

# Consumer Choice

[www.thecai.ie](http://www.thecai.ie)



FEBRUARY 2017

## IRISH MEDICINE COSTS CONSUMER CHOICE OFFERS A PRESCRIPTION FOR SAVING AND GREATER TRANSPARENCY

€ MONEY

MEDICATION COSTS

FREE TRIAL SCAMS

☕ LIFESTYLE

HEALTH EFFECTS OF SHIFT WORK

NEW FOOD PYRAMID

📷 PRODUCT TESTS

WASHING MACHINES

TABLET PCS

## The Consumers' Association of Ireland

The Council is the policy-making body of CAI. Members are elected from within the CAI's membership at the Annual General Meeting.

### Council Members

#### Chairperson

Raymond O'Rourke

#### Vice-Chairperson

Michael Kilcoyne

#### Hon Secretary

Elaine Bolger

#### Hon Treasurer

Richard Donohue

#### Council Members

Timothy Murphy

Steen Bruun-Nielsen

James Wims

## February 2017

Dear Member,

We are well and truly into all that 2017 promised in terms of new beginnings, new approaches and, decidedly, new challenges.

I will commence with the very positive news that the CAI website has been entirely overhauled and Members can now fully access our library of reports and tests right back to 2008. In addition, we can now begin to promote our Association and hopefully bring in new Members to carry on and expand upon our Council and lobbying efforts. I will be in touch very shortly by email to Members with more detail and updates.

However, it is highly important that we acknowledge what, in our opinion, are the overabundance of commentators who are referring to 'the unknown effects of Brexit'. In reality there are so many 'knowns' that this form of poor reporting is placing consumers in a bad and uninformed place and state.

We currently enjoy an environment in Ireland where we have some of the most challenging and competitive prices for groceries, food and vegetables ever witnessed. We are a part of the European Union where all borders to trade are opened and, whether it be online or on the ground, we can avail of prices that are competitive and transparent and backed up with legal provisions to protect us against poor quality goods and services - and with the added benefit of a 14-day cooling off period!

This is about to, or has already begun to, change. We have, from the outset, seen the negative effect of exchange rate losses in the value of the Pound against the Euro. But it did not, in any way, bring about a reduction in the prices we pay at the tills of the many UK retail branch outlets here in Ireland. The CAI has been lobbying for the abolition of geographical blocking where goods/services/holidays/car rentals and many other items being sold online e.g. from the UK, would not be sold to the Irish consumer wishing to pay in Sterling to avail of the better value. These are a few examples of the 'knowns' and they are having a direct impact on prices for Irish consumers.

Borders have people on both sides and, whether it be fixed or notional, we must impress upon all who are concerned that there will be change when the UK and Northern Ireland leave the European Union and, despite the legalities, that process has already begun to show its effect.



### Our Reports

Reports in Consumer Choice are based on market research, laboratory tests or user surveys, all of which are independently and scientifically conducted. Free goods are never accepted for testing - all samples are purchased. Occasionally items may be borrowed for review purposes only.

The reports are produced in the main by our own Editorial staff. Some material is occasionally drawn from other foreign independent consumer magazines.

Because Consumer Choice carries no commercial advertising it is not swayed by bias or influence and can point out advantages and flaws in goods and services that other magazines may not be able to do.

Reports on any article relate only to the articles or goods mentioned, and not to any other article of the same or similar description. We do not necessarily price or report on all brands or models within the class, and the exclusion of any brand or model should not be taken as a reflection on it.

Social Media:



### Consumer Choice

Consumer Choice is published by the Consumers' Association of Ireland (CAI) Limited, a wholly independent, non-government, non-profit making body. CAI was founded in 1966 to protect and promote the interests of the consumers of goods and services, and to enhance the quality of life for consumers. CAI is registered with charitable status: CHY 8559.

Advertising is not accepted for publication. Consumer Choice is available on a subscription basis only. To facilitate banking requirements all cancellations must be advised, by letter or email only, a full 30 days in advance. Where a bank applies a €24 chargeback fee for a Member/customer advised cancellation we will deduct same from any refund requests. To subscribe please write to:

Consumer Choice,  
26 Upper Pembroke Street,  
Dublin 2.

Tel (01) 637 3961  
Email [cai@thecai.ie](mailto:cai@thecai.ie)  
[www.thecai.ie](http://www.thecai.ie)

### Published Material

No part of this publication may be reproduced, stored in a retrieval system, or transmitted in any form without obtaining prior permission from the Council by contacting the Consumer Choice office. It may not be used for any form of advertising, sales promotion or publicity.

© Consumers' Association of Ireland 2016  
ISSN 0790-486X

### Staff

#### Policy and Council Advisor

Dermott Jewell

#### Design/Typeset

Denzil Lacey (Zava Media)

#### Managing Editor

Clodagh O'Donoghue

#### Researchers

Róisín Moloney Weekes

May Celliff

Sarah Breathnach

Atousa Motameni



# Contents

 [www.twitter.com/The\\_CAI](http://www.twitter.com/The_CAI)

 [www.facebook.com/](http://www.facebook.com/)



## MONEY

### 6 Money News

The latest advice and developments in money matters, including an update on the restrictions consumers continue to face in their transactions online due to geo-blocking and how signing up to 'free' trials can leave you feeling considerably poorer.

### 13 Irish Medicine Costs

*Consumer Choice* investigates the options when it comes to purchasing your medicines in Ireland and how to reduce costs on this nondiscretionary spending.



## FOOD & HEALTH

### 5 Food & Health News

The familiar Food Pyramid has been updated. Do you know what you should be eating and how much?

### 10 Working Against the Clock - *The impact of shift work on health*

New research has focused on how irregular working schedules can negatively affect eating patterns and lifestyle behaviours and the need for many shift workers to quit unhealthy habits.



## PRODUCT TESTS

### 16 Washing Machines

Even washing machines are becoming 'smart', but to pass our tests with flying colours they need to deliver on the basics - like getting laundry really clean. *Consumer Choice* has a dozen Choice Buys that achieve great results every time.

### 21 Tablet PCs

Ranging from entertainment-focused devices to machines for getting some serious work done, our independent labs have put 29 tablets through their paces to see which models outperform the rest.

# News Briefs

The latest information  
on the world of the  
consumer

## TPP (US Version – Totally Protects Phones)

The lithium-ion battery lies at the centre of power (sorry) of almost every smartphone, tablet, device and gadget in the world. However, they are also a known fire hazard that can burst into flames when they come into contact with air or water. When you consider the use of devices globally and then add the motor vehicle into the equation, it becomes fast apparent that we need to find a solution- and quickly.

Enter the team of Stanford University researchers who have developed a new lithium-ion battery with a built-in fire extinguisher. More importantly, as this has been tried and failed on previous occasions, it is the success with which the Stanford team has found the means to insert the flame retardant, triphenyl phosphate (TPHP), into the battery itself – without loss of performance – that is the outstanding breakthrough. Under tests, when the temperature of the battery reached 150 degrees Celsius, the TPP was released eliminating any potential danger - within 0.4 seconds.

Will insurance companies argue that this poses a flooding risk?



## Do Not Buy – Unless you Understand the Label!

Recently, the European Commission was strongly criticised by the European Court of Auditors in its report on 'Combating Food Waste'. In its report, the Court argued that the European Commission has shown a lack of ambition on food waste and in spite of having already identified problems, such as the need for rules on food donation or changes in VAT, not much had been actually, tangibly achieved. It further highlights issues regarding date labelling of food products indicating its view that the current system reflects these to be "a major factor contributing to confusion about food safety among consumers".

I have to say that, on this issue, I have difficulty with this level of rebuke. I understand where it is coming from though. A recent Eurobarometer survey showed that only 40% of consumers understand a 'use-by' date. Now, to be entirely honest here, I just do not get that – at all.

This is why the Court suggests that date labels should be "sufficiently clear for consumers in order to avoid unsafe food from being eaten and safe food from being discarded".

During the audit, the Court found several examples of products that were very similar but used different types of dates and gives the examples of Parma ham and Romanian cheese products, which used both 'use by' and 'best before' dates. Well, let's be honest, *that* is the problem and would confuse anyone!

## INADEQUATE PROTECTION OF YOUR DATA AND YOUR MONEY



Ernst and Young's (EY) Global Information Security Survey (GISS) was conducted among 1,735 leaders and information security and IT executives, 54 of which were based in Ireland. It is notable, from a global perspective, that the report has shown that at least 57% of those surveyed had one or more significant cyber-security threats during the past year and that, over the course of the last two years, the number of such incidents has increased by as much as 30%.

Focusing on Ireland, EY said that with a smaller pool of executives to work from, the number of organisations to have had a significant attack increased to nearly three-quarters (72%). This would indicate an increase of 29% based on the previous survey in 2014.

Perhaps of greatest worry to some of Ireland's largest organisations is how 55% of those surveyed said that they believe their organisation is unlikely to detect a sophisticated attack on their business. This figure reflects a worrying lack of progress in terms of cyber-security, especially as Irish executives are declaring how funding is the primary cause for concern. Indeed, more than two-thirds of respondents stated that up to 50% more budget was needed to keep their organisation within its risk appetite.

The report goes on to suggest that Irish firms realise the financial damage that could accompany a major cyber-attack incident. I find this more of concern as it suggests that the consumer can, or should, accept such a risk to the financial and other bodies in which they place their money and their trust. Not good enough!

# APplying Brexit Logic



Up until recently, in the UK, the cheapest paid-for apps in Apple's App Store cost consumers there £0.79. Not any longer. Attributing it to 'currency fluctuations', Apple introduced an, on average, 25% increase, bringing that cheapest rate to £0.99. The percentage hike is across all tiers with, for example, the £1.49 app increasing now to £1.99, while those formerly costing £7.99 are now £9.99. In-app purchases are going up too.

This is by no means a new approach from Apple. In January 2015, a similar move from the company saw the EU, Norway and Canada experience price increases, while Iceland saw a reduction (a number of those changes directly reflected VAT changes in regions). The news of the increases came on the same day that UK Prime Minister Theresa May outlined her country's stance towards leaving the EU.

I mention this because we constantly cross our internal border on holiday and other family travelling. Beware of the increased rates- especially if children have permission to make in-app purchases.

## Born and Razed

Discussions at the recent Davos 2017 Conference raised significant and quite heated debate around the idea of robots and artificial intelligence (AI) being put in place of and replacing jobs heretofore maintained by humans. In January, a Japanese insurance firm made headlines after announcing that it was replacing 30% of its workforce with AI based on IBM's Watson technology.

Now, courtesy of Silicon Republic, I see how the career of the news journalist is under threat following reports that China's Guangzhou-based *Southern Metropolis Daily* has published its first news article written by a robot journalist. According to the *China Daily*, the 300-word article was a piece reporting on the expected travel

complications caused by the arrival of the annual Spring Festival. Dubbed Xiao Nan by its creators at Peking University, the robot journalist is capable of producing a story in just one second, either a short story or a long report if required. To ease fears of potential journalists losing their jobs any time soon, the project's leader, Professor Wan Xiaojun, outlined how humans still possess far greater creative writing skills than any robot today.

Ahh yes, thus paving the way for the robot of tomorrow! I leave you with the following examples: Orchestras/ Brass sections - Electronic Keyboards: Cars - Self-drive Cars: The sword - The Pen - The Computer - The Robot- The End.





# Food & Health

 by Clodagh O'Donoghue

## The updated Food Pyramid clarifies guidelines for healthier eating

Most of us are familiar with the Food Pyramid, which provides a useful, visual reminder of what foods we need to be eating to maintain good health. In December 2016, the Department of Health published an updated version of the Food Pyramid as part of its 'Healthy Food for Ireland' initiative, which offers a set of national healthy eating guidelines for the Irish population. The changes to the Food Pyramid have been welcomed by *safe food* and others as sending a clear message about what and how much we should all be eating to achieve optimal health.

The Food Pyramid - which is aimed at adults, teenagers and children over five years - organises foods and drinks into five main shelves, starting from the most important shelf on the bottom. With a recommendation to eat at least five-to-seven portions of fruit and vegetables each day - increased from the 'five-a-day' recommendation - this shelf is now the largest on the pyramid, emphasising the vital importance of these foods to a healthy, balanced diet. This

message is key given that fruit and vegetables are something that we are literally not eating half enough of in Ireland, according to *safe food*'s Director of Human Health and Nutrition Dr Cliodhna Foley-Nolan, who notes that on average Irish people eat two portions a day.

