



**Science Media Centre**

*where science meets the headlines*

**Fiona Fox**  
***Chief Executive***





**Science Media Centre**

*where science meets the headlines*

## **Set up in 2002 after things went very wrong:**

- MMR & autism**
- GM crops**
- BSE**
- Animal research**

**Do we give our children more jabs than their bodies can cope with?**



American scientists find measles in autistic children  
**Another study raises questions over MMR**



Quitting safety record



**The Mirror**  
Delia's PERFECT PASTA  
Zoe to wed her Fatboy  
**THE PRIME MONSTER**  
Fury as Blair says: I eat Frankenstein food and it's safe



**WE FACING AN**  
**MMR: THE TRUTH**

For years, doctors pooh-pooed parents' fears over the MMR jab. When cases of autistic children rocketed by around 270% statistics were dismissed as fantasy. But now the evidence is growing too strong to ignore



by Melanie Phillips

**MMR safe? Baloney. This is one scandal that's getting worse**

**MP backs doctor in row over single dose MMR**



All's well in the country state at work that



**Evening Standard**

**Doctors make sure their children avoid MMR jab**

**Frankenstein food? You'll be made to like it**



**'I'd rather risk them being deaf or blind than becoming autistic'**

**FURY OVER GM CROP GO-AHEAD**

Soccer stars to face their sex case accusers

**Why I wouldn't give my baby the MMR jab**  
by Julia Carling

**Spin, lies and flawed science**

COMMENTARY



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## **Vision**

Policy decisions and public debate informed by accurate, evidence-based scientific information in the news media

## **Mission**

To make it easier for journalists to access the best science when stories hit the headlines and to ensure that more scientists engage with the media when stories hit the headlines

## **Values**

Reliable, fast, accurate, authoritative, independent, media savvy



Abbott  
Academy of Medical Sciences (AMS)  
Agriculture and Horticulture Development Board  
Alzheimer's Research UK  
Alzheimer's Society  
Association of the British Pharmaceutical Industry (ABPI)  
Association of Medical Research Charities (AMRC)  
Astellas  
AstraZeneca  
BASF  
Bayer  
Biochemical Society  
BioIndustry Association (BIA)  
Biotechnology and Biological Sciences Research Council (BBSRC)  
BNP Paribas  
BP  
British Ecological Society  
British Heart Foundation (BHF)  
British Pharmacological Society (BPS)  
British Retail Consortium (BRC)  
British Society for Immunology  
Cancer Research UK (CRUK)  
Cardiff University  
Celgene  
Chartered Institution of Building Services Engineers (CIBSE)  
Chemical Industries Association  
Cochrane  
Covestro  
Croplife  
Daily Mail and General Trust  
Department for Business, Energy and Industrial Strategy (BEIS)  
Diageo  
Du Pont  
EDF Energy  
Elsevier  
Engineering and Physical Sciences Research Council (EPSRC)  
Envigo  
European College of Neuropsychopharmacology (ECNP)  
Food and Drink Federation (FDF)  
Food Standards Agency  
Francis Crick Institute  
Gatsby Charitable Foundation  
GE Healthcare  
Genomics England  
GlaxoSmithKline  
Horizon Nuclear Power

Human Fertilisation and Embryology Authority (HFEA)  
Illumina  
Imperial College London  
Innovate UK  
Institute of Cancer Research  
Institution of Chemical Engineers (IChemE)  
Institute of Physics (IOP)  
Institutes of Physics and Engineering in Medicine (IPEM)  
Institution of Engineering and Technology (The IET)  
IoPPN  
John Innes Centre  
Kings College London (KCL)  
Lancaster University  
London School of Hygiene and Tropical Medicine (LSHTM)  
Marks & Spencer (M&S)  
Marshall UK  
McPin Foundation  
Medical Research Council (MRC)  
Medicines and Healthcare products Regulatory Agency (MHRA)  
Met Office  
MHR UK  
Microbiology Society  
Motor Neurone Disease Association (MNDA)  
MQ  
MSD  
Naji Foundation  
National Institute for Health and Care Excellence (NICE)  
*National Institute for Health Research (NIHR) (last funded 16/17)*  
National Nuclear Laboratory  
Natural Environment Research Council (NERC)  
Newcastle University  
Nuclear Decommissioning Authority (NDA)  
Nuclear Industry Association  
Nutrition Society  
Open University  
Oxitec  
Physiological Society  
PR Works  
Procter & Gamble (P&G)  
Queen Mary University of London  
Research Councils UK (RCUK)  
Rolls-Royce  
Rotary Club of Milton Keynes Grand Union  
Royal Academy of Engineering (RAEng)  
Royal College of Psychiatrists  
*Royal Pharmaceutical Society of Great Britain (RPSGB) (last funded in*

*2016-17)*  
Royal Society (RS)  
Royal Society of Biology (RSB)  
Science and Technology Facilities Council (STFC)  
Sellfield Sites  
Society for Applied Microbiology (SfAM)  
Society for Endocrinology  
Society for Radiological Protection  
Springer Nature  
Taylor and Francis  
UK Cleaning Products Industry Association (UKCPI)  
Unilever  
University College London (UCL)  
University of Aberdeen  
University of Birmingham  
University of Bristol  
University of Cambridge  
University of Durham  
University of East Anglia (UEA)  
University of Edinburgh  
University of Exeter  
University of Glasgow  
University of Leeds  
University of Leicester  
University of Manchester  
University of Nottingham  
University of Oxford  
University of Portsmouth  
University of Reading  
University of Sheffield  
University of York  
Wellcome Trust  
Wiley



## Engaging with the media

If you don't speak to the media, then someone else will

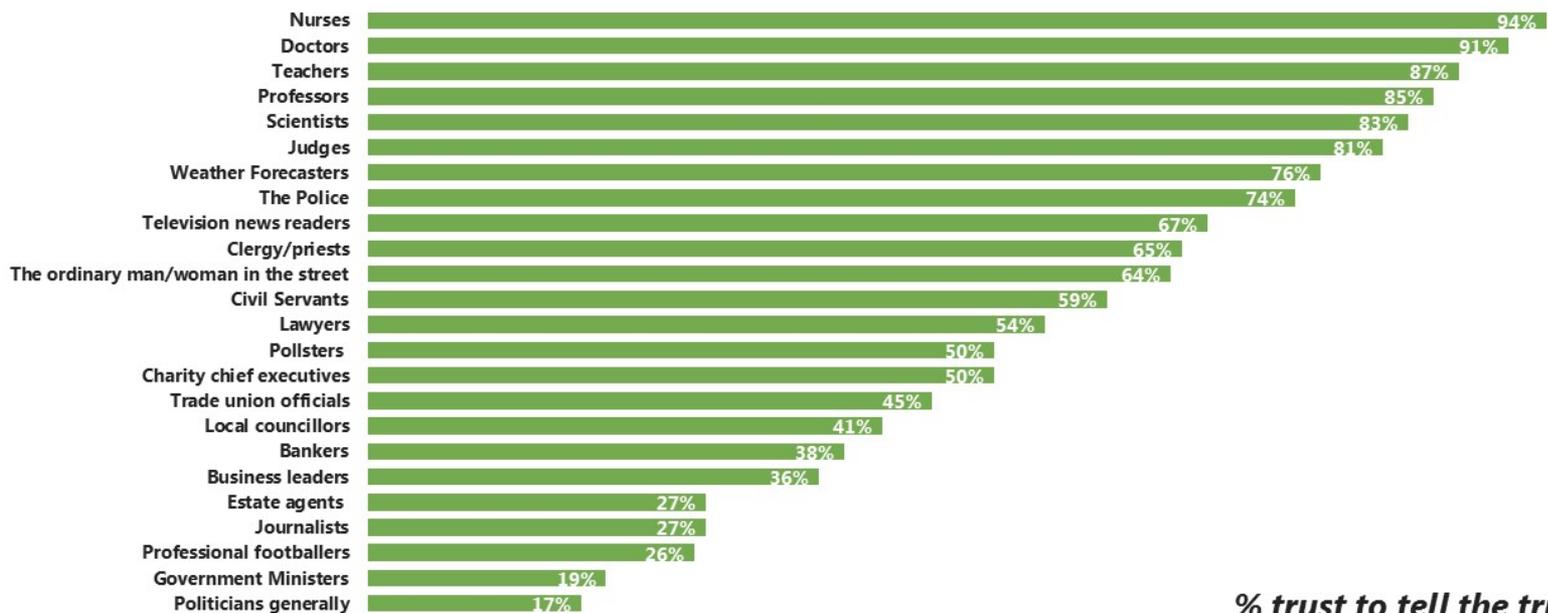
The 2014 BIS Public Attitudes to Science survey found:

