The Tweakments Guide:
Start with Skincare

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What you really need to know about looking after your skin

Alice Hart-Davis

ACCLAIM FOR ALICE'S WORK

'Alice would always be my go-to resource for anything skincare related. Her knowledge spans from the teenage years through to the more mature skin. As a journalist and author, she has written about and trialled virtually everything on the market, and her in-depth knowledge is legendary.'

– **Millie Kendall MBE**, CEO of the British Beauty Council

'As far as beauty is concerned, Alice is the expert's expert, someone who knows more about the industry than it does about itself.'

– **Dylan Jones**, Editor-in-Chief of GQ

'AHD is my absolute go-to for anything relating to procedures and the skin. There is nothing she does not know.

'Her integrity and passion for our industry, paired with her journalistic excellence and tenacity, are exactly what is needed at a time when science and facts are routinely being ignored for marketing and spin. I am so very grateful that she continues to share her vast wealth of knowledge with us all.

'I trust her implicitly.'

– **Caroline Hirons**, facialist, skincare- and beauty-industry expert

'Alice is a fountain of knowledge when it comes to skincare.'

– **Trinny Woodall**, founder of Trinny London

'Alice is truly a bible of everything skin – from topical to supplement to treatment – she's the credible source on it all. Not only that, but she is one of the kindest humans in our industry.'

– **Nicola Kilner**, co-founder and CEO of Deciem

ACCLAIM FOR ALICE'S WORK

'Alice is a fearless, future-forging beauty journalist, who covers the world of aesthetics and cosmetics with equal parts expertise and accessibility.'

– **Marcia Kilgore**, founder of beautypie.com

'Alice is one of the leading and most trusted voices in skincare.'

– **Liz Earle MBE**, author, presenter, and entrepreneur in beauty and wellbeing.

'I've known Alice all my beauty life for 20 years, and she is a well-respected and loved beauty journalist. Her expertise and deep knowledge is a shining example to us all. She is a leading authority in the industry when it comes to tweakments and skincare, and the fact she looks even more glam and fresh now than when I first met her 20 years ago says it all!'

– **Dr Ateh Jewel**, award-winning journalist

'If I ever want to know anything about cosmetic procedures, aesthetic practitioners or state of the art tweakments, I turn directly to Alice Hart-Davis. I believe there is no one with such a breadth of knowledge in this highly specialised area of beauty – truly, there is no question on lasers, injections, or peels that she can't answer. Alice's passion, boundless curiosity, and commitment to best practice make her the leading consumer voice in a sector that desperately needs her clear sightedness and journalistic vigour.'

– **Sali Hughes**, beauty journalist, host, author, and broadcaster

'Alice is one of my most trusted sources of independent information about skincare; importantly, she also has a solid comprehension of the science.'

– **Sarah Stacey**, joint editor of beautybible.com

ACCLAIM FOR ALICE'S WORK

'Alice is a proper grown-up investigative expert with years and layers of experience and knowledge. She tries everything so the rest of us don't have to! So she's perfectly poised to share with readers what works, what doesn't – and who you can trust your face and body to.'

– **Jo Fairley**, entrepreneur, author, co-founder of Green & Black and joint editor of beautybible.com

'If anyone knows the science behind skincare, and how products work with the body, it's Alice. I am continually impressed and inspired by the amount of effort and time that goes into her research, her knowledge on the skin is impressive!'

– **Nausheen Qureshi**, biochemist and founder of Elequra

'I have worked with Alice Hart-Davis on many occasions over many years and her ability to combine a razor-sharp knowledge of skincare with journalistic communication skills is something to admire. Her expertise speaks for itself, an award-winning beauty journalist and author with a sustained and excellent track record. Alice has this great ability to engage with everyone, while at the same time, she does not let anyone get away with "blagging it".'

– **Professor Mark Birch-Machin**, Professor in Molecular Dermatology and Director of Business Development (Faculty of Medical Sciences), Newcastle University

ABOUT THE AUTHOR

Alice Hart-Davis is an award-winning beauty journalist and author. She has been writing about skincare for 20 years, and has tried out countless products in order to assess and review them.

She has travelled widely in pursuit of skincare news, from European laboratories to shop launches in Shanghai and dermatologists' conventions in the USA, interviewing experts and brand creators along the way, in order to try to keep up to date with the fast-moving world of skincare technology.

Alice has won awards for her articles on skincare and the science behind it, though none of these gives her quite the same buzz as hearing that a product she has suggested to someone has changed their life by improving their skin, which in turn has made them feel much better about themselves.

