

Children should be allowed to play in the dirt, new research suggests

Children should be allowed to play in the dirt because being too clean can impair the skin's ability to heal itself, new research suggests.

by Murray Wardrop

Scientists have discovered that bacteria on the surface of the skin play an important role in combating inflammation when we get hurt.

The bugs dampen down over-active immune responses, which can lead to rashes or cause cuts and bruises to become swollen and painful.

The findings support previous research which suggests that exposure to germs during early childhood can prime the immune system to prevent allergies.

The so-called "hygiene hypothesis" has previously been used to explain why increasing numbers of children suffer allergies such as eczema and hay fever in more developed countries.

Parenting groups yesterday welcomed the findings as "a vindication of common sense" and urged parents to allow their children greater freedom to play outdoors.

Experts at the University of California at San Diego made the discovery by studying mice and human cells cultured in their laboratory.

The team, led by dermatologist



Professor Richard Gallo, found that common bacteria called staphylococci, can reduce inflammation after injury, when they are present on the skin's surface.

Prof Gallo said: "These germs are actually good for us."

He said that his team identified for the first time ever a previously unknown mechanism by which a product of staphylococci prevents inflammation.

The effect occurs because of a molecule called staphylococcal lipoteichoic acid that acts on keratinocytes, the primary cell type found in the epidermis - or outer skin layer.

Prof Gallo, whose findings are published in *Nature Medicine*, added: "The exciting implication of the work is that it provides a molecular basis to understand the hygiene hypothesis and has

uncovered elements of the wound repair response that were previously unknown.

"This may help us devise new therapeutic approaches for inflammatory skin diseases."

Parents Outloud, the pressure group, said the research provides scientific support for its campaign to prevent children being mollycoddled by health and safety regulations.

Its spokeswoman, Margaret Morrissey, said: "Parents have become so paranoid about their children playing outside and getting dirty that today's youngsters are not enjoying a proper childhood."

"You cannot blame parents for this because they are constantly bombarded with advertising telling them they have to buy anti-bacterial products to keep their children clean and healthy."

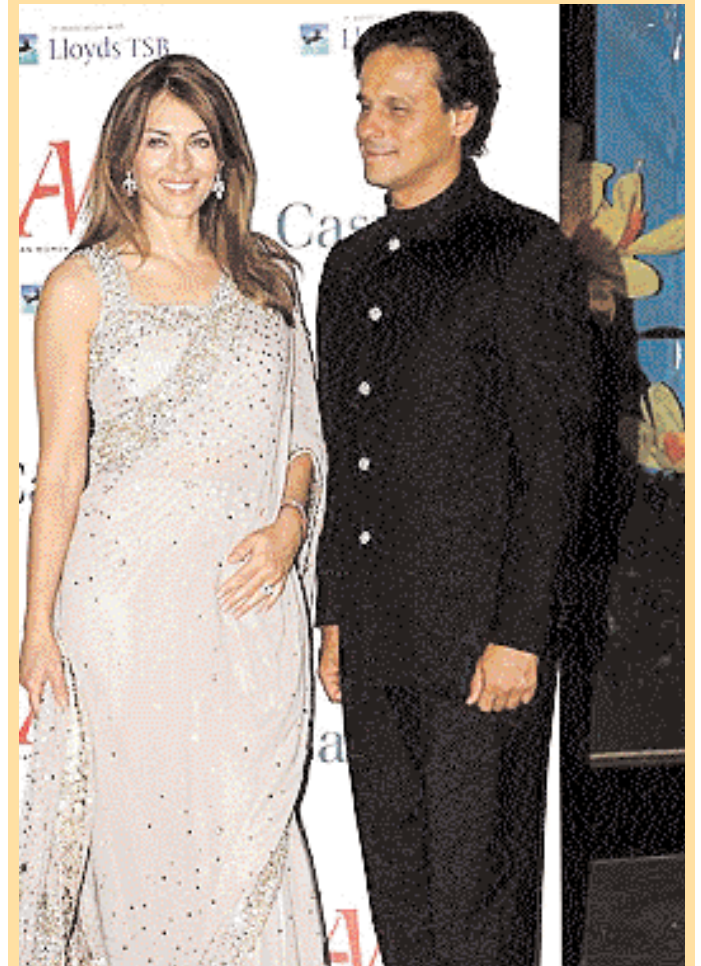
"However, hopefully research like this will help parents realise that it's natural and healthy for children to get outdoors and get mucky and that it doesn't do their health any harm."

Sue Palmer, children's campaigner and author of the book *Toxic Childhood*, added: "Clearly parents need to make sure their children are hygienic, but wrapping them up in cotton wool and not allowing them exposure to germs is just as damaging."

Up to four in 10 people in Britain suffer from allergies, research by the charity Allergy UK has found.

