

Cell Phones Hurt Children Even Worse Than Adults

By William Thomas – July 2003

Last April, while corporate news managers were guiding the attention of Americans elsewhere, a London newspaper reported on What Cell Phones Can Do To Youngster's Brain In 2 Minutes.

It turns out that a call lasting just two minutes can open the blood-brain barrier in kids as well as adults, allowing toxins in the bloodstream to cross this blood vessel gateway into the skull and attack brain cells. The same two-minute cell phone exposure also disrupts the natural electrical activity of a child's brain for up to an hour afterwards.

Leading medical experts now question whether it is safe for children to use mobile phones at all, reported the Mirror. Doctors fear that disturbed brain activity in children could lead to psychiatric and behavioral problems or impair learning ability.

Dr. Gerald Hyland says he is extremely disturbed by the new findings released in Marbella, Spain by the Spanish Neuro Diagnostic Research Institute.

"The results show that children's brains are affected for long periods even after very short-term use," this mobile phone adviser to the British government explained. "Their brain wave patterns are abnormal and stay like that for a long period. This could affect their mood and ability to learn in the classroom if they have been using a phone during break time, for instance."

Dr. Hyland and other MDs worry that cell phone's deep penetration into children's brains and the resulting disruption to the subtle electronic exchanges between brain cells could cause kids to lose the ability to concentrate and remember, making it impossible to learn.

Dr. Hyland also states that cell phone use is also linked with aggressive behavior in children. Previous studies show that anyone exposed to cell phone energy may experience radical changes in mood and behavior. Measuring relatively low microwave and radio frequency power levels in urban areas in 1975, Dr. William Blise found clinically diagnosed depression and violence. These effects may be even more pronounced in more susceptible adolescent children. [EMF Health Report March/April, 1995]

"It makes one wonder whether children, whose brains are still developing, should be using mobile phones," this MD declared.

The Spanish findings coincide with a potentially apocalyptic new survey showing that 87% of 11- to 16-year-olds own mobile phones; 40% of them spend 15 minutes or more talking each day on them, and 70% said they would not give up their cell phones in the face of government warnings.

Dr. Michael Klieseisen conducted the Spanish study. "We never expected to see this continuing activity in the brain," he told reporters. "We are worried that delicate balances that exist – such as the immunity to infection and disease – could be altered by interference with chemical balances in the brain." [Sunday Mirror Apr/04]

"This information shows there really isn't a safe amount of mobile phone use," Dr. Hyland emphasized. "We don't know what lasting damage is being done by this exposure. If I were a parent I would now be extremely wary about allowing my children to use a mobile even for a very short period. My advice would be to avoid mobiles."

Swedish Scientist Finds Cell Phone Hazards "Terrifying"

Unfortunately for anyone still in ignorance or denial about putting the equivalent of a loaded pistol to their heads and pulling the trigger, new research from Sweden's Lund University Hospital

corroborates the Spanish findings. The Swedes also found that exposure to radiation emitted by mobile handsets and neighborhood relay towers can destroy cells in the parts of the brain responsible for memory, movement and learning.

Professor Leif Salford, the neurologist who carried out 15 years of research said, “We saw opening of the blood-brain barrier even after a short exposure to radiation at the same level as mobile phones.” Salford added, “We had already shown that mobile phone radiation can allow harmful proteins and toxins to pass through the blood-brain barrier. Now we also see a significant degree of damage to neurons in the brains of adolescent rats. If this effect is transferred to young humans the effects can be terrifying.” [Daily Mail Nov6/99]

Cell Phones Expose Brain Cells to Bloodstream Poisons

A study by Finish scientist Darius Leszczynski published in the journal Differentiation shows that several hundred chemicals operating in a certain type of human brain cells could be altered by the weak microwaves broadcast by mobile phones.

The blood-brain barrier normally keeps toxins and microorganisms circulating in the blood out of the brain. But Professor Leszczynski found that at the legal limit for mobile radiation, a blood-brain barrier protein named HSP 27 became ineffectual in keeping blood poisons out of brain cells. [The Guardian June20/02]

Proteins found in the blood can, if they get to the brain, cause autoimmune diseases such as Fibromyalgia and Multiple Sclerosis. Damaged nerve cells could also lead to dementia, premature aging, and Parkinson's disease. Brain cells inflamed by cell phone conversations are also indirectly linked to Alzheimer's disease.