She lives in London, and keeps a magnifying glass on her desk and beside every basin, in order to be able to read the INCI lists on the back of products – the small print that tells you which ingredients the product contains.

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DISCLAIMER

This book is intended for reference and information only. The author is not a medical practitioner. The information given here is based on the author's experience and is for your consideration. It is not intended as medical advice on which you can rely. Any reliance placed by you on the information in the book is done by you at your own risk. If you suspect that you have a medical problem, you should seek professional medical help.

DISCLOSURES

I have been writing about skincare for 20 years. During this time, I have been sent press samples of innumerable different skincare products in all price brackets and been given many different facial treatments, none of which I have paid for, in order that I could write about the products and understand better how they work.

Also, over the years, I have taken press trips with, or worked as a consultant for, or on projects with, many companies that produce these products, including, in alphabetical order, Boots UK (WBA), Deciem, Dior, Estée Lauder, Johnson & Johnson, L'Oréal, Procter & Gamble, and Unilever.

This has helped to give me a unique, in-depth understanding of the field. Does this make me biased towards certain brands, or products? I really don't think so. All the opinions in the book are my own, except, obviously, for the quoted views of industry experts, which are in their own words.

I have not been paid for recommendations of the products mentioned in this book.

There's a shop on my website selling some of the products and devices which I truly rate. Often, these are products that I have been recommending – in my journalism and on social media – for years. If you're not sure about my objectivity, take a look at the consumer reviews on the product pages.

ACKNOWLEDGEMENTS: A FEW 'THANK YOU'S

Firstly, huge thanks to all the skincare experts, dermatologists, facialists, and other aestheticians who have talked me through the ins and outs of skincare over the past 20 years, and done their best to educate me. Also, to the brands and their long-suffering PRs who have sent me their products and dealt with my endless queries, always on the tightest of deadlines.

Next, massive thanks to my brother Guy Hart-Davis, one of the most patient, skilled and tactful copy-editors you could ever find. He has the knack of nicking out idiocies and straightening jumbled thoughts in the kindest possible way ('I've had a go at unpacking the next sentence…'), and having survived the rigours of editing *The Tweakments Guide* has bravely opted to dig deep into the world of skincare for this volume, and has taken the book the whole way through from raw copy to print-ready files.

Also, grateful thanks to the experts who read my early drafts and who have advised me on technical points; to my assistant and right hand Tilly Rigg, without whose tireless work all aspects of The Tweakments Guide would fail to function; and to my daughter Beth Hindhaugh for her patient, painstaking work on the glossary and index.

And particular thanks to my husband Matthew Hindhaugh, who for 20 years has put up with a bathroom stuffed with a ridiculous number of products, and who has learned (after a couple of incidents involving my finding an experimental scoop had been taken out of the latest pot of wonder-cream with a large finger) to demand a special safe zone for his own, limited selection of basic skincare (not even joking; he's allergic to many products).

DEDICATION

This book is for my friends Divya and Sally, who are avid users of skincare and always keen to hear my recommendations, yet tend to look a bit baffled when I start explaining why they might want this product for that concern.

I suspect they're not the only ones overwhelmed by the sheer variety of skincare products and confused about which ones might help them most.

I thought if I put it all down in a book, I might be able to explain it all a bit better and more logically; and they – and everyone else – could read it, digest it, and make up their own minds about what their skin might need.

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INTRODUCTION

Our skin is our protective canopy against the world. It's the biggest organ in our body; and whether you're looking at it from the point of view of function, comfort, or durability, you'll benefit from keeping your skin in good health.

Because that's what skincare is about. Aside from keeping our faces looking good for longer, which is what makes most of us pay attention to our skin, skincare is all about fixing problematic issues with the skin, and bringing it into better health, so that it works well, and looks glowing and healthy.

Once it's healthy, we can nudge it with stimulating ingredients, to coax it towards looking better and fresher.

We tend to think of our skin as it is at the moment. 'My skin is so dry,' we'll say, or 'My skin is so temperamental.' But just because that's how your skin has become, because of your genes and your lifestyle and the products you've been using or not-using, it doesn't mean you can't shift it into a happier state by using effective products that suit it.

And as to whether it's worth paying good money on skincare products, I'd offer that old truism that you wear your skin every day. Your face is what people notice when they meet you. We are hard-wired by evolution to be able to assess other people's age and health by the state of their skin, and whether it's smooth, clear and fresh-looking, or whether it's wrinkled and spotted with pigmentation, or roughened by time and the weather.