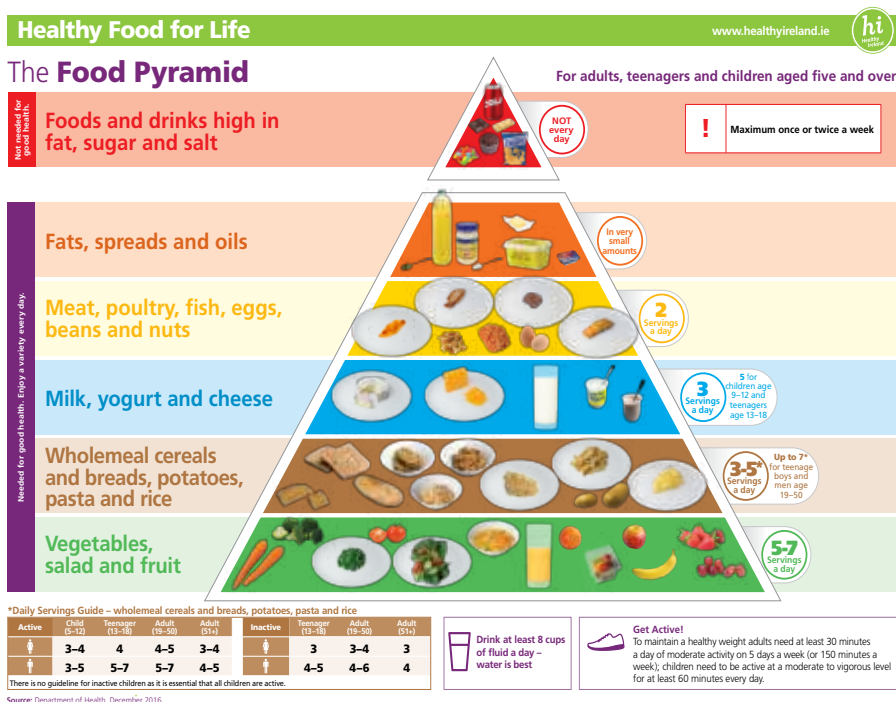
The second shelf of the Food Pyramid is made up of cereals, breads, potatoes, pasta and rice, with the recommendation to choose wholemeal and wholegrain options whenever possible. The third and fourth shelves indicate the need to consume three servings of dairy products like milk, yoghurt and cheeses daily as well as two portions of such protein sources as meat, fish, poultry, eggs, beans or nuts. Only a very small amount of fats, oils and spreads from the fifth shelf should be eaten.

In another important change to the Food Pyramid, the top shelf containing foods and drinks that are high in fat, salt and sugar has been separated and distanced from the other shelves. This clearly emphasises

the need to limit such foods to no more than once or twice a week and highlights the fact that they certainly should not be eaten every day. Such advice is important, because, as noted by Dr Foley-Nolan, "Distancing the treat foods on the now-separated top shelf of the pyramid emphasises that many of these foods are simply empty calories in which we currently majorly over-indulge".

The new Food Pyramid also clarifies what constitutes a proper portion size, which is again helpful given *safe food* research that has found that we are inclined to eat oversized portions even of nutritious foods.

A simple piece of advice offered by Dr Foley-Nolan to help people gradually get into the fruit and vegetable habit is for them to eat one more piece of fruit or portion of vegetables each day than they do currently and to build up to the recommended five or more a day by having at least one portion at each meal and snack time.



# Money News

 Money News by *Roisin Moloney Weekes*

## A new you for 2017 - don't get caught with free trial subscription traps

**It is resolution time of the year and we may be seeking a helpful hand from diet pills, beauty products, or health supplements, which are so regularly advertised online, often with a free trial attached.**

Free trials can be tricky and consumers are urged to read the terms and conditions to find out what happens when the 'free trial' ends. The European Consumer Centre (ECC) Ireland warns that many free trials result in consumers being locked into costly subscription services. In many cases, consumers are offered items for free for a certain period of time and are led to believe that the only charge they will incur is post and packaging but what is actually on offer is a subscription service that amounts to significant monthly charges unless the consumer opts out before the end of the free trial. In some cases, consumers do not remember to opt out on time but in many cases consumers make attempts to opt out but are unsuccessful as they are unable to get in contact with the supplier. Suppliers are very often based outside the EU, but forwarding addresses in Europe are given. Being based outside the EU means that consumers' routes to redress are even weaker.

The ECC reports that, of the numerous complaints they receive about free trials, many have involved pop-up ads. Consumers would be asked to pay a small amount, perhaps for post and packaging, but later realise that they have signed up to a subscription service. They report charges of up to €400 in some cases and often the products did not arrive until after the trial period had already expired. Consumers must be on their guard when it comes to such offers with

advertises so often accessing us through social media and in particular on our mobile phones when we are often less vigilant.

ECC Ireland advises consumers to keep the following in mind when it comes to free trials:

- With any online consumer transaction always make sure you know who you are dealing with by searching for the trader's address in the 'contact us' section or terms and conditions. If you cannot find the address easily or there is just a 'contact us' form, then this should set alarm bells ringing. Conduct a 'whois lookup domain' search to find out who registered the website, where it was registered, and when. Keep in mind that although a website may have a co.uk web address, the company could actually be registered outside the EU, in which case EU consumer legislation may not apply.

- Read through the small print for the terms and conditions of the offer that you are signing up to. The T&Cs should also provide further detail on the timeframe you have to cancel (typically 14 days from the date of placing the order) if you change your mind.

- Make sure you know what happens after the trial period finishes. Consumers are often required to inform traders in writing that they want to cancel. Otherwise, the free trial period may automatically roll over to a subscription where a monthly fee has to

be paid.

- Watch out for what website you are on if you are redirected by clicking on a link - this may be another company and by signing up you are authorising this company to take the monthly subscription. Make sure to check the URL at the top of the page.

- If sums of money have been charged to your card, then you should contact the trader in writing immediately indicating that you wish to cancel the contract.

- Carefully read the terms and conditions as the trader may offer refunds to unsatisfied customers, but this may incur a charge.

- Always use a secure method of payment like a bank/credit card just in case things go wrong because at least you may have the option of talking to your bank/credit card provider to possibly cancel an unauthorised transaction or avail of chargeback, if you cannot obtain a satisfactory response from the trader.

- If you are given a limited time to cancel the contract make sure you do so. It is a good idea to set a reminder on your phone to ensure that you won't forget.

In your New Year quest to become a new improved you, take precautions so that you don't end up a poorer you!

# Geo-blocking

A Services Directive report launched by the European Consumer Centre (ECC) Ireland and the Consumer Council of Northern Ireland has found that business practices such as geo-blocking are still preventing consumers from accessing services when shopping online. Article 20.2 of the Services Directive prohibits discrimination based on nationality and place of residence. Greater clarity and stronger enforcement for breaches are being called for as consumers too often face restrictions in their transactions online with no justification for price and service differentiation, particularly when purchasing items such as electronic goods, household appliances, vehicles, clothes, books, music and data downloads.

According to the report, Ireland had the third highest number of complaints relating to Article 20.2, after Austria and Italy, with the following being some examples:

- An Irish consumer who participated in a half marathon organised by a UK-based trader was charged more as an overseas participant, as opposed to the price available for residents from the UK

- An Irish consumer who attempted to hire a car in France was refused a vehicle by the car provider as the consumer was unable to provide a French driving license.

- An Irish consumer who attempted to shop online with a UK-based online trader was advised that she could shop from the Irish version of the site. Although the consumer could continue viewing the content of the UK site, the trader would not deliver to Ireland from the UK site.

- An Irish consumer ordered a dress from a UK-based online trader. The same dress was available on the Irish version of the website but at a higher price (€155 as opposed to £95). The consumer indicated the UK as the place of delivery but was advised that she would need to pay €155 as she was using an Irish credit card and clearly was residing in Ireland. The case was referred to the competent Trading Standards office in the UK, which refused to look into the matter, arguing that the Services Directive was not applicable in the case of online purchase of goods.

The ECC highlights that the

Services Directive has been an important step in improving the functioning of the single market for services. It welcomes the European Commission's acknowledgement that further action is necessary to give effect to the principle of nondiscrimination and develop rules against discrimination based on consumers' nationality and place of residence. There have been initiatives around the Digital Single Market and the Commission has adopted an e-commerce package that is described as a major step forward in tackling geo-blocking, making cross-border parcel delivery more affordable and efficient and promoting consumer trust through better protection and enforcement.

The report is the result of a joint project to investigate the work of European Consumer Centres Network under the Services Directive and the main problems experienced by consumers. ECC Ireland acted as the project leader, aided by a working group made up of ECCs Austria, Netherlands, Norway, Sweden, and the UK.

## An Post's AddressPal

More and more of us are shopping online but delivery difficulties and postage costs are common obstacles for both consumers and retailers. Many retailers, particularly in the UK, do not deliver to the Republic of Ireland.

Online shopping is becoming easier for Irish consumers with the establishment of An Post's service called AddressPal. This service offers consumers a UK delivery address for shopping on UK websites that won't ship to Ireland or that charge heavy fees for doing so. The reason so many retailers do not deliver here may be to avoid Irish consumers having access to cheaper UK prices when they have outlets in Ireland, which may be charging higher prices than prices charged online for the same products.

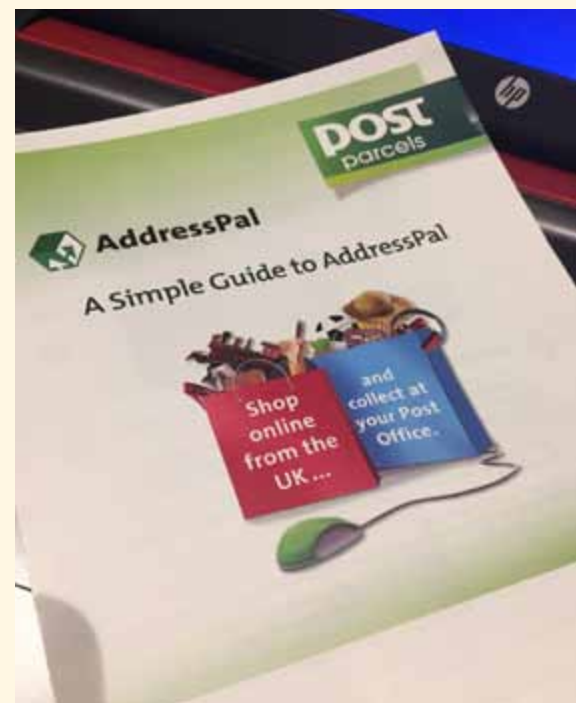
ParcelMotel.com, established by Nightline Direct, brought this service to Ireland prior to An Post. It offers consumers a virtual address when shopping online, allowing them to purchase from sellers who do not deliver to Ireland. Consumers' parcels are then

delivered to their nearest Parcel Motel Locker or Parcel Motel point for collection. These collection points are located in 124 areas around the Republic of Ireland in petrol stations, supermarkets and shopping centres. You can also use this service to return purchases to retailers or send parcels. Other providers offering a UK virtual address include DPD Parcel Wizard and Parcel Connect.

An Post's AddressPal was established last year and offers a similar service and in the first seven months registered more than 100,000 new users who were seeking a UK address for shopping. AddressPal reports delivering in excess of 20,000 items per week from its UK hub to 'click and collect' points in An Post offices throughout the country. With prices beginning at €3.50, this service offers consumers a route to make significant savings.

AddressPal is enjoying success in this market at a time of great opportunity with the UK public voting for Brexit and the value of sterling plummeting and Irish

consumers are taking full advantage of the value for money.







# Product/Tech News



## CES 2017

For the last 50 years, the world's major technology companies have assembled at the annual CES event to show off their latest gadgets and gizmos. When the first Consumer Electronics Show opened its doors in the summer of 1967 in New York City, 117 exhibitors proudly displayed the newest technology, including transistor radios, stereos and black and white televisions. The event is now held in January each year in Las Vegas, with over 3,800 exhibitors attending in 2017 in over 24 product categories, and although not everything on show at CES will make it to market and into the hands of consumers, the trends and technologies on display provide an insight into where the world of consumer electronics is headed.