- 89% adults say traditional media is one of their two most important sources of information about science:  
*i.e. newspapers, TV, radio and news websites*
- Only 6% adults say the same of social media, but this rises to 21% for 16-24 year olds

► **The public need to hear from the experts in mainstream media**

## Veracity Index 2017 – all professions overview

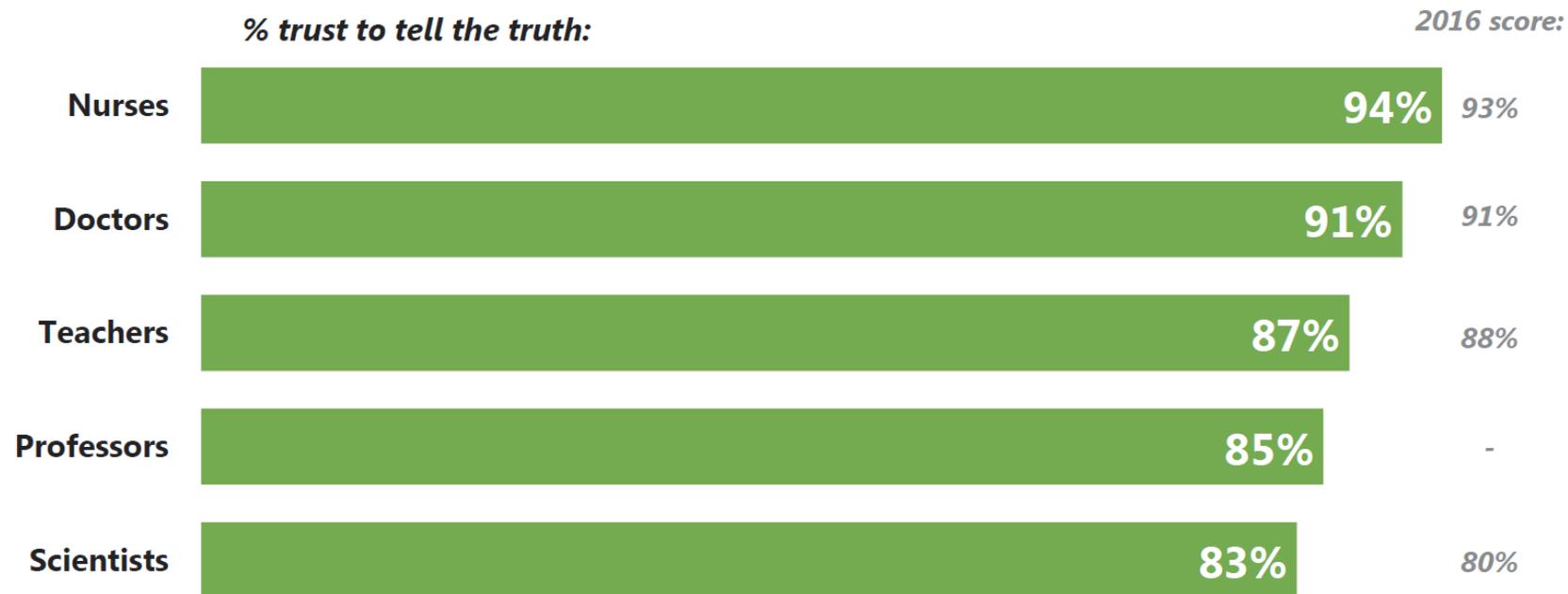
*“Now I will read you a list of different types of people. For each would you tell me if you generally trust them to tell the truth, or not?”*



**% trust to tell the truth**



## The five most trusted professions, 2017



**Trust in scientists has gone up 20 points since 1997**



## SMC Philosophy

***"We'll get the media to 'DO' science better  
when scientists 'DO' media better"***



## How?

- **Inject best science into every aspect of science reporting**
- **See science in the headlines as opportunity, as well as a threat**



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## Main Strategies

**Rapid Reactions** - responding to breaking stories

**Round-ups** - putting research into context

**Media Briefings** - scientists set the agenda



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**The SMC has pioneered  
ways of injecting more  
good science into  
breaking news**



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# Rapid Reactions

responding to breaking  
stories



Science Media Centre

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**Rapid Reaction - July 2017**

**Charlie Gard and  
mitochondrial disease**

**The Telegraph**

**Pope considers 'giving Charlie Gard a Vatican passport' to overcome rulings preventing treatment in Italy**

**EveningStandard.**

**Charlie Gard: Devastated parents launch court appeal to stop doctors withdrawing sick baby's life support**

**theguardian**

**Charlie Gard: Pope shows solidarity with parents of critically ill 10-month-old**

**BBC** 

**NEWS**

**Charlie Gard: Life support to be turned off, parents say**

**The Telegraph**

**Charlie Gard: Doctors can stop providing life support for sick baby as parents lose Court of Appeal fight**

**theguardian**

**Donald Trump offers help for critically ill baby Charlie Gard**



**INDEPENDENT**

**Charlie Gard: Donald Trump 'to confront Theresa May over terminally ill baby boy'**

**theguardian**

**Charlie Gard: European court rejects plea to intervene in life-support fight**

**MailOnline**

**Outpouring of grief worldwide for Baby Charlie Gard as his parents say 'their last goodbyes' to their son as doctors switch off his life support after eight-month battle**

**BBC** 

**NEWS**

**Charlie Gard parents to 'keep fighting'**



## This was a story whether we liked it or not

- A dying child and desperate parents
- A (perceived) race against the clock
- Story developing day by day
- World leaders weighing in
- Most importantly: Conflict
  - A media story always sets up sides
  - This is not always fair – but it's what we face
  - The public needed to be informed



## There were also some difficult questions that needed answering

- *If the alternative is death, surely any treatment is worth a go?*
- *Why not let the parents take him to the US? They have raised the money after all*

These were not unreasonable for reporters to ask.



## Science Media Centre Roundup

**Prof Dominic Wilkinson, Director of Medical Ethics at the Oxford Uehiro Centre for Practical Ethics, University of Oxford, said:**

“Any court decision is based on the evidence that is presented. The High Court made an ethically sound decision that Charlie Gard should not receive requested experimental treatment and that life support should be withdrawn. This was on the basis of convincing expert testimony that such treatment had no realistic prospect of helping him.

“However, **given the claims of new evidence about the possible effectiveness of this treatment it is appropriate, indeed vital, that the decision is reviewed.** The court needs to urgently assess whether there is, in fact, a realistic chance of helping Charlie with this treatment. If a review of this new evidence means that this treatment would be in Charlie’s best interests it should be provided, but that is by no means certain.”

**Dr Dan Hawcutt, Senior Lecturer in Paediatric Pharmacology at the University of Liverpool, said:**

“This is clearly a horrendous situation, and my every sympathy goes out to the young boy, his family, and the medical and nursing teams looking after him.

“I am a paediatric pharmacologist (so specialise in children’s drugs and treatments). I do not work in GOS, am not an expert in mitochondrial illnesses, and do NOT know any more about this patient than is in the press (summarised nicely in the GOS FAQ webpage).

“Apart from the doctors treating him, the parents, and the courts who have had access to his medical data, no one knows how severely affected by his condition this young boy is. The condition he has can cause irreversible damage to his brain (and other organs) – by which I mean are the cells there now dead, and no therapy can help. In order for the courts to make a decision, they will have had all this evidence presented to them. On each occasion it has been presented to a court, they have considered what is in his ‘best interests’ - and after all the evidence, decided it is not something that will help him.

