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**BBC**

**Healthy diet 'boosts childhood IQ'**



Eating chips, chocolate and cake may be damaging to a child's intelligence, according to researchers at Bristol University.

Their study suggests a link between a diet high in processed foods and a slightly lower IQ.

Writing in the Journal of Epidemiology and Community Health, they suggest poor nutrition may affect brain development.

The British Dietetic Association said more young parents needed to be educated about healthy eating.

The eating habits of 3,966 children taking part in the [The Avon Longitudinal Study of Parents and Children](http://www.bristol.ac.uk/alspac/) were recorded at the ages of three, four, seven and eight and a half.

The researchers said three types of diet emerged: Processed diets which were high in fat, sugar and convenience foods, traditional diets of meat, potato and vegetables, and health conscious diets of salads, fruit and fish.

The children all took IQ tests when they were eight and half.

Brain development

The researchers found a link between IQ and diet, even after taking into account other factors such as the mother's level of education, social class and duration of breast feeding.

A diet high in processed food at the age of three was linked to a slightly lower IQ at the age of eight and a half, suggesting early eating habits have a long term impact.

Dr Pauline Emmett, who carried out the study at Bristol University, said: "Brain development is much faster in early life, it's when it does most of its growing.

It seems that what happens afterwards is less important."

Although the relationship between diet and IQ was very strong, the impact was quite small.

Processed foods were linked with IQs only a few points lower.

Experts in the field said the results had confirmed common sense.

Fiona Ford, spokesperson for the British Dietetic Association, said: "It's well worth looking at the long term impact of diets, everyone's familiar with the short term.

"The research confirms the type of advice we already know, but that's not always enough.

Sometimes a society has to help a person change, we need to be educating more young parents about healthy eating."

Kristian Bravin, dietician at Leicester Royal Infirmary, said: "Most people know what they should do, some people don't have the inclination to cook good meals.

"I'm all in favour of a little bit of what you fancy, but when you're doing it every week it's a problem.

"People should seek advice from a registered dietician, but simply it's a message of moderating fat intake, five fruit and veg a day and whole grain starchy foods."

**DAILY MAIL**

**Danger of a junk food diet for children: Study reveals toddlers who eat more chips, crisps, biscuits and pizza have lower IQ**

By [Jenny Hope](http://www.dailymail.co.uk/home/search.html?s=y&authornamef=Jenny+Hope)  
**UPDATED:** 17:21, 8 February 2011



Toddlers fed a diet of junk food can suffer lasting damage to their brainpower, researchers warn.

Children who eat more chips, crisps, biscuits and pizza before the age of three have a lower IQ five years later, a study showed.

The difference could be as much as five IQ points compared with children given healthier diets with fruit, vegetables and home-cooked food.

But even if their diet improves, it could be too late as the ill-effects can persist for a lifetime.

This is the first study to suggest a direct link between the diet of young children and their brainpower in later life.

The project at Bristol University took account of factors such as social class, breastfeeding and maternal education and age.

Researchers also allowed for the influence of the home environment, for example a child’s access to toys and books.

They said good nutrition was crucial in the first three years of life when the brain grows at its fastest rate.

Young children eating a diet packed with fats, sugar and processed foods consume too few vitamins and nutrients, which means their brains never grow to optimal levels.

The findings are the latest to be published from a major investigation of childhood development called the Avon Longitudinal Study of Parents and Children.

This tracks the long-term health and well-being of around 14,000 children born in the early 1990s.

Parents completed questionnaires about the food and drink consumed by their children at the ages of three, four, seven and eight.

Three dietary patterns were identified; a processed diet high in fats and sugar, a traditional diet of meat and vegetables and a health-conscious diet high in salad, fruit and vegetables.



Researchers Dr Pauline Emmett and Dr Kate Northstone said the effect of a poor diet on brain development could persist forever, even if the diet improved.