The number of children with food allergies has tripled in the past decade, with millions being diagnosed with severe immune system disorders, some of them potentially life-threatening.

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Elizabeth Hurley and Arun Nayar

India without love for Elizabeth Hurley and Arun Nayar

Is Elizabeth Hurley tiring of all things Indian? Mandrake asks only because the actress-turned-businesswoman was conspicuous by her absence at the launch of To India With Love, a fundraising book for the victims of the Mumbai terrorist attacks, to which she had contributed.

By Richard Eden

Her no-show followed an even more surprising absence earlier this month, at the Royal Rajasthan Gala.

"It was very disappointing," says a guest at the gala dinner at the Banqueting House in Whitehall, which was hosted by the Maharaja of Jodhpur, Gaj Singh II, to launch the Indian Head Injury Foundation. "Her absence certainly raised eyebrows."

The Maharaja generously hosted the model's second

wedding reception, at the Umaid Bhawan Palace in India in 2007, and is only an occasional visitor to London.

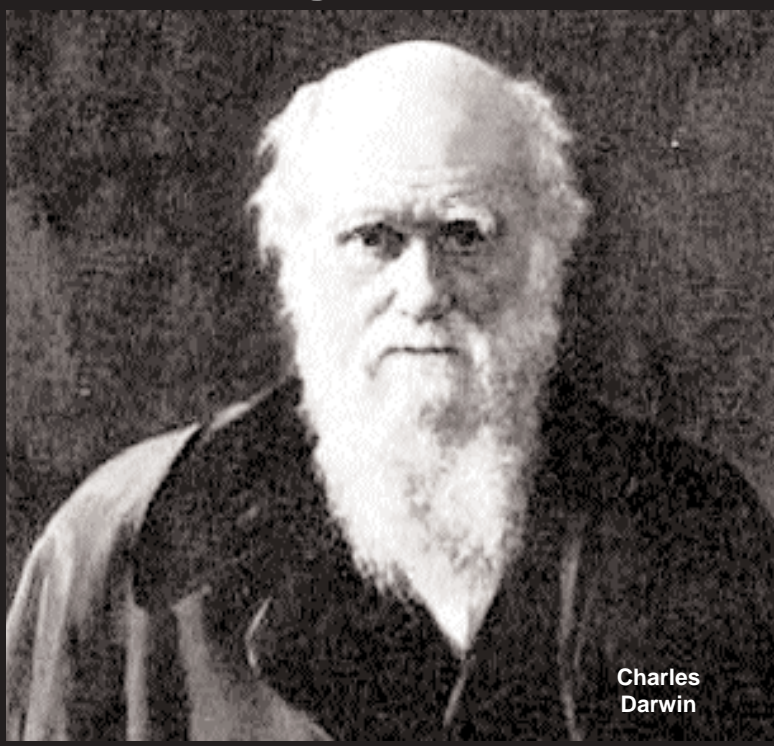
Hurley's spokesman declines to comment on rumours that her absence may be linked to problems in her marriage to Arun Nayar, a 44-year-old businessman raised in Mumbai.

In March, Mandrake disclosed that friends of the couple were concerned about their relationship. Earlier this month, I reported that Hurley, 44, was said by pals to have reluctantly accepted that she was unlikely to have a baby with Nayar, who has no children from his first marriage.

She told OK! magazine the other day that Damian, her seven-year-old son from a brief relationship with Steve Bing, the American businessman, "doesn't want us to add to our family under any circumstances".

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Lost: Darwin's missing notebook



Charles Darwin

An appeal has been launched to track down one of Charles Darwin's most important notebooks, which was probably stolen in the early 1980s.

by Stephen Adams, Arts Correspondent

English Heritage wants anyone who might know of the whereabouts of Darwin's 'Galapagos notebook' to come forward.

It is launching the appeal today to coincide with the 150th anniversary of the publication of *On the Origin of Species*.

To mark the anniversary, English Heritage is also publishing online Darwin's 14 other notebooks from his time aboard HMS Beagle between 1831 and 1836.

Sadly, the Galapagos notebook has never been seen since its disappearance from Darwin's Kent home, Down House near Orpington. It is likely a visitor took the opportunity to steal the Galapagos book while they were on public display.

The naturalist's great-great-grandson, Randal Keynes, said it was "almost certainly stolen".

He said: "Our family always felt that the best Darwin material should be at Down House so that the public could see it in his home. The Galapagos notebook is of outstanding value for the history of science."

"If Darwin had not posed the questions in that notebook, he might never have written *On the Origin of Species*."

"The notebook was almost certainly stolen around the 1980s. But I am hopeful that it is only a matter of time before it resurfaces and when it does, it must be returned to English Heritage and Down House."