“**The team who signed the letter, while having great expertise in mitochondrial illness, do not have any additional information about the patient than any other member of the public. As such, speculating about the potential impact of this treatment on him is problematic. It is very positive that GOS have once again looked to get the courts to help support such a difficult decision.**

“**It would seem that this could be easily solved by giving out more information about his condition, but the clinical team cannot, and rightly have not done this.** This would strip him of his confidentiality. It is therefore important to remember that this is not a PR battle. I cannot contribute to the debate, beyond repeating these generalities and commenting on public domain documents. No-one can.”



**Prof Alastair Sutcliffe, Professor of General Paediatrics at UCL, said:**

“Poor Charlie has a very rare disease in which the organelle which provides energy source used in daily cell life, called the mitochondrion, has a gene defect. The reason mitochondrial diseases are rare is because they are usually fatal. They show up in babies or young children more often than in later life. If not fatal they are progressive and cause serious neurological illnesses which cannot be cured.

“Charlie has one of those most severe of mitochondrial diseases and is untreatable. Medicine is advancing at a wonderful speed but some illnesses are still fatal.

“Gene therapy is in its infancy and is a promising field of human endeavour. But there are 6000 inheritable recessive conditions in humans – the prospect of them being cured is some time off.

“When a decision to withdraw life support is made for a baby this is not taken lightly and there are often tears in the medical and nursing staff looking after such a baby. But ultimately there is not a cure for many rare diseases. 40% of all rare diseases are in children under age 5 years, and of those most are fatal. The combined burden of such conditions in the UK is such that 1 in 300 people have a rare disease.

“Scientists and medical technology companies are making strides to find cures or treatments for many conditions. But alas, in the case of poor little Charlie, there are simply limits to medicine as we know it.”

**Prof Jonathan Montgomery, Professor of Health Care Law at University College London, said:**

“The court will quite probably want to consider whether there is new evidence that suggests there might be a significant chance of successful treatment for Charlie.

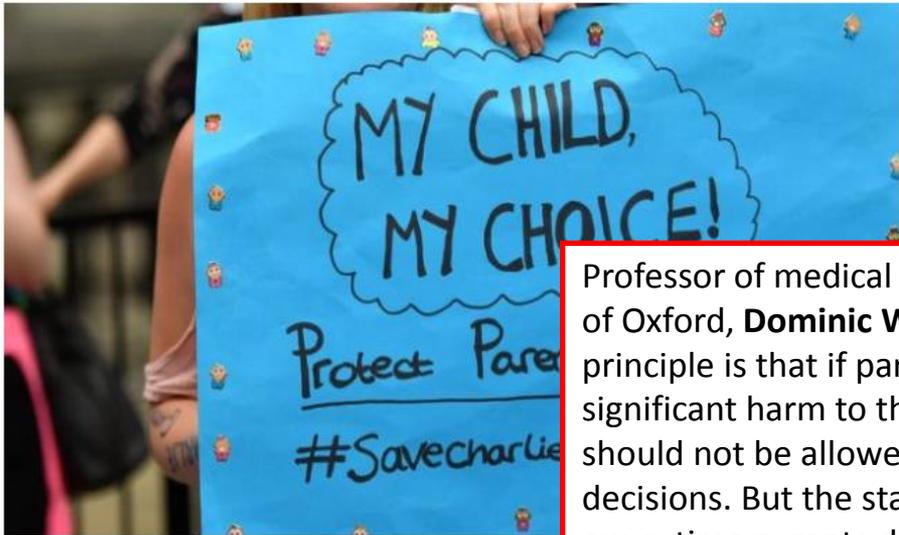
“However, it is not clear whether this evidence is new or whether the letter only offers a more optimistic assessment of previously available evidence. At least one signatory has indicated that his evidence was available to the family at the time of the trial. The judge may conclude that there is nothing to justify a reconsideration.

“Second, the court will be concerned that the prospect of benefit may be excessively and cruelly inflated. It is unclear how an estimate of a 10% chance could be made in relation to an untried treatment for a condition that has been said to affect only 16 people, and in relation to which no research has been undertaken, even in mice.”

## Reality Check: Why don't Charlie Gard's parents have the final say?

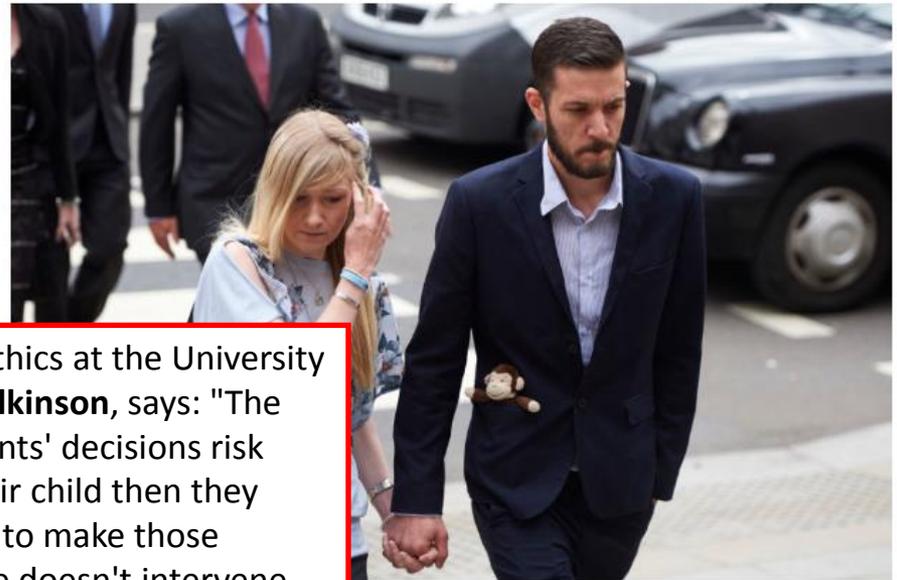
© 14 July 2017 | UK

f t b e Share



Parents, it is generally agreed, are allowed to choose for their children.

## Charlie Gard: US doctor to examine him in hospital



Parents are planning to take their son to the US for experimental treatment. (NIKLAS)

Professor of medical ethics at the University of Oxford, **Dominic Wilkinson**, says: "The principle is that if parents' decisions risk significant harm to their child then they should not be allowed to make those decisions. But the state doesn't intervene every time parents don't make the best decision."

The concept of parental responsibility is set out in law. The Children Act 1989 describes it as "all the rights, duties, powers, responsibilities and authority which, by law, a parent of a child has in relation to the child and his property."

f t e

## Consultant slams doctor's 'magic potion' treatment for Charlie Gard



Toby Meyjes for Metro.co.uk Sunday 16 Jul 2017 3:43 pm



Chris Gard and Connie Yates with their son Charlie Gard (Picture: PA)

**Alastair Sutcliffe**, professor of paediatrics, said that the 11-month-old's severe mitochondrial disease is 'untreatable' and that gene therapy 'is in its infancy'.



## Consultants throw cold water on US doctor's 'magic potion' for Charlie Gard



hear, move or cry  
FAMILY HANDOUT/PA WIRE

A British consultant has criticised the 'magic potion' treatment being offered by an American doctor who is flying to the UK tomorrow to examine Charlie Gard.

## Charlie Gard

## US doctor's intervention in Charlie Gard case 'raises ethical questions'

Critics say Michio Hirano should have been told by judge to see the critically ill baby in person before giving court his opinion



A banner hung outside the high court in London in support of Charlie Gard. Photograph: Carl Court/Getty Images

At the heart of the long legal battle to treat [Charlie Gard](#) or allow him to die was the figure of Dr Michio Hirano, an eminent doctor and expert in his field, but who had never seen the child he thought he could help. In the wake of the long and damaging case, ethicists say there are questions over the ability of medical experts to come to opinions without fully reviewing [the evidence](#) and seeing the patient face to face.

Jonathan Montgomery, professor of health care law at University College London, said there could be a case for a judge stipulating that a medical expert must see the patient before giving their opinion in court.

Hirano gave evidence to the high court in April in front of Mr Justice Francis. "Should the judge have directed that the expert needed to see the patient?" Montgomery asked.

**Jonathan Montgomery**, professor of health care law at University College London, said there could be a case for a judge stipulating that a medical expert must see the patient before giving their opinion in court.

Hirano gave evidence to the high court in April in front of Mr Justice Francis. "Should the judge have directed that the expert needed to see the patient?" Montgomery asked.