At the 2017 event, the inexorable move towards the Internet of Things continued to be very much in evidence with an ever-increasing range of everyday household items and objects being equipped with smart technology in a quest to boost effectiveness, or make our lives easier, or give us more information than we may know what to do with. The list of 'smartified' objects on this year's convention floor included a hairbrush, mirror and coffee maker, all of which could be useful in the mornings when you rise from your smart bed.

Another trend that has been gaining momentum over the last few years and shows little sign of abating is the wearable technology category, where products are often, though not always, centred around fitness and health. And, of course, CES 2017 was full of the usual plethora of the highest of high-tech in terms of phones, laptops, TVs, and cars as well as an expanding virtual reality category. So with the 2017 show offering its fair share of daft devices as well as awe-inspiring appliances, we look at a few new products that grabbed our attention.



The LG Signature W TV

## Wallpaper TV

TVs are always a big deal at CES with recent years seeing the advent and demise of the plasma screen, the introduction of 3D, the superseding of mere high definition by 4K HD, and the curving of displays for a more immersive experience. In 2017, the focus was on making TVs ultra-thin with LG leading the way thanks to its use of organic light-emitting diode (OLED) panels. Because OLED generates its own light instead of requiring a separate backlight to illuminate the panel, the screen can be made incredibly thin. LG has taken this to an extreme and used this year's CES event to showcase its new 'wallpaper' TV.

The LG Signature W (OLEDW7P) is designed to be mounted on a wall and has no bezel or backlight, nor any power and control systems. At just 2.5mm thick, the Signature W TV sits virtually flush with the wall on which it is hanging, giving a floating picture effect. A separate soundbar and control unit are connected via a ribbon cable. This LG model will come in sizeable 65- and 77-inch versions, and although no pricing has yet been announced it will undoubtedly run into thousands of euro. As at least one tester has noted, although the design aesthetic of this expensive device is impressive once it is all set up, taking it out of the box and getting it safely onto a wall is an exceptionally stressful process, especially as there are few safe places on which to grip the TV and the panel is so thin that it is vulnerable to damage. With no word on when this TV will become available to consumers, we can, however, leave this worry until another day.



Product News by Clodagh O'Donoghue

**The products featured on these pages have not been tested by the Consumers' Association of Ireland and their inclusion here is not, in any way, an endorsement of them.**

## Technology that should wear well



Waist is the new wrist

WELT

At CES 2017, wearable technology was very much in fashion. Often, this category focuses on monitoring and tracking health and fitness, with a succession of wristbands on offer to do the job in recent years. However, there is no reason that these monitors need to be worn on the wrist and a few variations on a theme emerged at CES 2017, including the Welt smart belt from Samsung's experimental product incubator C-Lab.

Invented by the medical doctor who previously worked on integrating heart-rate sensors into Samsung's flagship smartphones, the Welt is worn around the waist and can track steps taken, distance covered, calories burned, and time spent idle, among other things. Given that the size of your waist has been shown to be a key predictor of overall health, keeping an eye on it via the Welt companion app can help focus the mind on trimming it down if needed.

Another fitness tracker impressively squeezes its capabilities into a tiny but very smart ring to be worn on your finger. Not only can it measure all the same metrics as wristband devices - including steps, heart rate, calories burned, sleep, and activity type - this stylish item is waterproof up to 160 feet so you can go for a swim or do the washing up without taking it off. It impressed on the show floor so much that it was named the winner of the CES 2017 Best of Innovation in Wearable Technologies award.

Returning to the wristband format, London-based company Doppel is taking a different approach to improving well-being with its device that claims to alleviate workplace stress. Worn on the wrist, the Doppel band produces vibrations that are aimed at triggering the body's natural response to rhythm, helping users stay alert or calm down depending on the speed of the vibration, which is controlled through tapping or via a smartphone app. The jury is out on the usefulness of this one, though the company says the device has been independently tested by the Royal Holloway University London and shown to double a user's focus and alertness as well as significantly reduce stress.

A final mention goes to the Basslet, a Bluetooth-enabled wristband that will vibrate in sync with the bassline of music played on your headphones. Touted as "a wearable subwoofer for your body", the idea is to make you feel the music as you might at a loud party or club. You will pay \$179 for the privilege though, with the product available to pre-order now.

### Let's sleep on it

Getting your beauty sleep is important and a new smart bed offering aims to make sure your eight-hours of shut-eye are as comfortable as possible. The Sleep Number 360 is a bed that is clever enough to adapt to your body, responding as you toss and turn and automatically adjusting mattress firmness. The bed features a foot warmer that will switch on automatically at your normal bedtime and it can record your sleep quality via an app to help you develop a more restful night-time routine.

Sleep quality can be hampered if you have a partner who snores, but the Sleep Number 360 has this covered too - automatically sensing when snoring begins and making use of the split-side design to stealthily lift the side of the bed with the snoring partner to improve airflow and hopefully reduce the noise level.

### Smart morning routine

Having risen from a comfortable and high-quality night's sleep on a smart bed, you could continue to get the day off to high-tech start with various offerings from the CES showfloor. The Hydra Loop shower system will ensure that environmentally conscious types do not use too much water in the shower by flashing different colours while they wash to indicate the quantity of water used. A paired app will also track usage over time.

When it comes time to brush your hair, an ordinary non-smart hairbrush will probably do the job fine, but the Hair Coach will let you know when you are mistreating your locks. Developed by L'Oreal with Kérastase and Withings, the Hair Coach uses sensors to track brushing patterns, count strokes, and measure brush force. The battery-powered device also incorporates a microphone that the company says will pick up sounds that indicate breakage, frizziness and split ends. The accompanying app will gather this data and take into account factors like humidity and temperature before producing a hair quality score and offering tips and advice on how to improve your brushing habits to better protect your tresses.

At breakfast-time you can head to your smart fridge that will do so much more than just keep the milk for your cereal cold. Samsung introduced its Family Hub fridge last year, with the aim to make the appliance the centre of the household through the installation of an LED touchscreen on the door that can be used to post memos, pin photos, set calendar events, compile shopping lists and more. Through other apps, it can play music and video, display the weather and time, order groceries online and act as a virtual cookbook. Samsung's 2017 version has added voice controls among other things, so that when you are up to your elbows in flour you can ask for the next step in the recipe without having to touch the screen. This technology is now being incorporated into a wider range of Samsung fridges to get it into the hands of more users.

The Samsung model had to vie for attention at CES 2017, however, with the LG InstaView. LG's smart fridge offers many of the same features as the Samsung model, including an interactive touchscreen on the outside and a camera to remotely view the contents of the appliance on the inside. The LG InstaView runs Amazon's Alexa digital personal assistant, which can be used to request an Uber, set kitchen timers, place shopping orders, play music, browse recipes and more. Both the Samsung and LG fridges impressed visitors to the CES event, though it has been argued that affixing a top-of-the-range tablet to the door of your fridge will perform many of these functions at a fraction of the cost of one of these appliances. The day may come, however, when we will only dimly remember a time when a fridge could not multitask and focused solely on chilling food.



# Working Against the Clock – the impact of shift work on health

**New research has focused on how shift work can negatively impact eating patterns and lifestyle behaviours. *Consumer Choice* considers the findings and the need for many shift workers to quit unhealthy habits.**



REPORT by Clodagh O'Donoghue

## At a glance

- Health effects of shift work
- New research
- Recommendations

The beginning of the year, with the promise of spring in the air, brings a renewed enthusiasm to start afresh and this time do better, particularly in terms of making healthier choices. Recent research has highlighted the need for shift workers to be particularly mindful of taking care of themselves in order to avoid any ill effects from their working patterns.

Although most of us work standard 'nine-to-five' hours, an estimated 15% of the workforce, or around 270,000 people on the island of Ireland, are shift workers. Shift work involves working hours that fall outside of the standard working week, including evenings, overnight, and weekends as well as irregular or rotating shift patterns. For a number of industries and professions that provide services around the clock, this work pattern is necessary and, for some

employees, working outside traditional hours can have its benefits – such as making it easier to facilitate child care, reducing commuting times due to decreased traffic, yielding better pay in some instances, and allowing time for other activities, such as study. However, most people working shifts do so because it is a necessity of the job rather than out of personal preference. In addition, shift work has long been assumed to result in an increased risk of certain disorders and a negative impact on the overall well-being of employees.

A general concern with shift work is that it disrupts the normal sleep-wake cycle. Those working shifts can end up sleeping at varying times of day, potentially leading to reduced amounts of sleep. Such sleep patterns can also upset the worker's circadian rhythms. The

human body follows a set rhythm over a 24-hour period that regulates such body functions as temperature, metabolism, blood pressure, sleeping and waking. These daily cycles, known as circadian rhythms, form an internal body clock that allows for high activity during the day and low activity during the night. Shift work disrupts the normal circadian rhythm and its protective effects and this has been linked to an increased risk of long-term or chronic disease, such as hypertension (abnormally high blood pressure), obesity and Type 2 diabetes. However, beyond these more general effects, recent research has highlighted how shift work can mean that making healthy choices becomes more difficult and can have negative impacts on the eating habits and lifestyle behaviours of many workers in Ireland.



## Research findings

Recent research undertaken by cross-border agency *safe*food and led by Dr Clare Corish, Associate Professor at the School of Public Health, Physiotherapy and Sports Science in University College Dublin, incorporated the findings of a telephone survey of 1,300 shift workers living on the island of Ireland. In addition, 15 focus group discussions involving more than 100 shift workers were held and existing studies on this topic were also reviewed. The participants in the study were drawn from the three largest shift work categories in Ireland: the accommodation and food services sector, the health and social care sector and the manufacturing sector. The research focussed on examining the work patterns, eating behaviours, specific lifestyle behaviours and workplace environments of the shift worker participants.

Some key findings of the *safe*food research include the following:

- More than two in three participants (67%) reported skipping meals on shift work days.
- Nearly eight in ten of those surveyed (78%) reported not getting enough sleep.
- Less than half of the participants (44%) meet the recommended levels of physical activity per week.
- Higher rates of smoking were noted in the shift-work population than in the general population, with 30% of shift workers reporting that they smoke.

The negative impact of insufficient sleep, defined as less than seven hours per 24 hours, was clearly indicated in the research findings. Compared with shift workers who felt they did get enough sleep, those with inadequate sleep were more likely to skip meals on working days and they skipped meals on days off significantly more frequently. In addition, those with insufficient sleep were significantly less likely to consume the recommended five portions of fruit and vegetables per day and far more likely to report that shift work increases their alcohol intake.

Among those who skip meals, increased snacking is often used as a compensatory measure. Participants also reported that a lack of time, insufficient availability of healthy food and tiredness can all lead to a reliance on processed or

convenience foods, resulting in poor diet quality.

The study indicates that age and gender can play a role in influencing dietary and lifestyle choices, with findings that show that:

- Men reported poorer dietary behaviours than women and were more likely to report being overweight.
- Male respondents reported poorer sleep patterns than female participants.
- Younger shift workers reported poorer dietary behaviours and had higher

rates of alcohol consumption and smoking than older workers.

- Older shift workers reported lower physical activity and poorer sleep patterns than younger workers.

It is also notable that lower socioeconomic groups reported poorer dietary behaviours and higher rates of smoking compared with more affluent groups.

Differences in the impact of shift work were also seen across the three employment sectors as is demonstrated on the table of findings below.

**Table: Overview of reported health behaviours, workplace experiences and main issues for shift workers by employment sector.**

Overview of reported health behaviours	Workplace experiences	Main issues
<b>Accommodation and food services sector</b>		
67% skip meals on work days	58% agree they get adequate breaks	Long hours Lack of breaks
35% are smokers	58% are happy with healthy options	Erratic routine
28% are high-risk drinkers	41% agree their workplace environment facilitates a healthy lifestyle	Access to alcohol in workplace environment
51% get inadequate physical activity	62% have access to a canteen	Access to unhealthy foods leads to constant grazing
60% get insufficient sleep		
40% are overweight		
<b>Health and social care sector</b>		
64% skip meals on work days	52% agree they get adequate breaks	Long hours Lack of breaks
26% are smokers	43% are happy with healthy options	Occupational stress Heavy workload
24% are high-risk drinkers	37% agree their workplace environment facilitates a healthy lifestyle	Lack of time and energy
60% get inadequate physical activity	61% have access to a canteen	Poor access to out-of-hours food facilities
67% get insufficient sleep		Erratic routine
51% are overweight		
<b>Manufacturing sector</b>		
54% skip meals on work days	71% agree they get adequate breaks	Lack of time
30% are smokers	46% are happy with healthy options	Erratic routine
15% are high-risk drinkers	49% agree their workplace environment facilitates a healthy lifestyle	Lack of motivation
62% get inadequate physical activity	69% have access to a canteen	Access to unhealthy foods
78% get insufficient sleep		
64% are overweight		

These findings show that workers in both the health and social care and accommodation and food services sectors were more likely to report a lack of breaks and unclear finishing times, with poor structure to work organisation. In contrast, experiences in the workplace environment were better for many in the manufacturing sector. However, although shift workers in the manufacturing group reported achieving more routine meals and less hazardous alcohol intake, they are more likely to be overweight and sleep deprived. For policy makers and employers, this finding indicates that the workplace environment plays a key role and that any changes implemented need to be tailored to the specific employment sector. Moreover, as Dr Cliodhna Foley-Nolan, Director of Human Health and Nutrition at *safefood* notes, “healthy eating advice can’t follow a ‘one-size-fits-all’ approach and needs to account for the specific environment of shift workers”.