In addition to these potential personal disasters, medication that under normal circumstances wouldn't be able to penetrate the blood-brain-barrier could do so and cause damage. [British Library Net Sept14/03]

Mobile Phones Lead to Earlier Alzheimer's

Scientists have discovered that prolonged exposure to radiation emitted by mobile phones, cell phone towers and hidden relay stations can destroy cells in the parts of the brain responsible for memory, movement and learning.

Professor Leif Salford said, “We can see reduced brain reserve capacity”, meaning those who would normally have got Alzheimer's or dementia in old age will get it much earlier, those who would not 'normally' have got Alzheimer's or dementia during their lifespan are at greater risk of doing so, and that both will at best have a significantly diminished number of non-dysfunctional brain cells and brain subsystems throughout their lives.

Neurosurgeon Leif Salford and colleagues at Lund university hospital in Sweden published data including the above 'before and after' images showing for the first time, an unambiguous link between radiation emitted by GSM mobile phones – the most common type worldwide – and brain damage. After fifty days, the rat brains showed significant blood vessel leakage, as well as areas of shrunken damaged neurons. [British Library Net Feb5/03]

Childhood Cell Phone use May Make You Senile at 30

According to RFSafe.com, “A whole generation of teenagers face premature senility in the prime of their lives due to the use of mobile phones and new wireless technology.”

RFSafe.com continued: Leif Salford, who headed the research at Sweden's prestigious Lund University, says the voluntary exposure of the brain to microwaves from hand-held mobile phones is the largest human biological experiment ever. He is concerned that, as new wireless technology spreads, people may drown in a sea of microwaves.

Salford said it was possible that brain neurons would repair themselves in time. [Examples of brain cell self-repair are extremely rare. –WT] But the scientist warned, neurons that would normally not become senile until people reached their 60s might now do so when they are in their 30s. [RFSafe.com Nov26/03]

Phoning Your Cells

Cell phones are aptly named. Every call you make, every conversation you have on a cell phone dials your cells directly. And the message is not good. Just 13% of the cells exposed to mobile phone radiation remained intact and able to function, compared with 70% of cells exposed only to the natural electromagnetic field produced by the human body. [London Observer April11/99]

High Frequency = High Risk

It is not the power level but the frequency of electromagnetic emissions that pose the greatest danger. Even at very low power outputs of typical cell phones and cell phone relay towers, researchers have found the higher the frequency, the graver the risk.

Very High Frequency VHF, Ultra High Frequency UHF, microwaves and portable phones operating in the Gigahertz range are all high-frequency electromagnetic emission sources.

You Are An Antenna

It is well recognized that the human body becomes more transparent to RF energy as the frequency of RF energy increases, reminds radiologist Dr. Catherina Mills.

Human brains achieve peak absorption in the UHF bands, right where cellular telecommunications operate. Human bodies act as antennas whose peak resonance frequency lies in the middle of the VHF TV band. As we sit watching TV, our bodies are absorbing the same energy as the set, writes Robert Becker in his landmark book, Cross-Currents.

Cell Phone Towers Target Children

TV, radio and cell phone towers adjacent to schools or homes could be killing kids. An Australian study by Dr. Bruce Hocking has found that children living near three TV and FM broadcast towers in Sydney had more than twice the rate of leukemia than children living more than seven miles away. The radio frequency and microwave radiation exposures measured by Hocking are similar to those emitted by cellular towers. The highest power densities occur in a widening cone of transmission at a distance of 100 to 800 feet from towers rising 150-feet or higher above the ground. [EMF Health Report March/April/95; London Observer Apr11/99]

In New Zealand, cell phone towers are prohibited on school property because of possible health effects: learning disabilities, cancer, leukemia, DNA damage, blood disorders, brain tumors and electrical sensitivity. [EMF Health Report Mar/Apr'95]

But in the UK and USA, newly introduced Picture Phones featuring picture messaging are already boosting the power levels of often-disguised cell phone relay stations. [Sky News]

Cell Phone Towers Trigger Hyperactive Leukemia

After earlier studies showed leukemia to be more common among mobile phone users, cell biologist Fiorenzo Marinelli and his National Research Council team in Bologna, Italy began exposing this increasingly common cancer to the same 900-megahertz frequency of many mobile networks operating at low-power outputs experienced by those living, working or studying in the vicinity of cellphone towers.