We will never know whether or not it would have changed the evidence he gave at that time, but it would give us more confidence in that evidence if he had come and examined Charlie himself," Montgomery said.

**Dominic Wilkinson**, a consultant neonatologist and professor of medical ethics at the University of Oxford, pointed out that every expert who had seen Charlie had sided with the Great Ormond Street team in believing nothing could be done for him. That included an independent medical expert in mitochondrial diseases from Southampton University who was asked by the parents for a second opinion. It also included Charlie's court-appointed independent guardian. Wilkinson said that if Hirano and the other international doctors who proposed nucleoside therapy for Charlie had actually seen him, "who knows



819

Sarah Boseley Health editor

Tuesday 25 July 2017 20.04 BST



## Many journalists wanted to act responsibly:

“Views from both perspectives [medical & ethical] would be appreciated. The Trump/Pope interventions has opened up a whole new front, and it would be useful to get some neutral views.”

“We are desperate for outside opinions on the medical/legal/ethical aspects of the case. We'd prefer quotes to opinion pieces.”

“Yes, this definitely isn't going away. So if anyone who actually knows has a view on what the experimental treatment is, how it differs to the one that US kid who was all over TV yesterday, that would be helpful.”

“I want to cover this responsibly but I need experts to do that.”

“I can easily get rentquotes for the other side but need some good people speaking for the hospital and explaining their position.”



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**13 August 2008**

# **Prince Charles warns of 'GM crops catastrophe'**

***Rapid Reaction***



ONLINE BEIJING OLYMPICS THE BEST COVERAGE OF ALL THE ACTION TELEGRAPH.CO.UK/OLYMPICS

# The Daily Telegraph



## MOURINHO

MY FANTASY FOOTBALL TEAM WILL BEAT HANSEN'S CAN YOU BEAT MINE? THREE DAYS LEFT TO ENTER

SEE SPORT P16



50% SAVINGS ON SHORT BREAKS PAGE 17

www.telegraph.co.uk

BRITAIN'S BEST-SELLING QUALITY DAILY

Wednesday, August 13, 2008 No 47,648 80p

# Earth faces GM crops catastrophe, warns Prince

Multi-national firms conducting a 'gigantic experiment that has gone seriously wrong'

EXCLUSIVE

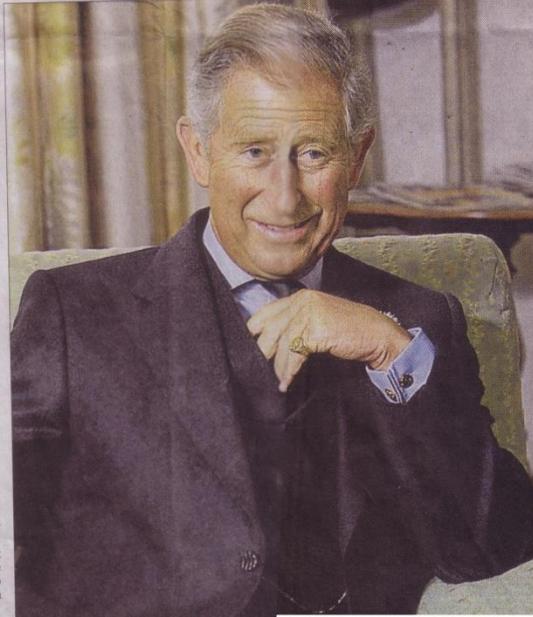
Jeff Randall

talks to the Prince of Wales about his fears for the future



only way to guarantee food for the world's growing population as the planet is affected by climate change.

The Prince will be braced for the biggest outpouring of criticism from scientists since he accused genetic engineers of taking us into "realms that belong to God and God alone" in an article in *The Daily Telegraph* in 1998.



PAUL GROVER

## Savers to suffer as inflation hits 4.4pc

By Harry Wallop  
Consumer Affairs Correspondent

SAVERS will be some of the hardest hit by rising inflation, analysts warned yesterday.

The cost of living has doubled in the past six months to more than twice the Government's target of two per cent.

The Consumer Price Index (CPI) – the Government's preferred measure of inflation – rose from 3.8 per cent in June to 4.4 per cent in July.

The rise shocked economists, who warned that the Bank of England would find it impossible to cut interest rates in the near future amid fears that inflation could reach five per cent later this year.

It also led to warnings that millions of people were suffering a drop in living standards. Families' finances are being squeezed harder than at any time since 1991.



STYLE

Emma Soames

Why Zara rules the high street

P27



NEWS

David Cameron



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## Science Media Centre Press Release

**FOR IMMEDIATE RELEASE 13 August 2008**

### Experts react to Prince Charles' statements about GM

**Ian Denholm** - Head of Plant and Invertebrate Ecology at Rothamsted Research Institute

**Dr Alan M. Dewar** - independent entomologist

**Dr Giles Oldroyd** - Research Group Leader at the John Innes Centre

**Professor Alison M. Smith OBE** - Research Group Leader at the John Innes Centre

**Prof Rosie Hails** - ecologist at the NERC Centre For Ecology and Hydrology

**Prof Johnjoe McFadden** - molecular geneticist at the University of Surrey

**Prof Ottoline Leyser FRS** - plant geneticist at the University of York

**Prof Jim Dunwell** - biological scientist at the University of Reading



Idiot box represented statistically, over t  
.co.uk/crossword  
 (fill in answer here and submit)

Telegraph

Home	News	Sport	Business	Travel	Jobs	Motoring	Telegraph TV	SEARCH
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Earth home

Earth news

Earth watch

Comment

Charles Clover

Greener living

Earth Pulse

Science

Messageboards

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Announcements

Culture

Blogs

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Dating

Digital Life

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Education

Expat

Family

Fantasy Games

Fashion

Features

Food & Drink

Football

Gardening

Health

Horoscopes

Lifestyle

My Telegraph

Obituaries

Promotions

## Prince Charles accused by scientists of abusing his position over GM food comments

By Andrew Pierce and Caroline Gammell  
 Last Updated: 6:01pm BST 13/08/2008

The Prince of Wales has been plunged into an extraordinary row with scientists after they accused him of seriously abusing his position over his comments on GM food.

- **Prince Charles sparks debate over GM crops claims**
- **Prince Charles warns GM crops risk causing biggest-ever environmental disaster**
- **The Prince of Wales: 'If that is the future, count me out'**

Scientists reacted angrily to the warning from the Prince in his interview in the Daily Telegraph that GM crops risked causing the world's worse environmental disaster.

MPs accused him of being a "luddite" who risked inflicting starvation on millions of people in Africa.

But the Prince will be heartened by the revelation that there is now only one GM trial ongoing in Britain - in Cambridgeshire - and there are no plans to licence any more.

Some 54 have been conducted since they were approved by the government in 2000.

Prof Ottoline Leyser, a plant geneticist at the University of York who is a Fellow of the Royal Society, said: "I am disappointed with the whole environmental movement.

"This is rabid anti GM. Misguidedly demonising GM results in the real issues being sidelined, creating the very problems that Prince Charles is trying to address.

"There are several issues that have been muddled together, resulting in serious dangers to the future direction of agriculture.



Listen: The Prince of Wales speaks out



guardian.co.uk

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[Environment](#) > [GM crops](#)

# Scientists condemn Prince Charles's attack on GM crops

Experts argue that Prince Charles's response to GM technology is 'showy' 'misses the point' and is 'morally indefensible'

Staff writers

guardian.co.uk, Wednesday August 13 2008 17:33 BST

[Article history](#)



**A** larger | smaller

Scientists have lined up to condemn Prince Charles's passionate attack on genetically modified crops and industrial farming.