In the study published in the Journal of Epidemiology and Community Health, children’s IQ was measured when they reached eight years old.

Dr Emmett said that the diet for children aged four or seven years had no impact on IQ scores.

But the 20 per cent of children with the worst diet at the age of three had on average an IQ score five points lower than the group eating the best diet by the time they got to eight, she said.

She added: ‘The brain grows at its fastest rate during the first three years and good nutrition during this period may encourage optimal brain growth.

‘By the age of three, brain development is slowing down which is perhaps why the diet doesn’t have much effect afterwards.’

Dr Emmett said the ‘traditional’ diet of meat and vegetables and the health-conscious diet led to better IQ scores probably because they had more fresh fruit, vegetables, meat, fish and home-cooked foods.

‘This doesn’t mean you should never give your child a fizzy drink, chips or pizza, but these foods and drinks shouldn’t dominate the diet,’ she said.

‘Young children should be eating a normal family diet, with home-prepared fresh foods, but the problem is we have lost touch with food.

People are frightened of preparing it from scratch.’

Dr Emmett, who has dietician training, said she admired TV chef Jamie Oliver’s attempts to get families cooking and eating together, using simple recipes and good ingredients.

The study of 4,000 children used a points system to score their diets.

For every one point increase in scoring from a processed diet at the age of three, there was a 1.67 point fall in IQ points.

For those children who ate the other diets, every one point increase in the dietary pattern linked to a 1.2 increase in IQ.

Michael Nelson, director of research at The School Food Trust, which aims to improve the quality of food in schools, said: ‘Given that around 23 per cent of children start school overweight or obese, it’s clear that healthy choices as part of their early development will stand children in good stead – not only for keeping a healthy weight as they grow up, but as this evidence suggests, improving their ability to do well at school.’

Graham Keen, Executive Director of the Health Food Manufacturer's Association, said: 'The best solution for most people is to eat as healthy a diet as possible, combined with other health-related lifestyle changes.

'For those looking to safeguard their nutritional intake, daily vitamin supplements provide essential nutritional insurance for millions of consumers.'

**INDEPENDENT**

**Poor diet may impact on IQ of younger children**

[Steve Connor](http://www.independent.co.uk/biography/steve-connor) Author Biography

Tuesday 08 February 2011



Diets high in fats, sugars and processed foods have been linked with slightly lower IQ in young children, a study has found.

A predominantly processed food diet at the age of three is directly associated with a lower IQ at the age of eight and a half, compared to children who eat a diet rich in fresh fruit and vegetables, according to a Bristol-based Avon Longitudinal Study of Parents and Children (ALSPAC), which is tracking the long-term health and well-being of around 14,000 children.

The scientists who carried out the study, published in the Journal of Epidemiology and Community Health, emphasised however that they could not say for certain that processed foods are the cause of lower IQs as other factors such as social class and educational upbringing may be implicated.

Parents were asked to detail the types and frequency of the food and drink their children consumed when they were three, four, seven and eight and a half years old.

A diet rich in processed food at aged three was linked with an IQ that was 1.67 points lower on the IQ scale, where a score of 100 is average intelligence.

"This suggests that any cognitive/ behavioural effects relating to eating habits in early childhood may persist into later childhood, despite any subsequent changes to dietary intake," the scientists said.

METRO

By Aidan Radnedge - 7th February, 2011

**Junk food diet ‘could damage your child’s IQ’**

**Scientists at Bristol University say that parents who give their children junk food could be lowering their IQ, but equally, 'health conscious' diets could boost IQ.**



Giving children a diet high in fats, sugars and processed foods in the first three years of life has been linked to lower IQ, regardless of whether diet improved later on.

Equally, giving children a ‘health conscious’ diet with lots of fruit, vegetables, rice and pasta could boost IQ, said scientists at Bristol University.

The brain grows at its fastest rate in the first three years, indicating that head growth is linked to intellectual ability, said Dr Kate Northstone.