The good news: After just 24 hours continuous exposure, 20% of leukemia cells were killed by this exposure.

The disastrous news: After 48 hours exposure, these effects reversed. As the cancer's survival mechanisms went into overdrive, three genes that trigger cells to multiply were turned on in the surviving cells, making them replicate ferociously, reported the Guardian. The cancer, although beaten back for a brief spell, had become more aggressive. [The Guardian 11 Nov '02]

More than 50 residential and occupational studies support the conclusion that exposure to electromagnetic fields promotes brain cancer, female and male breast cancer, miscarriages and other serious health maladies. [EMR Alliance Network News Spring '95]

Cell Phones Cause Childhood Cancers

It is hardly surprising that cellular phone frequencies emitting artificial electromagnetic fields alien to millions of years of evolution can trigger or intensify existing cancers.

"I believe that 30% of all childhood cancers are associated with EMF exposure" declares Dr. David Carpenter, Dean at the School of Public Health State University of New York.

At the University of Washington, Dr. William Guy saw nearly every test animal die from malignant tumors and immune system breakdown after five years' exposure to low-level electromagnetic fields.

The EPA found Dr. Guy's \$5 million study to have demonstrated the carcinogenic action of this type of pulsed RF radiation. [Washington Post 7 June '95]

Cell Phones and Cancer

The scientific evidence is absolutely conclusive: 60-hertz magnetic fields cause human cancer cells to permanently increase their rate of growth by as much as 1,600% and to develop more malignant characteristics. In 1990, the Environmental Protection Agency recommended that magnetic fields be classified as Class B carcinogens. This category for probable human carcinogens includes formaldehyde, DDT, dioxins and PCBs. [Dr. Robert Becker, "Cross-Currents"]

Three major animal studies show the low-level microwave radiation similar to that emitted from wireless communication devices has a cumulative effect on cancer promotion. At the molecular level, radio waves can disrupt growth patterns and the functioning of cells – particularly brain cells and nervous system tissue, says Doctor A. S. Michrck. [Village Voice 9 Sept '97]

Low Power Pulses Pose Extreme Hazards

Cell phone industry apologists like to claim that today's cell phones operate at relatively low power levels. Which is true. But what they never explain is that because biological systems operate in a non-linear manner – where small effects can produce a cascade of amplifying consequences – the damaging effects of cell phones and cell phone relay towers actually increase at low power levels.

It turns out that the weak pulses emitted by today's digital cell phones mimics the subtle signals of the body's cells, opening internal electrical pathways to this artificial disruption of inter-cellular communication. The result can be disease and reduced brain function – including the ability to reason and remember. [British Library Net 14 Sept '03]

Safety standards set at levels required to cook human tissue would be laughably inadequate – if the effects of this scam were not so dire.

Especially worrying is the fact that even very low microwave effects seem to affect the brain. The World Health Organization calls mobile phones safe when they do not exceed two watts of energy absorbed per kilogram (2.2 pounds) of body tissue.

But Salford and his colleges have found that even at one-ten-thousand's of a watt, albumen proteins increase in the brains of half the rats examined. This means that radiation from cell phone towers can penetrate and affect the brain. It also means that anyone in the vicinity of someone using a cell phone can be affected by second-hand radiation exposure. The very low effects are also the ones that affect the brain the most. [British Library Net 14 Sept '03]

Cell Phones and Eye Cancer

It turns out that the higher frequencies of today's low power cell phones are very close to the resonant frequency of the human skull. Cancer can be caused when radio frequency radiation released by a hand-held cell phone bounces back and forth in eye sockets filled with naturally conductive fluid. Research from the University of Essen in Germany shows how this watery uveal layer comprising the iris and base of the retina absorbs cell phone radiation with every call, increasing the chances of contracting eye cancer. [Epidemiology Jan '01]

As a London newspaper explained, Cells called melanocytes found in the uveal layer started growing and dividing more rapidly when exposed to microwave radiation. Since uveal melanoma starts within such cells, there is a ready-made mechanism by which mobile phone radiation might help to initiate cancer – especially in people with a genetic predisposition to the condition. [London Sunday-Times 14 Jan '01]

Cell Phones Cause Tumors to Sprout on Side of Head

While users tout the indispensable convenience of pocket phones, which they happily did without for much of their lives, few seem to recognize the drastic inconvenience of cancer.