## Recommendations

This research notes that shift work has a far-reaching impact on the lives of workers. As well as having to deal with the effects of working against the body’s natural day-night rhythms, making healthy eating choices can be made more difficult due to a lack of routine, insufficient sleep, general tiredness, and other impacts associated with shift work. It is of note, however, that the shift worker participants in the recent study have a lot in common with the general adult population, in that they cite lack of time and motivation for healthy eating and adequate physical activity - and their dietary habits, including fruit and vegetable consumption, are no worse than that of the general population. In addition, the reported age, gender and social class differences in health behaviours are mirrored in the general adult population with young people, males and those with lower incomes faring less well.

That said, there are some actions that could be taken to help alleviate some of the potential health issues associated with shift work and to improve workers’ physical and psychological wellbeing and work-life balance. The study recommends placing a focus on younger shift workers and those new to shift work to help them to transition to the irregular routine experienced with shift work and prevent the development of the less favourable lifestyle behaviours in terms of eating,

sleeping and physical activity that can be associated with shift work.

Employers should also be encouraged to improve the workplace environment for shift workers, providing reasonable time for eating and rehydrating during each shift, access to facilities for safely storing and preparing meals and snacks, and options for purchasing healthy foods within the workplace, either in a canteen or from a healthy vending machine. Tailored dietary guidance and targeted promotions providing information on developing healthy sleep patterns and practical advice on fitting physical activity around shift work schedules would also be of benefit.

According to Dr Clare Corish, who led the *safefood*-commissioned research, not only do employers have a responsibility to provide the structures, supports, facilities and breaks that workers need - including encouraging regular meal patterns by providing somewhere to buy or prepare healthy eating options - there is also an issue around how shift work is structured. For example, introducing a more natural rotation where workers move from morning to afternoon to night shifts instead of going between morning and night shifts every few days would help workers to adapt more gradually to their schedules. Dr Corish notes that it is ultimately in an organisation’s interests to make such changes given that stressed employees are less productive and more likely to be sick and absent from work.

## Advice for shift workers

When it comes to the individual shift worker, Dr Corish offers some advice on how 2017 can be the year to break the

cycle of unhealthy lifestyle behaviours and patterns that may have developed and help offset any negative effects experienced due to working schedules. Because skipping meals can lead to compensatory snacking, with this substitution often resulting in weight gain, it is important that shift workers make eating regular meals a priority. Dr Corish notes that a key finding from the research is that those who managed their diet well on shift work were very organised. Recognising that they were likely to be too tired to cook when they arrived home after a long shift, these workers planned and cooked meals in advance.

In terms of getting enough physical exercise, those who manage best tend to incorporate their physical activity into their routine - for example, going for a walk or run before going to sleep. This has the added benefit of producing better sleep patterns. Dr Corish hopes that the main message that shift workers will take from the report is that “they as individuals must take responsibility for their own wellbeing by getting organised and bringing healthy food to work and having healthy meals when they get home. Physical activity needs to be included not least because it improves sleep, so a walk or a run before going to bed is a good idea.”

Those who work shifts have a harder job than most in terms of making healthy choices, but with such key tools as awareness, motivation, organisation and planning, it can be done and will reap rewards.



# Irish Medicine Costs

**Consumer Choice** investigates the options when it comes to purchasing your medicines in Ireland and how to save.



REPORT by **Róisín Moloney Weekes**

At a glance

- **Buying online**
- **Prescription medication costs**
- **Tax relief**

Many of us, regardless of our age, are taking some form of medication to deal with a short-term or ongoing medical condition. An expense that can be considered essential yet often costly is difficult to do without, so rather than choosing not to purchase our medicines many consumers explore ways to reduce costs, including buying online at lower prices.

## Buying online

Buying medicines online can offer convenience, privacy and money savings. Treatments for all conceivable ailments can be found with a quick online search: treatments for acne, birth control, blood pressure, hormone replacement, insomnia, leukaemia, nicotine dependence, pain relief, Parkinson's disease, and weight loss, to name but a few.

In Ireland, it is against the law to supply prescription medicine online. The manufacture of fake or counterfeit medicine, known as falsified medicine, is also obviously a criminal offence and

illegal prescription medicines that are discovered by customs officials coming into Ireland are destroyed. Consumers who purchase prescription medicine online have no way of knowing how safe these medicines are and whether they could cause serious harm. The Health Products Regulatory Authority (HPRA) warns that even if medicines bought online look the same, there is no guarantee that they are genuine or that it is the same medicine that was prescribed to you and so your condition can go untreated. There is no way to know if the medicine has been tested and approved for human use. There is no way to know where and by whom the medicine was made. Some medicines bought online have been found to contain certain dangerous toxic substances and, because of the uncertainty around ingredients, there is no way of knowing how these medicines will interact with other medications a consumer might already be taking.

The US Food and Drug Administration (FDA) reports that it purchased and analysed several products that were represented online as Tamiflu (oseltamivir). One of the orders, which arrived in an unmarked envelope with a postmark from India, consisted of unlabelled white tablets. When analysed by the FDA, the tablets were found to contain talc and acetaminophen but none of the active ingredient, oseltamivir, was present. FDA also reports cases of consumers placing orders for Ambien, Xanax, Lexapro and Ativan and instead of receiving the drug ordered they got, in some cases, a powerful anti-psychotic drug. As a result, customers needed emergency medical treatment. On these sites, the supplier's true location is hidden and, as criminals are generally behind the operation of such websites, there is the added danger of identity theft or credit card fraud.

Buying nonprescription



medicines online is not illegal in Ireland but, unfortunately, consumers face the same risks. In June 2015, the European Union brought in new rules to combat the sale of fake medicines online. Pharmacies and other retailers across the EU can now sell nonprescription medicines on their websites - however, they must follow the rules set down in law. A supplier who sells nonprescription medicines over the Internet in Ireland must apply to the Pharmaceutical Society of Ireland (PSI) to be entered onto an Internet Supply List. This list is available on the PSI website, [www.psi.ie](http://www.psi.ie). These suppliers must also display the common logo (pictured on page 15 below) on their website and provide a link through this logo to the Internet Supply List on the PSI website. In this way, consumers will be able to check that they are dealing with a legitimate supplier.

Websites in other EU countries can sell nonprescription medicines to consumers in Ireland if the HPRA authorises the product for use in Ireland as a nonprescription medicine and their website displays the common logo with their country's flag and a link to their country's Internet Supply List. These rules apply to EU countries only and so there are no such protections when purchasing from suppliers outside the EU.

While the ban on the sale of prescription drugs online exists in Ireland, some countries - such as the UK, Germany, Sweden, Iceland and the Netherlands - legislate for quality assurance and efficacy of prescription medicine sold online. In the past, the Economic and Social Research Institute has questioned whether this outright ban on Internet selling is necessary. If such online selling was possible, it would bring increased competition to a market that seems to need it in order to lower retail prices. Last year, the European Commission criticised the Irish State for its failure to reduce the price of medicines. While some praise was given to the Department of Health for reforms that have generated savings on the cost of off-patent medicines and the use of generics, the lack of competition in the supply of drugs was criticised.

### Prescription medication costs

There are three basic components to the price paid by patients for their medicines



in Ireland. The first component goes to the manufacturer; the second goes to the wholesaler for the delivery of medicines to the pharmacy; and the third component goes to the pharmacist. This third component includes the mark-up and the professional fee or dispensing fee charged by the pharmacist. This element of the price will vary from pharmacy to pharmacy. Consumers should ask their pharmacist what is the dispensing fee and consumers should be aware that they can shop around.

When it comes to making savings, consumers can save on the dispensing fee by buying in bulk. Generally, consumers buy medicine on a monthly basis - a common scenario might be an individual purchasing a monthly prescription for, say, €13.50 per month. Over the course of six months, this consumer will spend six times €13.50, which amounts to €81. The €13.50 price tag is typically made up of i) a cost price (say, €6.50), plus ii) a markup, which is often 50%, so in this instance €3.25, bringing the price to €9.75, plus iii) a dispensing fee, of say €3.75. So had this customer collected the full six months at once, he or she would have paid six times €9.75 plus €3.75, equaling €62.25 for the same medicine, saving five dispensing fees worth five times €3.75 or €18.75 in the process.

While dispensing fees vary from pharmacy to pharmacy, so too does the markup on medicines. A study carried out by the then National Consumer Agency in 2013 found that consumers in different parts of the country were paying very different prices for the same medicines. Consumers are urged to compare the costs of their prescriptions in various pharmacies. This may prove more difficult than when shopping around for other goods. Many of us who take more than one medication regularly tend to stick with the same pharmacist as we rely on their expertise to analyse how our medicines will interact with each other. Given the essential nature of the products, consumers are less likely to question the prices charged. It would be far better for consumers if pharmacists would be more transparent in how they come to charge the retail price for medicines. Consumers are encouraged to ask their pharmacy if any price reductions are available, particularly when making regular purchases.

An alternative model of medicine sales is provided by Healthwave, a Dublin-based pharmacy that claims to save patients up to 50% on their prescription

costs through its membership model. Membership costs €25 annually for the whole family and the savings come as Healthwave offers generic medications, which are cheaper to manufacture and buy. Customers provide their prescription and their medicines are delivered to their home. Healthwave also eliminates the dispensing fee that pharmacies traditionally charge and seeks to provide greater transparency around the cost of medicine by displaying the prices of prescription medication in store and online. Healthwave has highlighted the need for consumers to discuss the cost of medicine with their GP and, last year, it launched [myprescription.ie](http://myprescription.ie), a website that consumers can use to look up their medication and check if there is a generic alternative and what it would cost.

While pharmacies are subject to certain restrictions when it comes to advertising, they are not precluded from displaying factual information regarding medicine, such as price. The Consumers' Association of Ireland calls on pharmacies to display their prices in order to ensure greater transparency for their customers.

### Drugs Payment Scheme

One measure that every consumer should be aware of when it comes to medicine costs is the Drugs Payment Scheme.

Under this scheme an individual

or family in Ireland pays a maximum of €144 each month for approved prescription drugs, medicines and certain appliances for use by that person or their family in that month. If you do not have a medical card, you



should apply for this scheme. Anyone ordinarily resident in Ireland can apply to join the scheme regardless of family or financial circumstances. Being ordinarily resident means that you have been living here for one year or you intend to live here for a minimum of one year. The definition of family for the purposes of the scheme means an adult, their spouse and any children under 18. Dependants over 18 years and under 23 years in fulltime education may also be included.

Consumers will pay no more

than €144 for all prescription medicines for the family within a calendar month. Once you apply to join the scheme you will receive a Drugs Payment Scheme card and you should present this card to your pharmacist when collecting your prescription medicines. You can apply for a drugs scheme card at your pharmacy of choice or your local health office. You can also download the application form from the Health Service Executive (HSE) website, [www.hse.ie](http://www.hse.ie), and you will need your PPS number and some basic information.

If you need to use two or more pharmacies in one month, you can claim back the amount paid over the monthly threshold of €144 from the central HSE office.