‘It is possible that good nutrition during this period may encourage optimal brain growth,’ she added.

The findings emerged after the long-term health of about 14,000 children born in 1991 and 1992 was tracked as part of the Avon Longitudinal Study of Parents and Children.

Parents were questioned about their children’s diet at ages three, four, seven and eight-and-a-half.

The results were then divided into three classes: ‘processed’ high in fats and sugar; ‘traditional’ high in meat and vegetables; and ‘health conscious’ high in fruit and vegetables, rice and pasta.   
IQ was measured at eight-and-a-half years old.

The dietary links to IQ still held after other potentially influential factors were taken into account.

Diet between the ages of four and seven had no impact on IQ.

The study ‘suggests that any cognitive and behavioural effects relating to eating habits in early childhood may well persist into later childhood, despite any subsequent changes – including improvements – to dietary intake,’ said Dr Northstone.

* By Mirror.co.uk
* [Comments](http://www.mirror.co.uk/news/technology-science/healthy-diet-in-early-childhood-linked-109164#comments)
* [8 Feb 2011 00:00](http://www.mirror.co.uk/by-date/08-02-2011)

**Healthy diet in early childhood linked to higher IQ**

Children brought up on a healthy diet in early life may be more intelligent than those fed high-fat foods.

Children brought up on a healthy diet in early life may be more intelligent than those fed high-fat foods.

Youngsters who eat plenty of fruit and salad aged three have higher IQs at eight.

But if those with poor diets improve their eating by eight they still have a lower IQ, the University of Bristol found.

The brain grows fastest up to three. Dr Kate Northstone said: “Good nutrition in this period may encourage optimal brain growth.”

The study is in the Journal of ­Epidemiology and ­Community Health.

TELEGRAPH

By [Richard Alleyne](http://www.telegraph.co.uk/journalists/richard-alleyne/), Science Correspondent

6:30AM GMT 08 Feb 2011

**Food for thought – diet does boost your intelligence**

**Children brought up on healthy diets are more intelligent compared with their junk food eating counterparts, new research suggests.**



Toddlers fed a diet packed high in fats, sugars, and processed foods had lower IQs than those fed pasta, salads and fruit, it was found.

The effect is so great that researchers from the University of Bristol said those children with a "healthier" diet may get an IQ boost.

Scientists stressed good diet was vital in a child's early life as the brain grows at its fastest rate during the first three years of life.

This indicated head growth at this time is linked to intellectual ability and "it is possible that good nutrition during this period may encourage optimal brain growth".

Scientists tracked the long term health and wellbeing of around 14,000 children born in 1991 and 1992 as part of the West Country's Avon Longitudinal Study of Parents and Children (ALSPAC).

Parents were quizzed about the types and frequency of the food and drink their children consumed when they were three, four, seven and eight and a half years old.

They were marked on a sliding scale which ranged from minus two for the most healthy to 10 for the most unhealthy.

IQ was measured using a validated test – the Wechsler Intelligence Scale for Children – of 4,000 children when they were eight and half years old.

The results found after taking account of potentially influential factors, a predominantly processed food diet at the age of three was associated with a lower IQ at the age of eight and a half, irrespective of whether the diet improved after that age.

Every 1 point increase in dietary pattern score was associated with a 1.67 fall in IQ.

On the other hand, a healthy diet was associated with a higher IQ at the age of 8.5, with every one point increase in dietary pattern linked to a 1.2 increase in IQ.

Dietary patterns between the ages of four and seven had no impact on IQ.

Although a modest increase, the scientists said the study's findings were in line with previous ALSPAC research that linked early childhood diet and later behaviour and school performance.

Dr Kate Northstone said: "This suggests that any cognitive and behavioural effects relating to eating habits in early childhood may well persist into later childhood, despite any subsequent changes – including improvements – to dietary intake.

She noted the brain grows at its fastest rate during the first three years of life – indicating that head growth at this time is linked to intellectual ability.