The risks are real – and increasingly documented. Now, Swedish biophysicists have found that the risk of developing brain tumours increases with phone use. [Daily Mail 17 Mar '03]

Studies show that adults who spend more than an hour a day yacking on their cell phones increase the risk of developing a rare tumor by 30% on the side of the head to which a cell phone or cordless phone is held. [Evening Standard 17 Mar '03]

For children, the risk is even higher.

Dream On

Speaking for just a half-hour a day on your cell phone also messes with your dreams. A world-renowned sleep laboratory at the University of Zurich has found that talking on a cell phone during the day significantly alters your brain's electrical activity after you fall into a sleep that is far from restful. [BBC News 27 June '04]

Cell Phones Release Stress Proteins

In 2002, Silva continued, the Journal of Cellular Biochemistry reported that heavy cell phone use could cause brain cancer and other diseases by interfering with DNA repair of wayward cells.

Dr. Theodore Litovitz, a biophysicist and professor emeritus of physics at Catholic University, worked with a team of scientists looking at stress hormones released by cell phones similar to the stress proteins released by microwaving food.

“Because stress proteins are involved in the progression of a number of diseases, heavy daily cell phone usage could lead to great incidence of disorders such as Alzheimer's and cancer,” Litovitz lamented. [Daily Mail 6 Nov '99]

Forgetful Cell Phone Users

Other researchers confirm the link between the use of mobile phones – and/or exposure of similar duration to radiation from mobile phone relay towers – and the early onset of Alzheimer's disease and dementia. Neurologists claim users and non-users exposed to second-hand cell phone emissions from portable phones and towers could be at risk of developing Alzheimer's disease, multiple sclerosis and Parkinson's disease.

In a separate study scientists have proved mobile phones also cause long-term memory loss. [Daily Mail 6 Nov '99]

Cell Phones and Asthma

Often attributed to steadily poisoned air in the enclosed spaces of a sun-orbiting space colony called Earth, alarming asthma increases among children and adults are also linked to cell phone pollution. Attempting to explain the 25% increase of asthma throughout the metropolitan area of Sydney, Australia, and the 5% increase in death rates there, cell phone researcher P.W. French found the production of bronchial spasm-causing histamine to nearly double after exposure to cellular phone frequencies. This disruptive histamine production persists after the phone is shut off.

French also found that cellular phone frequencies inhibit our body's cellular response to anti-asthmatic drugs. [Bioeffects of Cellular Phone Use by John A.G. Holt]

Cell Phones Reduce Male Fertility

Of course, your offspring will never be affected by cell phone emissions if you do not – or cannot – have any. Radiation from the phones could cut male sperm production by a third, researchers from the University of Szeged, Hungary told the European Society of Human Reproduction and Embryology.

Of the remaining sperm exposed to cell phone emissions, high numbers were found to be swimming abnormally, reducing the chances of fertilization in a woman's womb.

It was unclear whether the men were carrying their phones in their trouser pockets, or in briefcases typically carried at waist level. Professor Evers, who headed the Hungarian study, also cautioned that executive stress might also exacerbate the effects of cell phone radiation.

What is known, said Prof. Evers, is that sperm counts are decreasing sharply but less so for farmers living in the open air, on the land and not carrying a mobile phone at all.

Croaking

For more than a decade, the precipitous decline in frog populations worldwide has been studied as a warning of high-levels of pollution or ultraviolet radiation from our planets unraveling solar shield that could also be affecting humans. So far, studies have been inconclusive.

Now it appears that electromagnetic radiation from human-made microwave and radio-frequency sources may be a major factor in declining reproduction rates. Whether in frog eggs or human embryos, from the moment of conception, subtle electrical energy powers all cell division. And the higher frequencies of today's cell phones lie very close to the resonant frequency of rapidly replicating human DNA. [Epidemiology Jan '01]

“It is my belief that the whole of the infertility of frog spawn, which lies on the surface of the pond, and [humans] derives from the same cause: radiowave pollution,” says French. [Effects of 835mhz Exposure on Cell Structure and Function by P.W. French, St. Vincent's Hospital, Sydney, Australia]

Cell Phone Risk Extremely High

Neil Cherry, a former biophysicist at Lincoln University in Christchurch, New Zealand (now deceased) considered the proliferation of cell phones, microwave towers and microwave pollution to be a serious contributor to cancer, brain tumors and increasing neurological problems among the human population.