### Tax relief

Another area of saving for consumers to be aware of is tax relief, which can be claimed on their medicine bills. Consumers can claim tax relief in respect

of any qualifying health expenses paid by them in respect of any individual. Relief will be allowed at the standard rate of tax (20%). Claims can be made after the end of the tax year in which the expenses were incurred but a claim must be made within four years after the end of the tax year that relates to the claim. Therefore, to claim for the year 2013, you must submit your claim before the end of the year 2017. You do not need to submit receipts with your claim – however, if a claim requires clarification during the processing you will be contacted and asked to submit receipts at that point. Consumers should retain all receipts for a period of six years as your claim may be selected for detailed examination in the future. Qualifying health expenses include drugs or medicines prescribed by a doctor, dentist or consultant and supplied by a pharmacist. Relief is not allowed for any expenditure that has been or will be reimbursed by another body, such as the HSE or private health insurance

companies, or if the expenditure has been or will be the subject of a compensation payment. Revenue says that the quickest and easiest way to claim tax relief in respect of health expenses, which include medicine expenses, is online using PAYE Anytime, which is available on myAccount. This can be found at [www.ros.ie](http://www.ros.ie), where customers can register and manage their taxes, claim tax relief and more. Otherwise, consumers can complete a Form Med 1 - Health Expenses Claim for Tax Relief and submit it to the local Revenue office. It should be noted, however, that it will take longer to process where a claim is submitted in paper format. Consumers may also claim when completing their Form 11 to make a tax return and in the process claim relief and credits by entering the amount of health expenses claimed at Panel 1 on the form. There is no need to complete a Form Med 1 in this instance.

## Choice Comment

Every element of the prescribing mechanism contains, for a great majority of consumers, the highly specific ones of privacy, trust and anonymity.

Privacy: in terms of their condition and ailment, which is the focus of attention between them and their prescribing practitioner. Trust: that the pharmacist will, in turn, maintain the confidential doctor-patient bond and extend it to encompass their interaction with this customer.

Anonymity is a more difficult area for a patient and especially when they enter the door of the shop from which they will purchase their medication. For some, the ability to further a relationship with the pharmacist, to them, heightens the benefit or trust level as they now have a third party, albeit indirectly, monitoring their medications and, for example, advising when a random purchase of a cough medicine or the use of a particular pain killer could interact negatively with their repeating medications.

Alternatively, familiarity can bring difficulties and, understandably therefore, many choose to ensure their confidentiality, both personal and as a customer, by moving to the growing online outlets that 'guarantee' it.

For those that cannot nor should have to consider this as the only option, the Consumers' Association of Ireland (CAI), again, calls upon all pharmacies to place a book of all medicines and their up-to-date prices in a place where it is always readily available for any customer, current or potential, to pick it up, read it and understand what would be their costs of outlay, current or prospective.

Restaurants have been required to provide similar advisory booklets in terms of allergens; more, they must now indicate calorie counts per plate. Advance price displays are a requirement of the majority of all goods and service providers across the state. Consumers should not have to request prices at every turn but rather they should be there, openly available, for them to consider, privately and personally.

And, especially when it comes to their personal, private prescriptions, this is long past being a basic 'must-be-provided' for all chemist shops and their attending pharmacists. So long as it fails to be a matter of basic respect for the customer then trust in this area will always be clouded and the refusal, not unreasonably, subject to criticism and disdain.

This is one pill that has been swallowed by the consumer for a bitterly long time – too long!



 Click to verify  
if this website  
is operating  
legally

Common logo for internet supply of nonprescription medicines

### Useful contacts

#### Health Products Regulatory Authority

Kevin O'Malley House  
Earlsfort Centre  
Earlsfort Terrace  
Dublin 2  
Website: [www.HPRA.ie](http://www.HPRA.ie)  
Email: [info@hpra.ie](mailto:info@hpra.ie)  
Phone: 01 676 4971

#### Pharmaceutical Society of Ireland

PSI House  
15-19 Fenian Street  
Dublin 2  
Website: [www.psi.ie](http://www.psi.ie)



# Washing Machines

**Even washing machines are becoming 'smart', but what about down-to-earth practicalities like getting your laundry really clean? Consumer Choice has a dozen Choice Buys that will deliver every time.**



**REPORT** by Clodagh O'Donoghue

## At a glance

- Smart washing machines
- Powerful washing powders
- 12 Choice Buys

Alongside just about everything else these days, some of the latest washing machines are adding a 'smart' dimension thanks to wi-fi connectivity that allows them to link to a companion app on a smartphone or tablet. These new-fangled devices can be controlled and monitored remotely and the relevant app may even be able to diagnose minor problems and administer troubleshooting advice. Such advanced functionality is all very well, but it needs to be accompanied by impressive cleaning performance if it is to translate into an all-round great appliance. Whether smart or not, our Choice Buy models have one key feature in common – they will deliver spotless clothes, which, when it comes down to it, is what consumers really want from their washing machine.

## Get smart?

With the arrival of smart machines on the market, those in search of the latest and greatest appliances may be tempted to invest. The question then becomes how useful you will find the additional capabilities on an ongoing basis or will they merely be pricey extras that you can easily do without and would not miss?

So what exactly can these wi-fi enabled machines do? Smart washing

machines connect to the household wi-fi in the same way as mobile devices, printers and so on and users can then connect to the washing machine via an app on their phone or tablet. Once the connection is set up and users are registered, they can then remotely set their washing machine to start from anywhere they happen to be (as long as they have an internet connection). Of course, they will have to have sorted their laundry, put it all into the drum, closed the door and added washing powder. These machines are not so smart as to be able to do all of this preliminary work themselves! Once the cycle is in progress, users will be able to monitor what stage the machine is at and how much longer the programme has to run. They will be notified of any problems and the app will let them know when the programme has been completed and the drum is ready to be emptied.

The app can come in handy if the machine is not working properly as it can often detect both minor and more major problems. If a minor problem can be resolved without the need to call out an engineer, the app can offer some possible DIY solutions for dealing with the issue. With more serious problems, apps can let users know if the expertise of an engineer will be required.



Smart machines can also be set manually in the traditional way if you don't have your mobile device to hand. And safety features mean that the apps will not set the machine in operation if the door is not fully closed, so you hopefully will not return home to a flooded kitchen.

All this sophisticated technology comes at a price, with smart washing machines tending to cost more than €1,000. Given a couple of years, wi-fi enabled machines will become more common and it is likely that prices will drop so it may be worth opting for a non-smart but highly effective washing machine for the moment and keeping an eye on the market for better value next time around.

### Powerful washing powders

Buying a great washing machine is more than half the battle in the quest for spotless laundry but using an effective detergent undoubtedly helps the process along. With a wide range of products on supermarket shelves and a significant variation in price, particularly between big brands and own-store brands, the choice can be bewildering.

Our colleagues at *Which?* in the UK conduct ongoing tests to separate the good from the average in this market and repeatedly find that supermarkets' own brands more than give the major brand names a run for their money at typically less than half the cost. In a recent test that focused on washing powder, *Which?* found that Lidl's Formil Biological Powder tied with Ariel Bio Washing Powder for ability to remove all types of everyday tough stains, and these products were followed closely by Tesco Bio Powder Detergent. These top-ranking detergents are biological powders that contain enzymes to break down proteins, fat and starch and aid stain removal. In the non-biological powder category, Fairy and Persil Non-Bio Washing Powder performed best but scored only slightly higher than the UK supermarket brand tested. The researchers made the point that although the supermarket own brands are substantially cheaper to buy than the big brands, the branded products frequently are the subject of price promotions and with this type of non-perishable item, it can be very cost-effective to stock up when prices are reduced.

### Useful Contacts

**AEG**  
tel 0044 3445 611 611  
[www.aeg.co.uk](http://www.aeg.co.uk)

**Bosch**  
tel 01 450 2655  
[www.bosch-home.co.uk](http://www.bosch-home.co.uk)

**LG**  
tel 01 6869454  
[www.lg.com/ie/](http://www.lg.com/ie/)

**Miele Ireland**  
tel 01 461 0710  
[www.miele.ie](http://www.miele.ie)

**Samsung**  
tel 0818 717100  
[www.samsung.com/ie](http://www.samsung.com/ie)

**Siemens**  
tel 01 450 2655  
[www.siemens-home.com/ie/](http://www.siemens-home.com/ie/)



**Cottons wash**  
★★★★★  
**Synthetics wash**  
★★★★★  
**Rinsing**  
★★★★★  
**Spinning**  
★★★★★  
**Energy use**  
★★  
**Water use**  
★★



### 1. LG FH4U2VCN2 €780

The **Choice Buy** LG FH4U2VCN2 is a washing machine that excels at cleaning and rinsing laundry and that also has some smart features. Whether you are washing cottons or synthetics, your clothes will emerge spotless from the roomy 9-kg drum and this machine does a superb job of rinsing detergent out of your laundry also, which is particularly important for those with sensitive skin. With a 1400rpm maximum spin speed, the spinning cycle is highly effective at wringing moisture out of clothes, cutting down on the drying time needed. However, it is not the fastest appliance, and it is heavier on water and energy consumption than other appliances of comparable size. To offer some smart capabilities, this LG model is Bluetooth enabled to let you download new wash programmes to a smartphone and then install them on the machine via near field communication (NFC). The Smart Diagnosis feature lets users troubleshoot a fault by ringing a call centre and transmitting data via the machine and a smartphone.



**Cottons wash**  
★★★★★  
**Synthetics wash**  
★★★★★  
**Rinsing**  
★★★  
**Spinning**  
★★★★★  
**Energy use**  
★★  
**Water use**  
★★★



### 2. AEG L87405FL €850

The **Choice Buy** AEG L87405FL is a spacious washing machine that delivers powerful cleaning performance. With an extra-large drum that accommodates a massive 10kg of clothes, this washing machine should suit households that accumulate masses of laundry and the generous capacity means that clothes have plenty of space when they are churning around. On both cottons and synthetics programmes, laundry comes out stain free and spotless, though this is not the fastest of machines so you may have to wait a while for your clean clothes. For those in a hurry, there is a time-save option that reduces the length of time cycles take to complete as well as an ultra-quick wash programme. The 1400rpm spin does a superb job of squeezing moisture out of clothes and the rinsing cycle is reasonably good too, eliminating most of the detergent from the load. The extra-large capacity translates into an appliance that is a bit deeper than most so make sure to check the dimensions in your kitchen before buying.



**Cottons wash**  
★★★★★  
**Synthetics wash**  
★★★★★  
**Rinsing**  
★★★★★  
**Spinning**  
★★★★★  
**Energy use**  
★★  
**Water use**  
★★



### 3. AEG L79485FL €870

Another freestanding washing machine from AEG, the **Choice Buy** AEG L79485FL can be relied on to get your clothes thoroughly clean. Whether dealing with cotton or synthetic fabrics, this AEG model is great at eliminating stains to deliver super results. Its rinsing function also impressed, making it a good choice for those with sensitive skin as this machine does well in removing detergent from laundry – and there is an extra-rinse programme if you need. The 1400rpm spin is highly effective at getting as much moisture as possible out of clothes for quicker drying times – though the spin cycle is fairly noisy. The generously proportioned drum holds 8kg of clothes on a full load, which larger households might appreciate, and testers found this machine easy to use, both in terms of loading and setting programmes. The large LCD digital display is clear and easy to read and it handily shows how much time a programme has left to run.



**Cottons wash**  
★★★★★  
**Synthetics wash**  
★★★★★  
**Rinsing**  
★★★★  
**Spinning**  
★★★★  
**Energy use**  
★★★  
**Water use**  
★★★



### 4. Bosch WAN28100GB €600

The **Choice Buy** Bosch WAN28100GB does a superb job of cleaning laundry, effectively eliminating dirt and stains from both cottons and synthetics for a spotless finish. Having completed the wash cycle, this machine performs decently when rinsing out detergent and it is pretty good at wringing remaining water out of clothes with its 1400rpm spin. As with many machines, the spin cycle is fairly noisy – though, if this is an issue for you, you can consider delaying the start time for when you will not be in the room. The capacity of 7kg means that this machine will suit most medium-sized households, and programming is straightforward with a control dial that is intuitive to use and an LED display that provides information on temperature, spin speed, time remaining and load recommendations. Among the handy programmes on offer are special cycles for sportswear and duvets as well as anti-allergy and quick-wash options.