She added: "It is possible that good nutrition during this period may encourage optimal brain growth."

The findings were published in the Journal of Epidemiology and Community Health.

the Express

February 8, 2011 Tuesday

**Proof junk food lowers a child's** **IQ**  
**BYLINE:** Louise Sassoon  
  
**SECTION:** NEWS; Pg. 8  
  
**LENGTH:** 304 words

EATING junk food can lower the intelligence levels of children, a study has found.

Toddlers eating diets high in fat, sugar and processed foods have smaller IQs at the age of eight than those eating vitamin-rich diets packed with fruit and vegetables.

The difference between the two diets could be as much as five IQ points.

Worryingly, researchers have also found the damage caused to brainpower by eating poorly when young can persist even if a child's diet improves as they get older.

It is the first time a link has been discovered between a toddler's diet and their intelligence in later life.

The findings, published in the Journal of Epidemiology and Community Health, come after a study of thousands of children at Bristol University as part of a major investigation into childhood development.

Researcher Dr Pauline Emmett said 20 per cent of children with the worst diet at the age of three were on average five IQ points lower by the age of eight than the group who had the best diet.

"The brain grows at its fastest rate during the first three years and good nutrition during this period may encourage optimal brain growth," she said.

"By the age of three, brain development is slowing down which is perhaps why the diet doesn't have much effect afterwards.

She blamed the trend on people being frightened to prepare food from scratch saying people have "lost touch" with food.

Michael Nelson, director of research at The School Food Trust, which aims to improve the quality of food in schools, said: "Given that around 23 per cent of children start school overweight or obese, it's clear that healthy choices as part of their early development will stand children in good stead.

"That is not only for keeping a healthy weight as they grow up but, as this evidence suggests, improving their ability to do well at school."

The Guardian (London) - Final Edition

February 8, 2011 Tuesday

**Unhealthy diet linked to lower IQ in children**  
**BYLINE:** Ben Quinn  
  
**SECTION:** GUARDIAN HOME PAGES; Pg. 5  
  
**LENGTH:** 281 words

Diets packed with fat, sugar and processed food have been linked to lower IQs in a study of thousands of British children.

While such diets at the age of three were found by researchers to be directly associated with a lower IQ at the age of eight and a half, foods packed with vitamins and nutrients had the opposite effect, helping to boost children's mental performance.

Toddlers' diets could affect IQ levels later in childhood even if their eating habits later improved, according to the Avon Longitudinal Study of Parents and Children, which is tracking the long-term health of around 14,000 children.

"This suggests that any cognitive/behavioural effects relating to eating habits in early childhood may well persist into later childhood, despite any subsequent changes to dietary intake," wrote the authors, whose findings were published in the Journal of Epidemiology and Community Health.

Parents completed questionnaires on the type and frequency of the food and drink their children consumed when they were three, four, seven and eight-and-a-half years old.

Every one-point increase in diet score - a record of processed fat intake - was associated with a 1.67 fall in IQ.

The brain grows at its fastest rate during the first three years of life.

"It is possible that good nutrition during this period may encourage optimal brain growth," the report added.

Other research in the past has suggested that early nutrition could have a long-term effect on the developing brains of babies.

One of the first studies to draw these links was published in 2008 in the US journal Pediatric Research.

It found that pre-term infants fed enriched milk in their early weeks had a higher IQs as adults.

**SUN**

**Junk food makes kids less brainy**

By EMMA MORTON, Health and Science Editor

Published: 08th February 2011

**SCIENTISTS yesterday confirmed what healthy-eating campaigners have always known — junk food lowers a child’s IQ.**

Children under the age of four eating a diet of processed food, fat and sugar have lower brain power at 8½, a study of 4,000 kids revealed.

Their IQ fell by 1.67 for every increase on a chart which reflected how much processed fat they ate.

And the damage could not be reversed — as diet at the ages of four and seven had no affect on IQ scores.