11,000 Scandinavian cell phone users were studied and they showed significant neurological effects in a dose response manner, remarked the PhD researcher – such as headaches, fatigue, tiredness and dizziness. And a study in Australia also showed nausea. There is also a higher incidence of cardiac problems.

Cherry rated the risk from using a cell phone, extremely high. As this respected cell phone researcher emphasized, “The neurological effects are noticed within minutes of using a cell phone”.

DNA Damaged by Cell Phones

In 1993, the wireless industry association hired Dr. George Carlo, an epidemiologist to manage a research program into cell phone dangers. This six year, \$28.5 million dollar study found genetic damage from wireless phone radiation. Dr. Carlo's “Cell Phones: Invisible Hazards in the Wireless Age” blames the wireless industry and federal regulators for not following up on studies showing DNA damage and other health hazards from wireless telephone use.

Carlo's research concluded cell phone users were twice as likely to suffer from brain cancer and rare tumors than non-users. ABC reported. [ABC 20/20, 26 May '00]

Cell Phone Damage is Forever

Now working at the Microwave Therapy Centre in Perth, Australia, surgeon turned radiotherapist Dr. John Holt has spent 42 years probing the causes of cancer. Since 1996, he has been looking at cell phones as a possible cancer culprit.

Pointing to chromosome and genetic analysis by Dr. Peter French showing cells are permanently damaged by cellular phones, Holt warns, “Once the damage is created, the damage is irrecoverable - and inherited unchanged, from generation to generation.”

Precautionary Principle

As more and more modern advances are revealed as hazardous to healthy cellular life and reproduction, it is time to shift our decisions to precaution and prevention rather than risk. Instead of asking what level of risk is acceptable, a precautionary approach asks, “How much risk can be avoided?”

In 1992, the U.S. signed on to a UN declaration endorsing the “Precautionary Principle”. Europe – but not the USA – has actually adopted this approach, with much more stringent standards for electromagnetic emissions.

Disney Abandons Lucrative Child Cell Phone Branding

As industry watchdog Jeffrey Silva relates, in 2000, Walt Disney discontinued licensing some of its cartoon characters for display on mobile-phone faceplates because of health questions.

As cell phone lawsuits proliferate toward an industry-rattling precedent, it can be hoped that cellars will soon undergo the same stigma and public revulsion of cigarettes. In both cases, the best advice is not to light up. The lives you save may be those you most cherish.

[Regrettably Disney has subsequently performed an about face on this precautionary policy and, in the interest of profit in a market that is being exploited strongly at present, joined up with Sprint to promote cell phone services to children in the USA. TL]

Cell Phone Tips:

1. Don't use a cell phone except in an emergency.
2. Limit calls to 1 minute or less.
3. Never use a cell phone while driving. Park your vehicle and get clear of its steel structure, first.
4. Never use a cell phone near small children in or out of your car. Resist and remove cell phone relays from your neighborhood.

Hands-Free Hazards

But cell phone junkies would be well advised to consider that misrepresented precautionary measures like headsets could actually amplify exposures through increased power requirements of hands-free cell phones.

Even using a hands-free phone, you could be “Yacking Yourself To Death” advises Inter@ctive Week. Because hands-free phones use more power to operate, four year-old medical studies show that hands-free devices raise the amount of radiation being directed into the head by three times. [Inter@ctive Week 13 Apr '00]

Cell Phone Carried in Purses or Waist Pouches Must Be Off

Whenever your phone is turned on it sends a short burst signal to the nearest cell site every few minutes. Clinical studies have shown that the energy directed into your ovaries, liver, kidneys or similarly sensitive organs during each locator call is the same as conversation mode – even greater if the cell phone's antenna is not extended, requiring more power to complete the locator link.

Mobile Phones for Children: A Boon or A Peril?

Half of British children aged 5 to 9 own a mobile phone, and a brand for tots is imminent. Some experts are unhappy.