**Cottons wash**  
★★★★★  
**Synthetics wash**  
★★★★★  
**Rinsing**  
★★★  
**Spinning**  
★★★★  
**Energy use**  
★★★  
**Water use**  
★★★



### 5. Siemens WMH4Y790GB €1,170

The **Choice Buy** Siemens WMH4Y790GB is a pricey appliance that is wi-fi enabled and comes with some credit credentials. You can use the Home Connect app to access and control this washing machine through an Apple or Android smartphone or tablet and you can monitor the progress of a cycle from wherever you happen to be. The all-important question, however, is if this appliance is any good at delivering clean clothes – and, in fact, tests found that it produces spotless results on both cottons and synthetics programmes. Not only that, but the cottons cycle is reasonably fast given that the spacious drum can hold a substantial load of 9kg – making it suitable for larger households with significant laundry needs. As well as being able to control this machine through a mobile device, selecting from the wide range of programmes is very straightforward via the control panel and the high-resolution LCD display provides useful programme information including the time left to run on the cycle.



**Cottons wash**  
★★★★★  
**Synthetics wash**  
★★★★★  
**Rinsing**  
★★★  
**Spinning**  
★★★★  
**Energy use**  
★★★  
**Water use**  
★★★



### 6. Bosch WAT24420GB €700

The **Choice Buy** Bosch WAT24420GB excels at lifting dirt out of your clothes, whether they are made of cotton or synthetic fabrics. Though not overly impressive, its rinse function does a satisfactory job of eliminating detergent from your washed laundry, and the spin cycle, with a maximum spin speed of 1200rpm, is effective at getting rid of excess moisture. The drum capacity is above average at 8kg so you will be able to fit in plenty of laundry in one go and this appliance is particularly easy to use, with a door that opens wide, a large aperture that facilitates loading and unloading, and a clearly marked and intuitive control panel. As well as settings for wools and delicates/silk, this machine offers drum-clean and mixed-load programmes and Super Quick 15/30 and Allergy+ options. You can delay the start time of the appliance by up to 24 hours, so you can preset it to go into operation at a time that suits.



**Cottons wash**  
★★★★★  
**Synthetics wash**  
★★★★★  
**Rinsing**  
★★  
**Spinning**  
★★★★★  
**Energy use**  
★★★  
**Water use**  
★★★★



## 7. Miele WKR571WPS €1,750

With a price tag that may cause your eyes to water, the **Choice Buy** Miele WKR571WPS will need to impress in the cleaning stakes – and indeed, testers found this 9kg-capacity machine to provide excellent cleaning performance. This machine offers first-class dirt and stain removal on both cottons and synthetic fabrics – and it is also relatively fast when cleaning cottons given its generous capacity. Despite the high price, testers were not impressed with the rinsing ability of this machine, with a chance that some detergent could be left behind – this is worth taking into consideration if someone in your household has sensitive skin. However, with a fast top spin speed of 1600rpm, the spin cycle on this Miele model is particularly effective and other key positives include a handy drum interior light, a delay-start option and a time-remaining display, along with the machine's low water consumption, exceptionally quiet wash cycle and overall ease of use.



**Cottons wash**  
★★★★★  
**Synthetics wash**  
★★★★★  
**Rinsing**  
★★  
**Spinning**  
★★★★★  
**Energy use**  
★★★  
**Water use**  
★★★★



## 8. Miele WKF121 €1,300

Another pricey appliance from the highly respected manufacturer, the **Choice Buy** Miele WKF121 impresses with its cleaning performance. Whether on the cottons or synthetics programme, this machine is adept at stain removal and produces spotless results. As the drum can accommodate 8kg of cottons, you can get lots of laundry done in one go, making it suitable for most larger households, and with a maximum spin speed of 1600rpm, the fast spin function on the Miele WKF121 is highly effective, reducing drying time for your fresh laundry. However, the rinse function failed to impress, so there is a risk that some detergent might be left in laundry when the cycle is complete. Testers found this Miele model simple to use with a clear control panel and intuitive programme setting, with the range of automatic programmes including a QuickPowerWash and a minimum-iron option. Other positives of this machine include its low water consumption and its very quiet wash cycle.



**Cottons wash**  
★★★★★  
**Synthetics wash**  
★★★★★  
**Rinsing**  
★★★  
**Spinning**  
★★★★  
**Energy use**  
★★  
**Water use**  
★★★



## 9. Bosch WAN28080GB €570

The **Choice Buy** WAN28080GB will do an excellent job of getting dirt and grime out of your laundry to leave it clean and pristine. First-class cleaning results are achieved on both cottons and synthetics programmes, though the rinse function is no better than average. In terms of spinning capabilities, with a maximum speed of 1400rpm, this machine effectively eliminates much of the water to shorten drying times. The drum holds 7kg of laundry, which may not be sufficient for larger households but could suit medium-sized families. If you regularly start a wash only to discover you have dropped a sock on the stairs on the way to the machine, this Bosch model will let you pop the wayward item into the drum mid-cycle thanks to the 'reload function'. This handy feature checks that the water level is low enough for the door to be opened and adjusts it if necessary, letting you add forgotten items.



**Cottons wash**  
★★★★★  
**Synthetics wash**  
★★★★★  
**Rinsing**  
★★  
**Spinning**  
★★★★  
**Energy use**  
★★★  
**Water use**  
★★



## 10. Samsung WW70K5410WW €820

The **Choice Buy** Samsung WW70K5410WW will not let you down if you are looking for outstanding cleaning from your washing machine on both cottons and synthetics programmes – though you will have to wait longer than average for your clothes to emerge from the machine. The effective 1400rpm spin leaves laundry fairly moisture-free, cutting down the time it needs to spend in the tumble dryer or on the line. Those with sensitive skin may need to take into consideration that testers were not impressed with the rinse function, leading to a risk of detergent residue remaining on clothes. The drum can hold up to 7kg of laundry and the drum opening is large enough to make loading and unloading even bulkier items nice and easy. Samsung's AddWash feature means that, mid-cycle, you are able to drop into the drum a forgotten item of laundry, some extra detergent or a hand-washed garment for final rinsing using the smaller access door within the larger door.





**Cottons wash**  
★★★★★  
**Synthetics wash**  
★★★★★  
**Rinsing**  
★★★★  
**Spinning**  
★★★★  
**Energy use**  
★★★★  
**Water use**  
★★★



**Cottons wash**  
★★★★  
**Synthetics wash**  
★★★★★  
**Rinsing**  
★★  
**Spinning**  
★★★★  
**Energy use**  
★★★★  
**Water use**  
★★★★



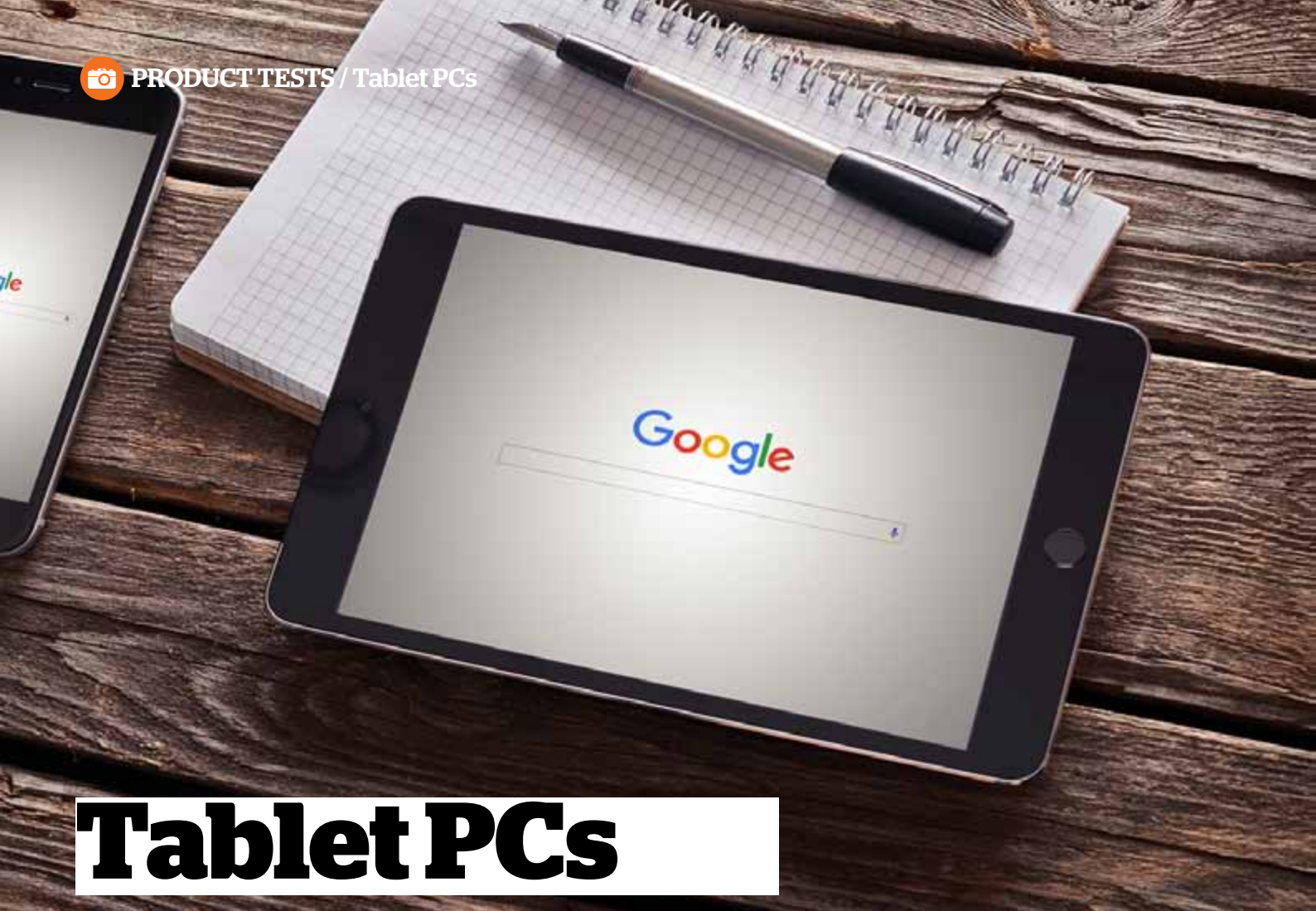
## 11. Bosch WAN24100GB €470

The most affordable of our current batch of Choice Buys, the **Choice Buy** Bosch WAN24100GB delivers a top-notch clean whether you are washing cottons or synthetics. The drum holds 7kg, suiting it to medium-sized households, and though not sporting the higher spin speeds of our other recommended models, the maximum 1200rpm spin on this machine is effective when it comes to removing moisture from your laundry, which will ultimately save on drying time. The spin cycle is pretty noisy, however, and the rinse capabilities are no more than average. This Bosch model is simple to operate, with a clear control panel that is easy to follow and a wide range of programmes to choose from, including automatic settings for jeans, sportswear, duvets, and woollens as well as anti-allergy and time-saving SuperQuick options. Other handy features include a time-remaining display to let you know what stage the cycle is at and an option to delay the start time of the machine for up to 24 hours.

## 12. Bosch WAWH8660GB €1,230

Sporting a very hefty price tag, the **Choice Buy** Bosch WAWH8660GB certainly delivers a lot for your money, with both great cleaning credentials and smart capabilities. Larger households will appreciate the roomy 9kg capacity of the drum, and the cottons programme not only does a very good job at lifting out dirt and grime, it is also quite fast relative to the amount of laundry that can be fitted into this machine. The synthetics programme is even better at producing pristine laundry and the 1400rpm spin does well to eliminate most of the moisture. One downside, however, is that the rinse function could be better. The innovative aspects of this Bosch model include its 'intelligent dosing system', which allows users to prefill the machine with liquid detergent and then the machine regulates how much detergent should be used according to the load put in. This model can also be remotely controlled and monitored from a mobile device via the Home Connect app.





# Tablet PCs

**Tablets today are growing up, maturing from entertainment-focused devices to machines for getting some serious work done.**



**REPORT** by Clodagh O'Donoghue

## At a glance

- 29 tablets on test
- Tablets versus laptops
- 11 Choice Buys

Although there are still plenty of smaller tablet pcs aimed at consuming content, more big-screen devices are emerging with a view to stepping into the space currently occupied by laptops. These two-in-one tablets, aimed at offering the best of both the tablet and laptop worlds, become particularly useful as laptop replacements when you add a detachable keyboard, and as well as larger screens, they tend to have greater onboard storage capacity and processors powerful enough to handle the most demanding of business apps, video or photo editing programmes and more. However, you will pay for the privilege of working away on your tablet, with devices sporting screens of 12-13 inches often hitting the €1,000 mark and rising from there.