But feeding kids plain old-fashioned meat or fish and veg can **BOOST** their mental performance.

Those fed meals rich in nutrients and vitamins at the same age saw their IQ rise 1.20 points.

The findings are particularly important as the brain grows fastest in a child’s first three years, experts said.

In a study spanning several years, scientists monitored the diet of kids at age three, four, seven and 8½.

Dr Kate Northstone, who led the research at Bristol University, said: “In this population of contemporary British children, a poor diet, associated with increased intake of processed foods, fat and sugar in early childhood may be associated with lower IQ at the age of 8.5 years.

“In addition, a healthy diet may be associated with higher IQ.

It is possible that good nutrition during this period may encourage optimal brain growth.”

But she added: “Further research is required to help determine the true effects of early diet on intelligence.”

Barbara Gallani, of the Food and Drink Federation, said: “It would not be surprising if a healthy, balanced diet is important in IQ development — just like it is generally for children’s health and growth.

*“We believe it is important for everyone to eat a wide variety of foods. It’s possible to eat a healthy diet and still include some treat foods.”*

The survey findings will give ammunition to campaigners eager for a healthy eating crusade for nursery pupils — similar to TV chef Jamie Oliver’s school dinners campaign.

But some experts believe the study may anger busy parents who rely on processed foods to placate children.

The Times (London)

February 8, 2011 Tuesday   
Edition 2;   
National Edition

**If you want a clever child, ditch the crisps and stock up on fruit and veg  
  
BYLINE:** Chris Smyth  
  
**SECTION:** NEWS; Pg. 8  
  
**LENGTH:** 495 words

Feeding children processed foods at a young age lowers their future IQ, while a diet rich in vitamins could make them more clever, research suggests.

A study of thousands of children in southwest England found that IQ scores decreased the more intensively a young child's diet was based on fats and sugars, while the scores increased for children who ate plenty of fruit and vegetables.

The 20 per cent of children who ate the most processed foods scored on average five points lower on tests than the 20 per cent who ate most healthily, researchers found.

Kate Northstone, of the University of Bristol, who led the research published in the Journal of Epidemiology and Community Health, said that a nutritious diet could produce a "reasonable difference" in IQ scores over time.

She said that while more research was needed to confirm the findings, it was important for parents to realise that healthy eating could have an impact on more than just a child's weight.

"Our message is to encourage parents to give fresh food as much as they can. It's impossible to say 'no crisps', but if we can encourage fresh food all the better," she said.

While previous studies have linked breastfeeding to higher childhood IQ, less is known about the effects of an early diet on intelligence later in life.

Dr Northstone and her colleagues looked at data from a study of children born in 1991 and 1992 whose parents were asked to fill in questionnaires when their children were 2, 4, 7 and 8½, detailing how often the children ate certain types of food.

The trial included some 14,000 children, with complete data available for 4,000 of them.

Each child was given a score on a scale ranging from a "processed" diet, high in fats and sugars, to a "healthconscious" one, rich in salad, fruit and vegetables, rice and pasta.

These were compared with the results of an IQ test taken when the children were 8½ years old.

Even after adjusting for factors including the mother's education and social class, the researchers found that a diet heavy in processed food at the age of 3 was associated with lower IQ five years later.

A healthy diet at 3 was associated with a higher IQ later on.

However, the researchers found that changes to children's eating habits after the age of 3 made no difference to their later IQ.

"A possible explanation for this is that the brain grows at its fastest rate during the first three years of life," the researchers said.

"Studies have shown that head growth during this time is associated with cognitive outcome, and it is possible that good nutrition during this early period may encourage optimal brain growth."

The short-term effects of fatty, sugary foods have been a topic for concern, with Jamie Oliver's campaign to improve school dinners drawing impetus from research suggesting that poor eating habits among children was leading to behavioural problems and difficulty concentrating.

Studies also suggest that skipping breakfast worsens cognitive performance.