Simon Thurley, chief executive of English Heritage, said: "The missing notebook is out there somewhere but it belongs at Down House, Darwin's own home and where he referred to it over many years, all the while developing his revolutionary theory."

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Large Hadron Collider produces first proton collisions in Big Bang mission

The Large Hadron Collider, the world's biggest atom smasher, has succeeded in producing the first proton collisions, just three days after it was restarted following repairs.

by Aislinn Laing

Scientists working at the European Organization for Nuclear Research (Cern), hailed the development as a "great achievement" and a major step towards mimicking the conditions that followed the Big Bang to unlock the secrets of the universe.

The low-energy collisions came unexpectedly after researchers managed for the first time to circulate two beams around the 27-kilometre (16.8 mile) tunnel 100m beneath the Franco-Swiss border for the first time on Monday.

Physicists working at the facility told how there was standing room only to watch the results and cheers erupted with the first collisions.

The world's largest machine was first launched in September 2008 amid

an international fanfare which saw the world's media invited to the facility to make sense of the epic experiment.

But just nine days later, the £5bn LHC suffered a spectacular failure from a bad electrical connection. Fifty-three of 1,624 large superconducting magnets - some of them 50 feet long - were damaged and had to be replaced.

Just weeks ago, an element of comedy was introduced after it emerged that further problems had been caused by a small piece of baguette dropped by a passing bird which landed in a piece of equipment on the surface above the accelerator ring.

After 14 months of repairs, the giant machine was restarted on Friday evening and the first beam started circulating in a clockwise direction around the tunnel about 10pm.

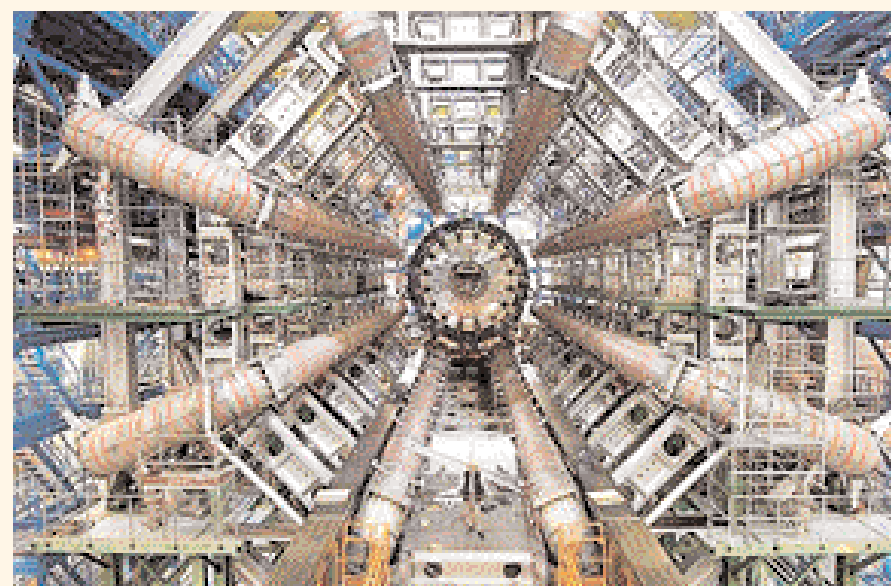
By Monday, the operators were able to move onto the next stage of circulating two beams with the hope of generating a collision. Early in the afternoon, the beams crossed for the first time, then a second time later in the evening.

At present, the beams are being cir-

culated at low-intensity to minimise any damage in the event of an accident. The true test will come as scientists provoke high-energy atom particle collisions and begin to analyse in

earnest the fall out from the proton collisions in the months to come.

Ultimately, the collider aims to create conditions like they were one trillionth to two trillionths of a second



Cern scientists have hailed the first proton collisions at the Large Hadron Collider as a "great achievement"

after the Big Bang, which scientists think marked the creation of the universe billions of years ago. Physicists also hope the collider will help them see and understand other suspected phenomena, such as dark matter, anti-matter and supersymmetry.

Cern's Director General Rolf Heuer said yesterday's collisions were actually the side effect of the quick advances being made by the LHC during its start-up phase.

He said that the scientists would be proceeding cautiously, just a driver would with the first production model of a new car.

"We'll never accelerate this the first time with a kick-start to its maximum velocity," he said. "It's a great achievement to have come this far in so short a time. But we need to keep a sense of perspective - there's still much to do before we can start the LHC physics programme."

David Barney, a physicist working at Cern said: "It's quite amazing really, we never expected this to go so quickly. We're incredibly pleased, everything seems to be working excellently. The LHC hasn't actually accelerated particles yet - it hasn't made them go any faster than they were when they came into the tunnel."

"Cern intends to collide them at higher energy next week. It's going incredibly well and we don't really know what to expect next."

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