The more familiar ten-inch tablets still abound and can provide a winning mixture of enabling some work to be done and providing comfortable dimensions for viewing content, web browsing, sending emails and more. And there are also plenty of more modestly sized seven- and eight-inch devices that provide the ultimate in portability and one-handed reading comfort and

often squeezing some very high-end specifications into their compact frames. With displays that measure between seven and almost 13 inches and with price tags that stretch from less than €100 to just shy of €1,500, our current test surveys the gamut of the tablet market.

## Tablets on test

As with all our independent research, our tablet tests are constantly tweaked and adapted with a view to providing the most accurate and useful information and assessments possible. This year, the tablet tests reduced the weighting of the screen-quality rating slightly and moved the score for the responsiveness of a device's touchscreen into the ease-of-use rating, the weighting of which was accordingly increased. Such changes together with increased expectations from testers as to performance and capabilities of the devices can affect scoring, so models are best compared among batches rather than from year to year.

To provide a rounded overview of the tablet market, our labs have not only tested the latest product releases but they also have tested the newest versions



of some older tablets as well as retesting a handful of top tablets from last year's batch with updated operating systems to see how they fare against the newbies. In the smaller tablet category, the retested Samsung Galaxy Tab S2 8 and Apple iPad mini 4 - now running Android 6.0.1 and iOS 10.0.1, respectively - remain firmly at the top of the table and way ahead of the competition. Indeed, the Samsung device outscores every other tablet, large and small, in the batch.

The 9.7-inch version of the iPad Pro was not available the last time we reported on tablets in the February 2016 issue of *Consumer Choice*, but now that it has arrived it tops the table among larger tablets of eight inches and more. In fact, testers preferred it to its bigger 12.9-inch sibling for a number of reasons, including the lighter weight, making for a more comfortable holding experience, and the longer battery life - and both photos and videos captured on the smaller tablet scored more highly than those shot on the larger device. Unsurprisingly, however, all iPads in the batch impressed in our tests and comfortably achieve Choice Buy status.

Overall, among the current batch of tablets, the wide price variation is matched by a wide disparity in performance and scoring. Generally, these devices tend to be easy to use and do a reasonable-to-great job with specific tasks, including web surfing, emailing, displaying videos, playing music, and so on. However, the major differentiations can be seen in screen quality and overall performance, including the speed of operation, processing power and how well the tablet can handle more demanding programmes and apps.

And if you want to move beyond merely consuming content to actually creating it, veering into laptop-replacement territory with a two-in-one tablet, then you are likely looking at a

costly device. Content creation, producing documents and so on are generally made substantially easier with the addition of a keyboard but these often must be bought separately and will further push up the generally very hefty initial purchase price.

### Tablets versus laptops

So with some tablet manufacturers setting their sights at challenging the laptop space, what advantages might tablet pcs hold over the traditional laptop and in what areas are laptops are hard to beat? Portability is a key factor, with larger-screen tablets still sporting notably slimmer and lighter dimensions than laptops, even when the optional keyboard is added. Tablets deliver faster start-up times, generally provide longer battery life and some versions offer 4G for accessing the internet when out and about. Laptops tend to provide more powerful processing, though the top-of-the-range big-screen devices in our tests can match these capabilities. Laptops also generally offer a greater range of ports for connecting external devices, though often Bluetooth connections may be used to compensate for a lack of physical ports on tablets. Storage is another area where laptops typically outshine tablets, though again, there are some two-in-one tablets offering generous amounts of onboard memory to narrow the gap somewhat.

When it comes to operating systems, the user experience should not be disimproved to any great extent if you opt for a tablet over a laptop. Windows 10 on a tablet and on a laptop offer similar experiences, especially if you attach a keyboard to the tablet. Those familiar with Apple products should have no problem navigating iPads and those more accustomed to Mac programmes should be able to find an app equivalent for doing most tasks on an iPad. Similarly, on Android tablets, the operating system is generally very user friendly and choosing

the right apps should deliver most of the functionality you need.

Generally speaking, to satisfactorily replace a laptop, particularly for tasks that require a lot of typing, tablets need a keyboard to be attached. Laptop keyboards tend to be more comfortable to use and have a more solid and durable feel. They also come included in the purchase price, unlike two-in-one tablets, where the keyboards often must be bought separately at a typical cost of €100-€200. One exception is the Samsung Galaxy TabPro S, which comes with a detachable keyboard that could be more comfortable to use but that certainly gets the job done.

If you feel a keyboard will be a useful addition and you are prepared to go to the extra expense, it is clearly important that you choose a keyboard that is compatible with your particular tablet. Beyond this, you may like to look for a keyboard that can hold your tablet at a range of viewing angles. Many keyboards offer only one position, typically a 120° angle, but this may not be the most comfortable angle for you. It is worth checking out the tablet's positioning when used in conjunction with the keyboard before you buy. When choosing a keyboard also ensure that it feels solid and stable, as this will have a significant impact on how easy and satisfying it is to use and potentially on how long it will last.



## 1. Apple iPad Pro 9.7 €809

Although our testers liked the Apple iPad Pro 12.9, they definitely preferred the more compact **Choice Buy** Apple iPad Pro 9.7 and, in fact, have scored it higher than any other iPad to date and placed it firmly at the top of the current batch of tablets of eight inches or more. Sporting similar dimensions to the iPad Air 2 and weighing only very slightly more at 449g, the 9.7-inch version of this tablet is far more comfortable to hold for long periods than its considerably heavier 12.9-inch sibling. It incorporates all the stunning features of the bigger device, however, with superfast processing, a dazzling Retina display with crystal-clear 2048 x 1536 resolution, and the ability to multitask with ease. To add to its faultless performance, battery life is impressive, with tests measuring 10.5 hours of web surfing and 12 hours of video playback on a full charge. The price quoted above refers to the 128GB version. Although there is also a 32GB version available for €699, this may not provide sufficient storage for those looking for a laptop replacement and, as ever with Apple devices, there is no option to expand storage via a memory card.





## 2. Samsung Galaxy Tab S2 9.7 €530

The **Choice Buy** Samsung Galaxy Tab S2 9.7 is an exceptional tablet, with very impressive performance across the board. Extremely light at just 386g and superslim at only 5.6mm thick, this tablet is very comfortable to hold in one hand for long periods and it is a pleasure to use with its highly responsive touchscreen and ultra-speedy processor that can handle the most demanding apps with ease. The 9.7-inch screen is outstanding, with 2048 x 1536 resolution displaying brilliantly crisp, bright and detailed images, making viewing photos and videos a joy. Now running Android 6.0.1, this tablet is very intuitive to operate and offers useful features like multiple user accounts and side-by-side multitasking. Battery life is very good, yielding almost 13.5 hours of viewing time when watching videos, though you will get less than half that time when surfing the web. Added to this tablet's other excellent attributes are an effective fingerprint reader and the ability to record video footage in 4K resolution. Those in the market for something a little smaller might like to check out its 8-inch sibling, which scored even more highly in tests.



## 4. Google Pixel C €650

The **Choice Buy** Google Pixel C is an excellent 10.1-inch tablet made by the creator of the ubiquitous Android mobile operating system for the purest of Android experiences and running the latest 6.0.1 version, dubbed Marshmallow. The display on this tablet is beautifully crisp, bright and sharp with 4K 1800 x 2560 resolution making viewing a pleasure and the touchscreen is extremely responsive with a powerful processor keeping everything moving along nicely. Despite a premium, solid feel, it is fairly lightweight to hold and those who like to surf the web will be delighted with the 13 hours of battery life on a full charge, whereas video playback will yield a very satisfactory nine hours. A compatible keyboard is available online as an optional extra, though testers were not overly impressed with its performance and it lacks a trackpad. Images taken on the 8MP rear camera were also somewhat disappointing. Although the device tested was the 32GB version, the price quoted is for the 64GB tablet as the only model found in Irish shops and, with no memory card slot, onboard storage cannot be expanded.



## 3. Samsung Galaxy TabPro S €1,260

Aimed at those looking to ditch their laptop, the **Choice Buy** Samsung Galaxy TabPro S is a pricey proposition but one that has a lot to recommend it. This is a very high-quality, solidly built device that is a pleasure to hold. The sizeable 12-inch screen offers a dazzling display with supersharp 1440 x 2160 resolution, wide viewing angles and excellent readability even in bright, sunlit conditions. Performance is smooth, fast and impresses across the board. Interestingly, the operating system that comes on this device is Windows 10 Pro and the hefty purchase price includes a detachable keyboard that comes in the box, making it all the easier to get plenty of work done. In fact, testers found that navigating through the Windows system without the keyboard a little tricky. Battery life was no more than average, with tests measuring 7.5 hours of video playback and just 4.5 hours when surfing the web. Nonetheless, as a rival to other large-screen tablets like the Microsoft Surface 4 and Apple iPad Pro 12.9 that are positioned as potential laptop replacements, this Samsung device more than holds its own and indeed narrowly outperforms its direct competitors in our recent tests.



## 5. Lenovo Yoga Book €580

Those looking for something different from their tablet might like to check out the **Choice Buy** Lenovo Yoga Book. Touted by the manufacturer as a "2-in-1 engineered for productivity", this innovative device folds in the middle and is, essentially, two conjoined screens, with the top screen serving as a conventional tablet and the bottom screen acting as a keyboard or drawpad. This tablet comes with a special ink pen that can be used in conjunction with the supplied paper on top of the drawing pad, with any notes or doodles made appearing digitised on the other screen. However, this device moves beyond the realm of eye-catching tricks to provide a highly responsive touchscreen, speedy performance and a very satisfactory 11 hours of battery life. The tested version uses the Android 6.0.1 operating system, and this device can also be bought loaded with Windows 10. It gets a lot of things right, making the grade as a Choice Buy, but many may prefer to opt for a regular tablet as their main or initial device.



## 6. Microsoft Surface Pro 4 €1,499

Those looking to put their tablet to some serious work might consider the **Choice Buy** Microsoft Surface Pro 4, which is a heavyweight in every sense of the word. Weighing 791g and with a large 12.3-inch screen sporting 1824 x 2736 resolution and a beautifully crisp and sharp display, this powerful tablet runs Windows 10 Pro and can handle all manner of demanding business apps effortlessly. These devices are offered with one of a range of processors, with both the i-5 and i-7 options producing extremely impressive speeds and, indeed, resulting in operation that is noticeably faster than the already-rapid iPad Pro. The Surface Pro 4 has a highly responsive touchscreen and a Surface Pen comes provided, though many may find they will need to purchase the attachable keyboard for really getting down to business. The price quoted is for the tested 256GB version with an i-5 processor and opting for an i-7 processor will push the price up even more, as will adding a Microsoft Type Cover, which costs €155 or €199 with fingerprint ID included. You can lower the cost by opting for a model with 128GB of storage and an i-5 processor for €1,129.



## 7. Apple iPad Pro 12.9 €919

With the introduction of the **Choice Buy** Apple iPad Pro, Apple took a big leap in terms of size, offering a very substantial 12.9-inch screen and aimed at those looking for a larger device that can double as a laptop replacement. The 2732 x 2048 resolution display is stunningly sharp and offers plenty of room for the new multitasking, split-view feature enabled by the highly effective operating system - iOS 9.1 - running on this device. Though extremely slim at just 7mm thick, the larger screen size on the iPad Pro inevitably means a heftier weight - a substantial 738g - so users may not find it comfortable to hold for extended periods. With a super-fast processor, this tablet is incredibly speedy even when handling HD video or demanding apps and battery life is very decent, with 11 hours of video playback on a full charge, though just under eight hours of web browsing. As there is no memory card slot, the tested 32GB device may not afford enough storage for those using it as a laptop replacement - and the 128GB version is an even more eye-wateringly expensive €1,029, with the 256GB version rising to €1,139.



## 8. Lenovo Yoga Tab 3 Pro €520

The **Choice Buy** Lenovo Yoga Tab 3 Pro is a great all-rounder, performing to a high standard across the board. The 10-inch screen offers 1600 x 2560 resolution and is nicely crisp with good readability even in bright conditions. Testers found this tablet a little slow to start up but, once it gets going, it zips along very speedily indeed thanks to its powerful processor. Of the 32GB of onboard storage, just 21.5GB is available to users after the Android 5.1 operating system and preinstalled apps are taken into account, though memory can be expanded via the micro-SD card slot. A unique feature of this tablet is its in-built projector, which works well and could prove highly useful for some, though little more than a quirky party trick for others. The projector will prove heavy on power consumption - though otherwise battery life is good, with our tests measuring seven hours of video playback and 11 hours of web surfing on a full charge, with a brief 30-minute charge yielding more than 2.5 hours of power.