The Times Online (UK) – John Naish – June 23, 2009

In a world where everyone is busy texting and chatting, more and more parents believe that their little ones should join the fun. In spite of dire warnings about the long-term harm that mobile phone use may wreak on young children's mental and physical health, we have just passed the tipping point: more than half of British children aged between 5 and 9 own a mobile phone.



Now, in this rapidly expanding market, a major network is about to adopt a range of kiddie-phones designed for children as young as 4, with claims that its handsets are safer and smarter. But can there be any sense in texting toddlers?

Health concerns about the impact of mobile phone use on adults' brains may have largely subsided but government guidelines still warn that children's vulnerable grey matter should be protected. Professor Lawrie Challis, an emeritus professor of physics who has led the Government's mobile-phone safety research, says that parents should not give children phones before secondary school. After that, they should encourage them to text rather than to make calls, as texting exposes their brains to lower levels of electromagnetic radiation.

"We have no idea if they are different in reaction to this sort of radio frequency," says Challis, "but there are reasons why they may be – children react differently to ionising radiation, radioactivity and gamma rays. If you are exposed to too much sunlight as a child, you are far more likely to get skin cancer than if you are exposed as an adult."

A disturbing study by researchers at Örebro University Hospital in Sweden last year indicated that children may be five times more likely to get brain cancer if they use mobiles phones.

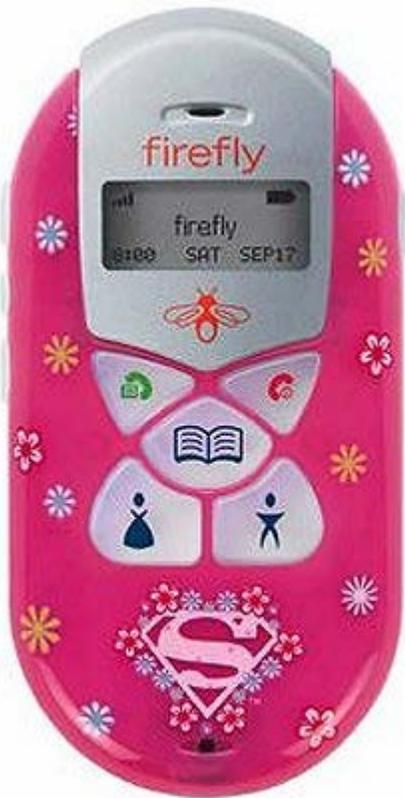
On top of this comes new concern about the long-term effects of mobile phone use on the mental health of youngsters. This month **Dr. Michael Carr-Gregg, a leading Australian psychologist, called parents who allow young children to use mobile phones "insane"**. Carr-Gregg, a University of Melbourne professor of paediatrics, is worried about the power of mobile phones to distract and overexcite.

According to a new survey conducted by Carr-Gregg, 40 per cent of children with mobile phones are sleep-deprived on school nights, as peer pressure has made it normal for children of 6 and 7 to stay up until the early hours texting friends. His evidence, revealed in a series of Australian academic seminars, suggests that millions of children are allowed mobile phones in their bedrooms, creating a generation of overtired "zombies".

Other new research has linked sleep deprivation in children with hyperactivity symptoms and hormone imbalances that increase the risk of obesity and diabetes. Carr-Gregg says that no child should be allowed a mobile phone until the age of 12.

Nevertheless, the landmark point at which more than half of British children aged between 5 and 9 own mobiles has been passed, according to research by Josh Dhaliwal, the co-founder of MobileYouth, a specialist research consultancy that tracks young people's technology use. "Lots of children's phones tend to be hand-me-downs from adults," he says. "My sister gave her seven-year-old daughter a mobile for her birthday and that's about the norm now."

Sensibilities are changing rapidly: a recent poll by Populous suggested that the number of parents who believe that it is acceptable to allow a child under 12 to own a mobile phone has increased by more than a third in the past 12 months. Until now, fears of a parental backlash have deterred mobile networks from marketing handsets in the UK specifically for the very young. A planned Disney service aimed at those aged 8 to 14 was scrapped in 2006 because of an "adverse retail environment". All that is about to change, says Dhaliwal.