While his vivid vision of "conducting a gigantic experiment with nature ... which has gone seriously wrong" has garnered support from some, including Friends of the Earth and the Soil Association, researchers have

**Environment**  
GM crops · Food

[More news](#)



News Site of the Year | The 2008 Newspaper Awards

# TIMES ONLINE

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- UK NEWS | WORLD NEWS | POLITICS | ENVIRONMENT | WEATHER | TECH & WEB | TIMES ONLINE

Where am I? > Home > News > UK News > Science News

From **The Times**  
August 14, 2008

## Scientists condemn 'ill-informed, negative' Prince over GM crops warning



**TIMES RECOMMENDS**

- > Somali single mother excels in Britain
- > [Cypriots look to rid island of British fugitives](#)
- > Bedbugs thrive thanks to our busy lifestyles

MARS PHOENIX MISSION



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## Round Ups

Putting research into  
context



- **we receive press releases from the top 10-15 journals**
- **identify stories that can be sensationalised or mis-reported**
- **seek 3<sup>rd</sup> party experts to provide context**



**Science Media Centre**  
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**5 July 2013**

**Link between protein in cow's milk and autism**

***Roundup***

## **New research strengthens link between common cows' milk protein and serious neurological disorders**

British healthcare professionals were warned last night of the dangers of a protein in cows' milk that has been labelled a 'devil' by some academics. At an event held at the Cumberland Hotel, London, a group of over 50 health care professionals, including dietitians, GPs and nutritionists were presented with **compelling new research findings which indicate a direct link between consumption of the A1 milk protein and exacerbated symptoms of neurological disorders such as autism and schizophrenia.**

Dr Malav Trivedi, an award winning researcher at NorthEastern University, Massachusetts, presented his findings for the first time in the UK at the event, and added an exciting new argument to the debate around the negative health implications of A1 beta casein protein, which is present in the majority of cows' milk consumed in the UK. Dr Trivedi's research focused in particular on the proven effects of BCM7, a naturally occurring substance produced by the A1 protein, on the neural pathways, and proposed that eliminating A1 protein from diets could dramatically reduce the symptoms of autism and other inflammatory disorders.



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## Science Media Centre Roundup

**UNDER EMBARGO UNTIL 00.01 UK TIME on FRIDAY 5<sup>th</sup> JULY**

### Expert reaction to press release on non-peer reviewed research that suggests a link between protein in cow's milk and autism

**A spokesperson for the National Autistic Society said:**

“There is little scientific evidence demonstrating the efficacy of restrictive diets in supporting people to directly ‘manage’ their autism, rather than to treat other conditions.

“Dietary restrictions can lead to poor nutrition, and so should only be adopted following advice from a medical professional.”

**Prof Mick O'Donovan, Deputy Director of Cardiff University's MRC Centre for Neuropsychiatric Genetics & Genomics, said:**

“The work mentioned in this press release does not seem to have been published so it is impossible to assess the claim in any detail. Not being published, it has also presumably not been tested by peer review...”

**Prof Dorothy Bishop, Professor of Developmental Neuropsychology, University of Oxford, said:**

“People should be extremely sceptical of any press release that discusses a major health issue like autism yet fails to reference any verifiable data that back up the strong public health claims. It is impossible to evaluate the dramatic claims that are made by Dr Trivedi in the absence of any peer-reviewed data...”

**Prof Jeremy Turk, Consultant Child & Adolescent Psychiatrist, Southwark Child & Adolescent Mental Health Neurodevelopmental Service, said:**

“I have never heard of this suggestion, know of no scientific evidence to support it, and would be extremely sceptical about the proposed link. Cow’s milk is an extremely nutritious and important component of our diet, is generally well tolerated, and I would fear the possible adverse effects of reductions in its consumption as a consequence of publicity associated with the reported suggested research.”

**Prof Jean Golding, a Medical Research Council funded researcher based at University of Bristol, and Emeritus Professor of Paediatric & Perinatal Epidemiology, said:**

“These findings were presented at a non-scientific seminar. Obviously if cow’s milk represents any kind of health risk this is important - but without strong evidence, preferably in the form of a randomised controlled trial, it is dangerous to take this seriously...”



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**Coverage: 0**

## Journalists comments in response to the Roundup:

“FYI I'm not touching this with a barge pole...”

“Ha, how extraordinary! Thank you... I have just hit delete!”

“Good response. Pretty sure we've all agreed to kill it off, so the experts should hopefully be assured by that.”

“Wasn't surprised to see that he was funded by A2 Milk. Was my suspicion but didn't see that when I looked at his profile.”



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**9 September 2015**

# **Human transmission of amyloid-Beta pathology as published in Nature**

*Roundup*

## LETTER

doi:10.1038/nature15369

# Evidence for human transmission of amyloid- $\beta$ pathology and cerebral amyloid angiopathy

Zane Jaunmuktane<sup>1</sup>, Simon Mead<sup>2,3,4</sup>, Matthew Ellis<sup>3</sup>, Jonathan D. F. Wadsworth<sup>2,3</sup>, Andrew J. Nicoll<sup>2,3</sup>, Joanna Kenny<sup>2,4</sup>, Francesca Launchbury<sup>3</sup>, Jacqueline Linehan<sup>2</sup>, Angela Richard-Loendt<sup>3</sup>, A. Sarah Walker<sup>5</sup>, Peter Rudge<sup>2,4</sup>, John Collinge<sup>2,3,4</sup> & Sebastian Brandner<sup>1,2,3</sup>

More than two hundred individuals developed Creutzfeldt–Jakob disease (CJD) worldwide as a result of treatment, typically in childhood, with human cadaveric pituitary-derived growth hormone contaminated with prions<sup>1,2</sup>. Although such treatment ceased in 1985, iatrogenic CJD (iCJD) continues to emerge because of the prolonged incubation periods seen in human prion infections. Unexpectedly, in an autopsy study of eight individuals with iCJD, aged 36–51 years, in four we found moderate to severe grey matter and vascular amyloid- $\beta$  (A $\beta$ ) pathology. The A $\beta$  deposition in the grey matter was typical of that seen in Alzheimer's disease and A $\beta$  in the blood vessel walls was characteristic of cerebral amyloid angiopathy<sup>3</sup> and did not co-localize with prion protein deposition. None of these patients had pathogenic mutations, *APOE*  $\epsilon$ 4 or other high-risk alleles<sup>4</sup> associated with early-onset Alzheimer's disease. Examination of a series of 116 patients with other prion diseases from a prospective observational cohort study<sup>5</sup> showed minimal or no A $\beta$  pathology in cases of similar

(Wilhelmi) was common to all patients who developed iCJD and size-exclusion chromatography, used in non-Wilhelmi preparation methods, may have reduced prion contamination<sup>1</sup>. As of 2012, a total of 450 cases of iatrogenic CJD have been recognized worldwide after treatment with c-hGH or gonadotropin (226 cases), transplantation of dura mater (228) or cornea (2), and neurosurgery (4) or electroencephalography recording using invasive medical devices (2)<sup>2</sup>. In France, 119/1,880 (6.3%) recipients developed iCJD, in the UK 65/1,800 (3.6%) and in the USA 29/7,700 (0.4%)<sup>2,14</sup>.

Since 2008, most UK patients with prion disease have been recruited into the National Prion Monitoring Cohort study<sup>5</sup>, including 22 of 24 recent patients with iatrogenic CJD (iCJD) related to treatment with c-hGH over this period, all of whom necessarily have very long incubation periods. Of this group of patients with iCJD, eight patients (referenced nos 1–8, Supplementary Information) aged 36–51 years, with an incubation period from first treatment to onset of 27.9–38.9 years (mean 33 years) and from last treatment to onset of 18.8–30.8 years



## **This study**

- **Good science**
- **But only studied eight autopsied patients**
- **Findings were “suggestive” so the study would need to be replicated**
- **We feared that the coverage result would be that “Alzheimer’s is catching” headlines**



## Science Media Centre Roundup

**EMBARGOED UNTIL 6pm UK TIME on WEDNESDAY 9 SEPTEMBER 2015**

### Expert reaction to evidence for human transmission of amyloid-Beta pathology, as published in Nature\*

**Prof Nigel Hunt, Dean of the Faculty of Dental Surgery, said:**

“This study alone does not provide any conclusive proof that Alzheimer’s disease can be transmitted from person to person. Dental practice carries no more risk than any invasive clinical procedure. This is new research in a field of relatively recent scientific enquiry that needs to be taken seriously with further research to inform any changes to all clinical and dental practice.

“In dentistry patients are protected from infection risks through the widespread use of single use instruments. All dental instruments that are reused are covered either by guidance from NICE or guidance about decontamination in primary care dental practices. The findings from today’s study must be considered by all relevant organisations to ensure current guidance is as robust as it needs to be.”