## 9. Huawei MediaPad M2 10 €320

Significantly less expensive than our previous Choice Buys, the **Choice Buy** Huawei Media Pad M2 is a ten-inch tablet from a relatively new entrant to the tablet market that is definitely worth considering. The 1920 x 1200 screen is bright and provides plenty of detail, with excellent readability even in challenging sunlight. Running Android 5.1.1, this device is straightforward to use and the processor allows users to perform all tasks, from web surfing to viewing video to playing games, at a nicely speedy pace. Those who use their tablet to take snaps will not be disappointed with the capabilities of the front 5MP and rear 12.9MP cameras, and video footage can be shot in HD. Battery life is more than satisfactory, with a full charge yielding sufficient power to watch videos for a solid session of nearly nine hours and to surf the internet for an even-longer nine and a half hours. Onboard storage is limited to 16GB, with just 7.71GB available to users but this should not prove a problem thanks to the presence of a micro-SD card slot for expanding memory.



## 18. Samsung Galaxy Tab S2 8 €400

For those impressed by the sound of the Samsung Galaxy Tab S2 9.7 but looking for something more compact and a little less pricey, the **Choice Buy** Samsung Galaxy Tab S2 offers an eight-inch version that squeezes all the same eye-catching specifications and superb performance into a condensed package that costs around €100 less than the larger offering. Once again, the 2048 x 1536 resolution screen offers stunning detail and the super-fast processor keeps everything zipping along at lightning speed. Again sporting an exceptionally slimline design, the 5.6mm thick tablet is even thinner than its main rival, the iPad mini 4, and 40g lighter – making it extremely portable and comfortable for one-handed use. Of the 32GB storage, around 22GB is available to users and – unlike the iPad mini 4 – there is the option to expand this to 128GB via the micro-SD card slot. Battery life is great if you like to watch videos on your tablet, with 12.5 hours viewing time delivered in our tests, and when it comes to web browsing, a decent eight hours was measured. This is a super small tablet filled with fantastic features but that is nonetheless easy to use.

## 19. Apple iPad mini 4 €409

The **Choice Buy** Apple iPad mini 4 is another outstanding tablet from Apple with familiar features like the stunning Retina display screen and effective fingerprint scanner that still have the power to impress. Measuring 7.9 inches diagonally, the 2048 x 1536 resolution screen is superb with reduced glare and very good viewing angles, and the processor moves everything along very swiftly indeed. Now running iOS 10.0.1, the iPad offers a SplitView feature that allows two apps to be open on the screen at once for mobile multitasking – though the small screen size may limit how often you use this. The tested version of this tablet offered 16GB of internal storage, of which almost 11GB was available to users, and with no memory card slot, there is no option to expand memory. Those needing extra storage might like to look for the 32GB and 128GB versions, currently priced at €449 and €559, respectively, and adding 3G/4G connectivity will push the price up further still. A terrific tablet, the iPad mini 4 does not quite match the performance of the Samsung Galaxy Tab S2 8 but will not disappoint Apple lovers.

### Useful contacts

**Apple Ireland Ltd**  
1800 92 38 98  
[www.apple.com/ie](http://www.apple.com/ie)

**Huawei**  
tel 1890 482 934  
<http://consumer.huawei.com/>

**Lenovo**  
tel 01 6535 568  
<http://www.lenovo.com/ie/>

**Microsoft Ireland**  
tel 1800 71 0200  
[www.microsoft.com/ireland/](http://www.microsoft.com/ireland/)

**Samsung**  
tel 0818 717100  
[www.samsung.com/ie](http://www.samsung.com/ie)





MODEL		SPECIFICATIONS									TEST PERFORMANCE							SCORE %
		Price (€)	Claimed memory storage (GB)	Available memory storage (GB)	Other memory storage options (GB)	3G/4G option	Screen size (inches)	Weight (kg)	Screen resolution	Operating system	General performance (10%)	Screen quality (15%)	Ease of use (25%)	Specific tasks (25%)	Battery life (15%)	Device overview (10%)	Back-up security (0%)	
Bigger than 8 inches																		
1	Apple iPad Pro 9.7	809	128	109	32, 256	✓	9.70	0.449	2048x1536	iOS 9.3.1	★★★★★	★★★★★	★★★★★	★★★★★	★★★★	★★★★	★★★★	82
2	Samsung Galaxy Tab S2 9.7	530	32	22.3		✓	9.73	0.386	2048x1536	Android 6.0.1	★★★★	★★★★★	★★★★★	★★★★★	★★★★	★★★★	★★★★	81
3	Samsung Galaxy TabPro S	1260	128	94.81		✓	11.98	0.692	1440x2160	Windows 10 Pro	★★★★★	★★★★★	★★★★★	★★★★★	★★★	★★★★	★★★★	80
4	Google Pixel C	650*	32	24.22	64		10.16	0.512	1800x2560	Android 6.0.1	★★★★	★★★★★	★★★★★	★★★★	★★★★	★★★	★★★★	78
5	Lenovo Yoga Book	580	64	51.99			10.07	0.689	1200x1920	Android 6.0.1	★★★★	★★★★	★★★★★	★★★★★	★★★★	★★★★	★★★★	77
6	Microsoft Surface Pro 4	1499	256	238	128, 512		12.30	0.791	1824x2736	Windows 10 Pro	★★★★★	★★★★★	★★★★	★★★★	★★★	★★★★	★★★★	76
7	Apple iPad Pro 12.9	919	32	25	128, 256		12.88	0.738	2732x2048	iOS 9.1	★★★★★	★★★★★	★★★★★	★★★★	★★★	★★★	★★★★	76
8	Lenovo Yoga Tab 3 Pro	520	32	21.51		✓	10.10	0.666	1600x2560	Android 5.1	★★★★	★★★★	★★★★★	★★★★	★★★★	★★★★	★★★★	75
9	Huawei MediaPad M2 10.0	320	16	7.71			10.14	0.498	1200x1920	Android 5.1.1	★★★★	★★★★	★★★★★	★★★★★	★★★★	★★★★	★★★★	75
10	Lenovo Yoga Tab 3 10	230	16	9.66	32	✓	10.03	0.671	800x1280	Android 5.1.1	★★	★★★★	★★★★★	★★★★	★★★★	★★★★	★★★	71
11	Asus ZenPad 10 (Z300M)	200	16	7.49			10.06	0.472	800x1280	Android 6.0	★★★	★★★	★★★★	★★★★	★★★★	★★★★	★★★★	67
12	Acer Iconia One 10	170	16	5.85			10.08	0.539	800x1280	Android 6.0	★★★	★★★	★★★★	★★★★	★★★	★★★★	★★★★	66
13	Kurio C15200 Smart	240	32	15.699			8.89	0.4653	800x1280	Windows 10 Home	★★★★	★★★★	★★★★	★★★★	★★	★★★	★★★★	64
14	Acer Iconia Tab 10	230	32	24.41			10.05	0.528	1200x1920	Android 6.0	★★	★★★	★★★★	★★★★	★★★	★★★★	★★★★	59
15	Alba AC101CPLV2	120	16	8.61			10.03	0.556	800x1280	Android 5.1	★★★	★★★	★★★★	★★★	★★★	★★★★	★★★★	50
16	Alcatel OneTouch Pixi 3 10	110	8	1.11			10.06	0.503	800x1280	Android 5.0.1	★★★	★★★	★★★★	★★★	★★★	★★★	★★★★	46
17	Archos 101b Xenon	140	16	8.12		✓	10.01	0.536	800x1280	Android 5.1	★★	★★	★★★★	★★★	★★★	★★★★	★★★★	34
Smaller than 8 inches																		
18	Samsung Galaxy Tab S2 8	400	32	21.84		✓	8.02	0.268	2048x1536	Android 6.0.1	★★★★	★★★★★	★★★★★	★★★★★	★★★★	★★★★★	★★★★	85
19	Apple iPad mini 4	409	16	10.43	32, 128	✓	7.87	0.308	2048x1536	iOS 10.0.1	★★★★	★★★★★	★★★★★	★★★★	★★★★	★★★★	★★★★	79
20	Lenovo Yoga Tab 3 8	180	16	8.96		✓	7.98	0.478	800x1280	Android 5.1.1	★★	★★★★	★★★★★	★★★★	★★★★	★★★★	★★★	72
21	Amazon Fire HD8	130	16	8.07	8		8.03	0.34	800x1280	Fire OS 5.3.1.1	★★★	★★★★	★★★★★	★★★★	★★★★	★★★★	★★★★	71
22	Acer Iconia One 8	150	16	8.41			8.03	0.342	800x1280	Android 5.1	★★★	★★★★	★★★★★	★★★★	★★★	★★★★	★★★★	67
23	Asus ZenPad 8.0	150	16	7.01			8.03	0.349	800x1280	Android 6.0	★★★	★★★	★★★★	★★★★	★★★★	★★★★	★★★★	64
24	Huawei MediaPad T1 7.0	120	8	4.36			6.95	0.269	1024x600	Android 4.4.2	★★★	★★★★	★★★★	★★★★	★★★	★★★★	★★★★	62
25	Lenovo Tab3 8	130	16	5.34		✓	8.00	0.35	800x1280	Android 6.0	★★	★★★	★★★★	★★★★	★★★★	★★★★	★★★★	59
26	Lenovo TAB3 7 Essential	90	8	3.11		✓	6.98	0.298	1024x600	Android 5.0.1	★★	★★★	★★★★	★★★★	★★★	★★★★	★★★★	54
27	Acer Iconia Tab 8 W	150	32	9.1			8.05	0.382	800x1280	Windows 10 Home	★★★★	★★	★★★★	★★★	★★★	★★★★	★★★★	47
28	Acer Iconia One 7 B1-770	100	16	9.27			6.96	0.284	1024x600	Android 5.0.1	★★	★★	★★★★	★★★	★★★	★★★	★★★	40
29	Alba AC70PLV4	75	16	7.71			6.93	0.266	1024x600	Android 5.1	★★★	★★	★★★	★★★	★★	★★★★	★★★★	30

\*This price is for the 64GB version.

## USING THE TABLE

Star ratings are out of five.

### SPECIFICATIONS

**Price:** Typical retailer’s price if you shop around. Prices are provided for the wi-fi only version and may vary depending on the amount of onboard storage provided.

**Claimed memory storage:** The memory size in GB of the tablet version tested.

**Available memory storage:** The measured amount of internal storage available to users taking into account the space used by the operating system and preinstalled apps.

**Screen size:** Measured diagonally in inches.

**Weight:** The weight of the device in grams without including any detachable keyboards.

**Operating system:** The operating system that comes on the tested device. This can often be upgraded to a newer version as it becomes available.

### TEST PERFORMANCE

**General performance:** Includes the results of benchmark tests to gauge how quickly data is moved around the system as well as ratings for the start-up time, the speed of switching between apps and the tablet’s performance when copying files.

**Screen quality:** The screen’s resolution and viewing angle, colour purity and absence of reflection in various lighting conditions.

**Ease of use:** Includes ratings for the ease of setting up and using the function buttons, connecting to wi-fi or a 3G/4G network and transferring files, as well as the speed and accuracy of the touchscreen, the convenience of the physical and virtual keyboards, and the quality of the automatic screen rotation.

**Specific tasks:** Includes ratings for the video call function, watching videos, listening to music, taking still photos, making videos, the email function, surfing the web and ebook capabilities.

**Battery life:** Includes ratings for the length of time a fully charged battery lasts when playing video or web browsing using wi-fi or 3G/4G connections and the battery life gained after charging the device for just 30 minutes.

**Device overview:** Includes ratings for the construction quality of the tablet, the connections available, the measured size of internal storage and the portability of the device.

**Backup - security:** Includes ratings for the ease of making a backup and resetting the tablet, the quality and range of security features, and the convenience of creating multiple user accounts.



*Visit our website  
[www.thecai.ie](http://www.thecai.ie)*

---

**Follow us on Facebook & Twitter**



[www.facebook.com/ConsumersAssociationIreland](http://www.facebook.com/ConsumersAssociationIreland)



[www.twitter.com/The\\_CAI](http://www.twitter.com/The_CAI)