Enter the candy-coloured, brightly lit Firefly Mobile, specially designed for children aged from 4 to 12, with simplified controls (only five buttons) and a restricted set of functions.

Kevin and Frances Crean, a Dublin-based husband and wife who are marketing it, say that the phone will launch in Britain on a major network before the end of the year.

The toy-like handset has an "on" switch, an "off" switch and two buttons with a male and female figure on – one calls mum, the other dad (perfect for traditional families).

Another button accesses a phone book that contains up to 20 numbers. The phone book is PIN-protected and so can be entered, to begin with at least, only under parental supervision.

The phone cannot download Internet files and can be set up to block calls from numbers that it doesn't recognise.

Frances Crean, a mother of three, says that a family panic led them to look for a youngster-friendly phone: "In summer 2006 we had a health scare with our daughter. She was 6 and attending a day camp when she developed a sore neck and a rash – classic symptoms of meningitis. Nobody at the camp had contacted us to say that she was unwell, but when she was collected we realised that she looked very ill and rushed her to hospital. Thankfully we got the all-clear. We wanted to find a phone that would be safe for her and found this one being made in America. We felt that if we didn't market it now, someone else would."

It helped that her husband is a former sales director for a mobile phone company, although Crean, 34, says that the £85 phone's specially limited features mean that it is no great money-spinner for

network operators. “They are not designed to encourage children to spend time chatting. Nor can you take photographs or send texts, though on one of our models children can receive them.” The phone’s text-less nature means that it is far less likely to be misused in the playground for virtual bullying. The creators also claim that it produces levels of electromagnetic radiation that are below the European recommended levels. These limits are, however, set for adult use of phones: the European Parliament has urged European ministers to bring in stricter limits for children’s exposure.

Crean adds that the phones are marketed at parents rather than at children – this is important in Britain, as the network operators have agreed to a code of conduct which stipulates that they won’t market phones specifically to under-16s. But what constitutes marketing to children can be moot: in the Irish Republic, where the toy-like handset is already on sale, the phone’s vendors includes Smyths, the country’s biggest toy store, and the Creans ran a short radio and bus advertising campaign for Christmas.

Crean says that despite the restricted functions, the handset passes the kiddy-credibility test. “Our eldest daughter is 9 and understands why it isn’t good for her to have a regular mobile,” she says. “A good few of her friends have normal ones, though.”

More than 7,000 handsets have already been sold in Ireland, and the Creans are currently deep in commercial talks with several UK networks. “We are definitely going to have the product launched there before the end of this year,” she says. “In Ireland our phones have just had a network launch with O2, having been marketed initially as a sim-card-free phone two years ago.”

Not everyone in Ireland considers the Firefly a boon for young children, though. Aine Lynch, the chief executive of the National Parents Council, argues that the Firefly would be more appropriate for children aged 11 or 12, rather than those as young as 4. She points out that it would prevent them from accessing the Internet, ringing up inflated phone bills or calling and texting people unknown to their parents. “Targeting a phone at a four-year-old causes us concern,” she says. “It gives rise to questions as to where parental responsibility is going. **Why would kids need to be contacted by mobile phone? Why are they not in the care of their parents, teachers or supervisors?**”

Other European countries are heading in the opposite direction to Britain and Ireland: the French Government introduced laws earlier this year that ban sales of mobile phones to children under 6 and prohibit advertising them to children under 12. And a report released in January by the Finnish Radiation and Nuclear Safety Authority concluded that children’s use of mobile phones should be limited until the potential long-term health risks are identified. But in Britain, the Government’s watchdog, the Mobile Telecommunications and Health Research Programme, appears to have stalled on its declared plan to fund such a study. No work has been commissioned from its £3.1 million research budget.

Given this apparent official indifference, toddler-phones are set to become an increasingly common UK phenomenon, says MobileYouth’s Dhaliwal. Several other companies, including Samsung, are building handsets for children aged 4-5 with limited functionality, though none is yet signed to a UK network, he says. Given the parental enthusiasm for dialling up their little darlings, such phones may prove to be the best option, he adds. “There are legitimate reasons why you would not sensibly want a child to have a fully functioning handset, even though people currently do this. You are giving them access to the Internet and you can’t control what sort of people gain access to them. At least restricted kiddie mobiles prevent this from happening.” (Emphasis in bold type has been added)