**Prof. David Allsop, Professor of Neuroscience, University of Lancaster, said:**

“I can imagine that this might result in a lot of misleading headlines. What the paper shows is that some people treated with human growth hormone who subsequently went on to develop CJD also show evidence of  $\beta$  amyloid deposits, a key feature of Alzheimer’s disease, in their pituitary glands. What the paper does NOT demonstrate is whether these people would have gone on to develop Alzheimer’s disease had they lived long enough (they died of CJD) or that their pituitary  $\beta$  amyloid deposits were caused by contamination of growth hormone with a ‘rogue’ form of  $\beta$  amyloid. One possible (and indeed likely) explanation is that deposition of the ‘prion protein’ in CJD can result, in some cases, in the co-accumulation of  $\beta$  amyloid.

“It is very well known from other studies that one type of rogue protein (in this case the prion protein) can predispose to accumulation of another (in this case  $\beta$  amyloid). There is no evidence that Alzheimer’s disease can be transmitted from one person to another, or through use of contaminated surgical instruments, and these results should be interpreted with a great deal of caution.”



**Dr Tara Spire-Jones, Reader and Chancellor's Fellow, Centre for Cognitive and Neural Systems, University of Edinburgh, said:**

"This study does not imply that Alzheimer's could be transmitted via dental procedures. The study was based on 8 people NONE of whom had Alzheimer's. Compare that to the thousands of people who have been studied finding no link of Alzheimer's being transmissible. I can find zero reports in the scientific literature of this type of Alzheimer's pathology being present in teeth roots so it is highly unlikely that there will be seeds present on dental instruments. This study is scientifically important as it suggests that if exposed to brain tissue from patients with Alzheimer's pathology, there is a possibility of seeding that type of brain pathology in other people, but even this possibility will need to be confirmed in other studies. And this pathology alone is not Alzheimer's disease, only one of the associated brain changes."

**Prof. Masud Husain, Professor of Neurology & Cognitive Sciences, University of Oxford said:**

"There is no reason based on these findings to worry about catching Alzheimer's disease from dental procedures."

**Dr Eric Karran, Director of Research at Alzheimer's Research UK, said:**

"While it will be important for further studies to explore any potential implications of today's research, there is currently no evidence to suggest that the amyloid protein could be passed through dental surgery or blood transfusions."

**Prof. David Allsop, Professor of Neuroscience, University of Lancaster, said:**

"There is no evidence that Alzheimer's disease can be transmitted from one person to another, or through use of contaminated surgical instruments, and these results should be interpreted with a great deal of caution."

**Prof. Masud Husain, Professor of Neurology & Cognitive Sciences, University of Oxford said:**

**"While this is a beautiful piece of investigative medicine, we have to keep the findings in context.** They concern a rare group of people who sadly developed CJD. They didn't die of Alzheimer's disease and the findings in their brains show only some of the features observed in Alzheimer patients. **These results certainly do not provide sufficient evidence to believe Alzheimer's disease is a transmissible illness.** The authors argue that the prion (CJD) pathology and the amyloid ('Alzheimer') pathology are effectively independent. In other words, they suggest that the prion transmission did not trigger the deposition of amyloid. Stronger evidence would be required to accept such a proposal. Crucially, a previous analysis of a population of patients who developed CJD in this unfortunate way has not revealed a higher risk of developing Alzheimer's disease."



# SHOCK CLAIM IN NEW STUDY

# YOU CAN CATCH ALZHEIMER'S

Fears 'protein trigger' could spread in surgery & transfusions

BY ANDREW GREGORY

**ALZHEIMER'S** could be transmitted to patients on instruments during surgery, scientists have warned.

A study found the protein behind the disease survives sterilisation.

Research chief Professor John Collinge said: "It will potentially stick to metal surfaces."

Blood transfusions may also be affected.

This is the first ever evidence of human-to-human spread.

**FULL STORY: PAGE 4**



But Alzheimer's Society research director Dr Doug Brown insisted: "There remains no evidence the disease can be transmitted via medical procedures."

# 'SEEDS' OF ALZHEIMER'S 'MIGHT BE TRANSFERRED ON MEDICAL INSTRUMENTS'

By John von Radowitz, Press Association Science Correspondent

Seeds of Alzheimer's disease can potentially attach to surgical instruments and be transferred from one person to another during operations, a new study suggests.

The findings provide the first evidence of dementia-causing microscopic protein fragments.

Health officials and experts were quick to reassure the public.

Dr Eric Karran, chief scientist at the charity Alzheimer's Research UK, said: "The biggest risk factor for Alzheimer's is age, along with genetic and lifestyle factors. If further research was to confirm a link between historical tissue contamination and Alzheimer's, it would only likely be relevant to a tiny proportion of the total number of people affected."

Dr Doug Brown, director of research at Alzheimer's Society, said: "Injections of growth hormone taken from human brains were stopped in the 1980s. There remains absolutely no evidence that Alzheimer's disease is contagious or can be transmitted from person to person via any current medical procedures."

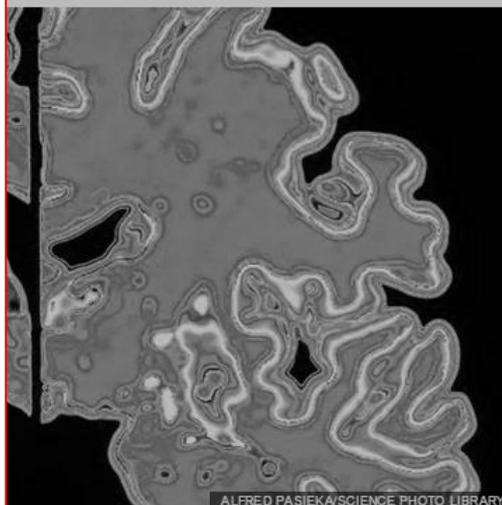
the leading journal Nature. Information about the safety of some medical tests. Blood donations are not considered a threat as a precaution, say the experts. It was only very while investigating a rare form of dementia (iCJD), a brain-destroying condition that can be spread by surgical instruments and procedures.

## 'Transmittable Alzheimer's' concept raised

Dr Eric Karran, director of research at Alzheimer's Research UK, said: "While the findings sound concerning, it's important to remember that human-derived hormone injections are no longer used and were replaced with synthetic forms since the link to CJD was discovered in the 1980s.

"Current measures in place to limit contamination with the prion protein and minimise CJD risk from hospital procedures are very rigorous and the risk of developing CJD from surgical contamination is extremely low.

"The biggest risk factor for Alzheimer's is age, along with genetic and lifestyle factors. If further research was to confirm a link between historical tissue contamination and Alzheimer's, it would only likely be relevant to a tiny proportion of the total number of people affected."



ALFRED PASIEKA/SCIENCE PHOTO LIBRARY

Alzheimer's during certain medical procedures, such as human growth hormone injections, speculate in Nature.

autopsy studies in eight patients. The findings are inconclusive and do not mean

People cannot catch Alzheimer's from coming into contact with other people with the condition.

People cannot catch Alzheimer's from coming into contact with other people with the condition.

# ALZHEIMER'S LINK TO BLOOD TRANSFUSIONS

British scientists say disease could be passed on du

By Fiona Macrae and Sián Boyle

ALZHEIMER'S disease can be caught from blood transfusions, operations and



Richard Kerr, president of the Society of British Neurological Surgeons and a consultant brain surgeon, said: 'This is new information in a field of highly complex scientific enquiry that needs to be taken seriously. With such a small study, however, further research is needed.'

Dr Doug Brown, of the Alzheimer's Society, said the findings were 'interesting' but contain 'too many unknowns'. He added: 'There remains absolutely no evidence that Alzheimer's disease is contagious or can be transmitted from person to person via any current medical procedures.'

people who had died from CJD, the human form of mad cow disease, when he stumbled on the link with Alzheimer's. The patients had caught CJD after being given injections of human hormones as children to treat growth problems. Prof Collinge found a protein that is a hallmark of Alzheimer's in the brains of seven of the eight patients. In four, levels of the memory-robbing amyloid beta protein were

Turn to Page 2

Blooming: The Queen surrounded by well-wishers in Scotland on the day

63 glorious years and st

SEE PAGES 12&13

# Alzheimer's could be passed on by humans

Threat from blood transfusions and operations, study reveals

Oliver Moody Science Correspondent

The trigger for Alzheimer's disease can be passed between people through contaminated surgical tools, a landmark study suggests.

