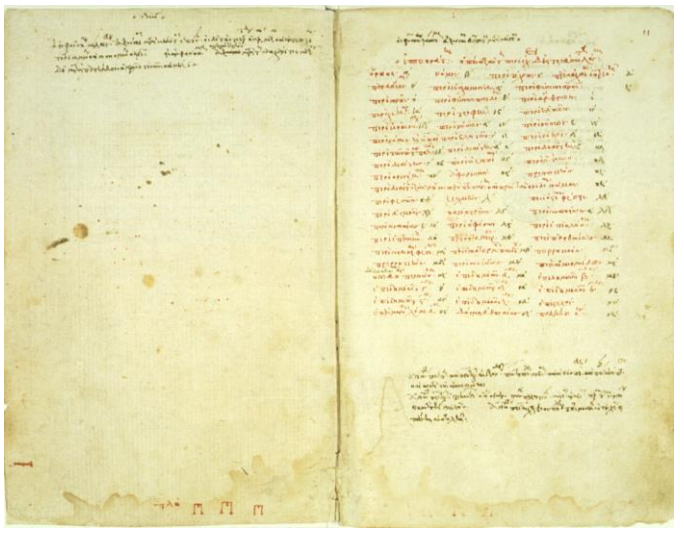
Concept of Disease: Humoral doctrine of 'dis-ease'

The humoral theory of disease is, perhaps, one of the best known of the ancient doctrines in the west. It is most closely associated with the Greek physician Hippocrates (c.460BC-c.375/370BC), and the later Graeco-Roman physician Galen (AD 129 – c.210). Hippocrates is often known as the 'Father of Wesern Medicine' and his compendium of sixty to seventy written works – the output of a number of scholars – is known as Hippocratic Corpus. There were various competing interpretations of the causes of disease but through Galen's influence the humoral theory (as well as his ideas on anatomy) dominated late antiquity and early medieval thought.



HIPPOCRATES

GALEN



Vaticanus graecus 277, 10v-11r: Table of contents in a fourteenth-century Hippocratic Corpus manuscript.

Picture of the Week

Campus is rich with many beautiful landscapes – Walkway near Golden Jubilee Block

Picture Courtesy; Dr. Rakesh Ramesh

DO YOU HAVE ANY INTERESTING CONTENT TO BE PUBLISHED?

Write to Dr. Avinash. H. U: ***avinash.hu@stjohns.in***