Until now, scientists believed that the disease was mostly a consequence of old age and partly influenced by genes. The new findings raise the prospect that patients could develop dementia as a result of a hospital operation, a blood transfusion or dental work such as root canal treatment.

The study, published in *Nature* yesterday, is the first evidence that the

"seeds" of Alzheimer's — microscopic protein molecules — could be transmitted between humans. The discovery was described by the study's lead scientist as a paradigm shift in the understanding of how Alzheimer's develops.

John Collinge, professor of neurology at University College London, said: "You could have three different ways you have these protein seeds generated in your brain. Either they happen spontaneously — an unlucky event you age — or you have got a faulty gene or you've been exposed to a medical accident. That's what we're hypothesising. It's a paradigm shift." More than

500,000 people in the UK live with Alzheimer's, which accounts for just

dead bodies had advanced physical signs of Alzheimer's when they died in

Roger Morris, professor of molecular neurobiology at King's College London, said the Alzheimer's seeds had spread through a very specific medical procedure that had not been carried out in Britain for 30 years.

"Does this *Nature* paper . . . presage a new era in which Alzheimer's disease changes from being an isolated disease of each individual as they age to becoming infectious and able to attack everyone, young and old? No," he said.



Science Media Centre

*where science meets the headlines*

## **Media Briefings**

Background briefings

News briefings

Expert encounters

Emergency briefings



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**As the row about statins continued to brew, the SMC thought:**

**“Right – let’s bring the best evidence and the best scientists to bear on it.”**



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**1<sup>st</sup> July 2014**

# **The Science of Statins**

***Background Briefing***



Science Media Centre

where science meets the headlines

## Science Media Centre background briefing

**What?** The Science of Statins

**When?** Tuesday 1<sup>st</sup> July 2014

**Where?** 5<sup>th</sup> Floor, Wellcome Collection, 183 Euston Road, NW1 2BE

The row over the *BMJ* claims about side effects of statins and the angry response from some to NICE's proposal to extend the drugs to people with a lower risk has led one columnist to refer to 'the Statin Wars'. But has the truth become the first casualty of this particular war? As some doctors make claims about risks of patients on statins developing diabetes, cataracts, muscle disease etc, others argue the benefits of these cheap drugs outweigh the risks. In the middle of this dispute lie the public and patients confused about where the evidence actually lies.

Speakers will include:

***Prof Peter Weissberg***, Medical Director, British Heart Foundation

***Prof Liam Smeeth***, Professor of Clinical Epidemiology, Department of Non-Communicable Disease Epidemiology, London School of Hygiene and Tropical Medicine

***Prof Adam Timmis***, Professor of Clinical Cardiology, Barts and the London NHS Trust

***Prof Rory Collins***, Head of the Nuffield Department of Population Health and BHF Professor of Medicine & Epidemiology

***Prof George Davey Smith***, Professor of Clinical Epidemiology, University of Bristol

***Prof John Deanfield***, BHF Professor of Cardiology, UCL



## Briefing attendees

Jo Willey	Express
Nigel Hawkes	BMJ
Helen Briggs	BBC
Jane Dreaper	BBC
Ben Spencer	Daily Mail
Charlie Cooper	Independent
Adam Brimelow	BBC
Sarah Boseley	Guardian
John von Radowitz	PA
Laura Mulholland	BBC Newsnight
Laura Donnelly	Telegraph
Chris Smyth	Times
Tom Feilden	BBC Today
Catherine de Lange	New Scientist
Rachael Buchanan	BBC

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TIPS FOR  
SUCCESS**

SEE PAGE 7

**KATE LOOKS  
GROOVY WITH  
NEW 1970s  
HAIRSTYLE**

SEE PAGE 3

**STATINS ARE NO  
RISK TO HEALTH****Top heart doctors  
give the drug final  
seal of approval**

By Jo Willey Health Editor

**STATINS** are safe and "the jury is no longer out" on whether the benefits outweigh the risks, leading heart experts said yesterday.

Research over 25 years has provided clear and definitive evidence to back the use of the cholesterol-lowering drugs, they said. The heart pills have been mired in controversy after scare stories about their dangers. These were later retracted.

In May, researchers were forced to withdraw "misleading" claims about statins published in the respected British Medical Journal which overestimated side effects 20-fold.

They later accepted the research, which claimed the drugs caused higher rates of diabetes, tiredness and muscle pain than had previously been scientifically proven, was incorrect.

At the time, medics warned that thousands of people could be needlessly putting their lives at risk if they stopped taking the life-saving pills because of the false claim that statins had severe side effects in a fifth of patients.

Now six leading scientists have joined forces to declare the evidence is "substantial" that the pills are safe. However, they say people should not rely on the medication as a "quick fix" but

**HUNT FOR  
MADELEINE  
BRITISH  
POLICE  
START TO  
QUESTION  
FOUR  
SUSPECTS**

SEE PAGE 2

**Statin benefits 'outweigh risks'**

FROM PAGE ONE

be encouraged to adopt healthier lifestyles to lower heart attack and stroke risk and make an informed choice with a doctor about statins.

Professor Sir Rory Collins, head of the Nuffield Department of Population Health at Oxford University, said: "Side effects could put off high-risk patients from taking their life-saving medication. Major vascular events such as heart attacks or stroke are life-changing events for many people so to avoid these is important.

**Aches**

"The benefits outweigh the risks. The evidence is substantial that the treatment is safe but it remains a choice but one they can only make if they are not misinformed."

He said it was common for older people taking statins to suffer aches and pains but trials had shown these were just as common in those not taking the drugs.

George Davey Smith, professor of clinical epidemiology at the University of Bristol, said 25 years of research had provided definitive and clear evidence to support the use of statins. He said: "The jury is no longer out on the cost/benefit

**KICKING BAD HABITS CAN REVERSE HEART DISEASE**

**HEART** disease can be halted or even reversed in middle age by ditching an unhealthy lifestyle, a study revealed yesterday.

It is never too late to kick bad habits and make simple changes, it showed. Quitting smoking, cutting back on drink, taking up exercise and eating a healthier diet can undo heart damage and slash the risk of a heart attack.

But people who drop healthy habits and pick up more bad ones as they age are at risk of doing significant damage to their heart health, the findings of the US study published in the journal *Circulation* showed.

Professor Bonnie Spring, of Chicago's Northwestern University, said: "It's not too late. You're not doomed if you've hit

young adulthood and acquired some bad habits. You can still make a change and it will have a benefit for your heart."

The research concluded that changes made in your 30s and even 40s can have a big impact.

Study volunteers were assessed at ages 18 to 30 then 20 years later. The findings debunked two myths, said Prof Spring. "The first is that it's nearly impossible to change patients' behaviours. Yet, we found that 25 per cent of adults made healthy lifestyle changes on their own.

"The second myth is that the damage has already been done - adulthood is too late for healthy lifestyle changes to reduce the risk of developing coronary artery disease. Clearly, that's incorrect."

ratio." They were joined by John Deanfield, the British Heart Foundation professor of cardiology at University College London; Professor Liam Smeeth, from the London School of Hygiene and Tropical Medicine; Adam Timmis, professor of clinical cardiology at Barts and the London NHS Trust and Professor Peter Weissberg, medical director of the British Heart Foundation.

Professor Weissberg said: "If you take a statin your risk will reduce of having a heart attack or stroke. If you are at

negligible risk all you are doing is exposing yourself to a low risk of side effects."

Following the BMJ story, the Medicines and Healthcare products Regulatory Agency issued a safety update reassuring patients that statins were safe.

Its advice to health professionals said at least 450 deaths from heart attacks, stroke or vascular failure would be prevented for every 10,000 patients treated, if patients with a 20 per cent risk or more of suffering such a cardiovascular event over a

10-year period took statins for at least five years.

Statins are used by seven million people in the UK. The National Institute of Care Excellence is set to publish guidance to medics to say people who have a 10 per cent risk of suffering a cardiovascular event could also be prescribed them.

Professor Smeeth said: "Statins are very effective and one of the safest drugs we've ever had. If it was me personally being offered a statin for preventing a heart attack I would take one."

**Daily Express**

By **Ben Spencer**  
Science Reporter

**OVERWHELMING** evidence now shows that the benefits of statins vastly outweigh the risk of side effects, a group of health experts has claimed.

Six professors from British universities yesterday entered the growing debate about the use of statins, the UK's most prescribed drug.

Many GPs and patients are concerned about their over-prescription, which some say will needlessly expose people to side effects such as muscle pain and diabetes. But the group of leading cardiologists and epidemiologists dismissed fears about side effects as misrepresentative and misleading.

Professor George Davey Smith, clinical epidemiologist at Bristol University, said 'the jury is no longer out' on statins.

He said: 'Trials have shown unequivocally that statins reduce coronary heart disease mortality and there are very low levels of severe side effects.'

'We are not forcing these tablets down people's throats, we are giving people the evidence on which to make a decision.'

Professor Davey Smith added that a great root of the misunderstanding is that people on statins tend to blame the drug for any minor health problem.

He said: 'Because people have symptoms they look for an explanation and their doctors look for an explanation, and they attribute it to the tablet.'

Their intervention comes just a

# Statins: Health benefits vastly outweigh the risks, say experts

fortnight before the National Institute for Health and Care Excellence is due to publish new guidelines that will radically increase the use of the drug.

The medication is currently only available to those at a 20 per

**'The jury is no longer out'**

cent risk of suffering a heart attack or stroke within the next decade. Some seven million Britons already take the drug.

The new guidance will advise GPs to prescribe statins to anyone deemed to have a 10 per cent

risk, which is estimated to increase the number on statins by up to ten million.

The planned shift to 'pre-emptive' prescribing has led some GPs to warn that many people will be given the drugs who do not need them.

Dr Kailash Chand, deputy chairman of the British Medical Association, said: 'Statins are very useful for people at high risk, those who have had a stroke or heart attack.'

'But to prescribe these drugs to those at low risk prompts a real concern we are over-medicalising and over-statinising Britain.'

'Statins definitely have side effects - that is what I have seen

after 30 years of prescribing them as a GP. To say otherwise is just not true.'

But Oxford University professor Sir Rory Collins said trials have definitively shown that taking statins over five years increases the risk of side effects by less than 1 per cent.

He added: 'It isn't irrelevant to have a heart attack, it is a major life-changing event.'

'For many people a stroke is a life-changing event. To avoid these is important.'

'If one looks at the absolute risk, which is less than 1 per cent, and you look at the absolute benefit, the benefits in those terms outweigh the risk.'

# Don't be scared of statins, say heart doctors

By Laura Donnelly, Health Editor

PEOPLE could be frightened off taking statins because of “prejudice, belief and anecdote” used to attack the drugs, leading scientists and heart experts have said.

Controversial draft NHS guidelines to increase the number of people taking the pills have come under fire in recent months amid concerns over their side-effects and the “medicalisation” of swathes of the public.

But a panel of six leading cardiologists and scientists yesterday insisted that “the

jury was no longer out” about the benefits of the drugs in preventing stroke and heart attacks, compared with risks which have been over-stated.

Last month a group of doctors wrote to Jeremy Hunt, the Health Secretary, expressing concern over the recommendations, saying too many of those involved in drawing them up had financial ties to companies which produce the drugs.

Before that academic papers published in the *British Medical Journal* questioned the widespread use of the medicines, claiming that they cause harmful side-effects. But the statements were with-

## Risks and benefits Guidelines dogged by controversy

**1980s** Statins first licensed in the UK.

**2000** New NHS standards for heart disease care recommend statins should be given to patients assessed with a 30 per cent risk of a heart attack or stroke within a decade.

**2005** National Institute for Health and Clinical Excellence cuts threshold to 20 per cent.

**February 2014** Nice publishes draft plans to cut threshold to 10 per cent, meaning one in four adults would be advised to take statins.

**March** *British Medical Journal* publishes articles suggesting one in five people on statins will suffer side-effects such as liver disease and kidney problems.

**May** *BMJ* withdraws the

statements and launches an investigation into whether the full articles should be retracted.

**June** Nine doctors and academics write to Jeremy Hunt, the Health Secretary, saying the guidelines will lead to the “medicalisation of five million healthy individuals”.

**July 18** Nice final guidance due.

drawn after they were found to have misrepresented figures on levels of side-effects. The National Institute of Health and Care Excellence is due to publish final recommendations on the prescribing of statins later this month.

Draft proposals suggest cutting the “risk threshold” in half, meaning the vast majority of men over 50 and most women over 60 would be advised to take the drugs to guard against strokes and heart disease.

The panel said the weight of evidence – including 27 clinical trials – demonstrated that the benefits of the pills out-

weigh any side-effects. Less than one per cent of patients would suffer side-effects, they added, while those who took statins would typically reduce their risk of heart attack and stroke by 40 per cent.

Prof Peter Weissberg, medical director of the British Heart Foundation and a member of the panel, said: “The biggest threat to good medicine is prejudice, belief and anecdote.”

Prof George Davey Smith, professor of clinical epidemiology at the University of Bristol said: “The jury is no longer out on the cost/benefit ratio for taking these tablets.”



## Independent

# Opposition to statins based on 'prejudice, belief and anecdote'

**CHARLIE COOPER**  
HEALTH REPORTER

The row over the safety of statins intensified yesterday after leading cardiologists and researchers accused doctors of acting upon "prejudice, belief and anecdote" in opposing plans to prescribe them to millions more people.

New proposals which could see the cholesterol-lowering drugs prescribed to anyone with even a low risk of heart attack or stroke have been attacked as the "medicalisation of society", while Government advisers have been accused of underestimating the side effects of the drugs.

However, a panel of six experts yesterday said statins are "very effective and safe", and gave their staunch backing to the new draft guidance from Nice, which would see them prescribed to anyone with a one in 10 risk of a heart attack or stroke in the next 10 years - potentially up to 10 million patients.

Peter Weissberg, cardiologist medical director of the British Heart Foundation, said that, in terms of "medicalising society", the use of statins in such a large group was no different to vaccinations being given to entire populations.

Statins are given to around seven million people, and are recommended for anyone with a one in five or higher risk of heart attack or stroke in the next 10 years, or who have already suffered a major cardiac event.

"The biggest threat to good medicine is prejudice, belief and anecdote," Professor Weissberg said. "As human beings we're all influenced by our own personal experience. That is why in medicine we need objective evidence to guide our prescribing - that comes from randomised controlled trials."

Professor Sir Rory Collins, co-director of Oxford University's Clinical Trial Service Unit, which has carried out major studies into statins, said data showed that the benefits well out-weighed the risks.

He said recent claims in an article in the *British Medical Journal*, later withdrawn, that 20 per cent of patients suffered side effects may have "put off high-risk patients from taking their treatment". Data from randomised controlled trials showed that taking statins led to only a 0.05 per cent increased risk of serious muscle pain or haemorrhagic stroke, he said. By contrast, the risk of heart attack fell by between 6 and 12 per cent for high risk patients, and 3 to 5 per cent for lower risk.

Dr Aseem Malhotra, a cardiologist who has spearheaded calls for the new Nice guidance to be scrapped, agreed statins had a role in treating patients at high risk, but it was "clear" statins would not extend life in low-risk groups. The British Medical Association and senior figures including the president of the Royal College of Physicians have also spoken out against the new guidance.



Peter Weissberg said the use of statins in a large group was no different to vaccinations



## Some other briefings we've held:

Brexit: now what for science? - Wednesday 29 June 2016

The facts about antidepressants - 10.30am Wednesday 11<sup>th</sup> January 2017

UK first - Results of genome editing in human embryos - 10.30am Tuesday 19<sup>th</sup> September 2017

Can gene drives offer a more human approach to pest control? – 10:30am Monday 4<sup>th</sup> December 2017

The increasing burden of multiple illnesses – a report from the Academy of Medical Sciences – 10:30am Thursday 19<sup>th</sup> April 2018



## Take home messages:

- **You can't complain if you do not engage**
- **Engaging does change what the public sees and hears**