We often spend a lot of time and effort on our clothes, our hair, and our make-up, in order to present ourselves as we'd like to be seen.

It's worth spending some time, effort, and money on your skin, too.

WHO THIS BOOK IS FOR AND WHY I WROTE IT

20 years ago, my boss called me over to her desk on a London newspaper, and tapped the luxurious, tissue-filled presentation bag at her feet with a designer-shod toe. 'D'you want it?' she asked. 'I've got one already.'

'It,' was a jar of Crème de la Mer, launching that week, and already creating a sensation for its £115 price tag – as well as its supposed rejuvenating powers. 'Wow, yes!' I said keenly, and made off with the bag before she could change her mind.

It's hard to describe how unbelievably excited I was to have my hands on that product. I'd been delving into the fast-developing field of anti-ageing skincare since I joined the *Evening Standard's* features team. The paper carried little in the way of beauty and skincare writing – which was left to glossy magazines – but I'd taken it on myself to cover this area along with the health pages, just in case I got the chance to write about the extraordinary world of high-tech skincare, by which I was mesmerised.

Could these new products possibly do what they claimed, and actively improve the look and feel of the skin, and reduce wrinkles and pigmentation? I took every opportunity to quiz the brands and the developers behind the products, and the dermatologists and skincare scientists who would regularly bring me back down to earth by pointing out where a cream's claims were dubious – or ludicrous.

But to cut a long story short, I began to learn what worked, and which products could provide actual proof – preferably in the form of proper clinical trials – that they did what they claimed. I've tried an enormous number of products over the years, and written about them for magazines and newspapers. I've won awards for my writing interpreting skincare science and attempting to explain it to readers. It's an area that continues to fascinate me as the technology behind the ingredients becomes ever more focussed, and complex. Ingredients that turn the blue light from the devices from something that harms the skin into something that boosts collagen? They're on the way. Personalised products created to treat your skin's needs? They're here already, and they don't cost the earth. Serums loaded with ingredients that make up for the

deficiencies in your skin's DNA? They're here too, and though the current versions aren't as exciting as they sound, they will surely be what we all use in the future. If we have the funds.

And as for Crème de la Mer? Many of the brand's newer products are super high-tech and work a treat, but that original cream didn't do the trick for me. On my combination skin, it slid about and provoked breakouts, as it's a heavy cream based largely on mineral oil and petrolatum (yes, petroleum jelly, like Vaseline; and mineral oil, such as baby oil). Not such a miracle, though I still have friends that swear by it. Most people have a naturally dry skin type, so the mineral oil content helps this by preventing water loss from the skin and keeping it feeling smoother and softer. That's why so many women – especially mature women, whose skin has become drier with the loss of sex hormones with age – fell in love with this product.

So what products should you use on your face? What is worth trying? What reliably gives results? Where do you start with all this, and how do you put together a skincare regime?

A great deal of skincare coverage – in the media, and on social media – is dedicated to the latest discoveries, new miracle products, and trends in product use. Much of it is marketing-led. These new products and trends are entertaining, maybe even thought-provoking, but they are the bells and whistles of the skincare world. They distract our attention from the fundamentals of skincare – the need to keep our skin, our barrier between our insides and the outside world, clean, protected and in good shape.

This book is for anyone – young or old, male or female – who is confused about what they should be putting on their face, when there is so much overwhelming choice, and so much conflicting advice about which products to use.

WHAT WILL THIS BOOK TEACH YOU?

This book tells you what you need to know to look after your skin effectively. The book consists of three parts:

- Part One explains what you need to understand about modern skincare to get the most benefit from it.

- Part Two teaches you the seven crucial rules for looking after your skin. It also tells you about the best skincare products I've discovered at low, medium, and high price points.
- Part Three shows you how to put these rules into a workable daily skincare routine, which can be as simple or as complex, as cheap or as expensive, as you like. In Part Three, you'll also find answers to the 12 biggest questions about skincare concerns – from wrinkles to melasma, and from rosacea to rough skin, taking in large pores, acne, and the menopause along the way.

WHERE SHOULD YOU START?

Start wherever you want, really. Part One is background, scene-setting, explaining some of the key issues at play in the skincare arena, and what I think about them, and why.

But maybe you'd prefer to get into the more practical part? If so, just dive straight into Part Two, which tells you the key rules about caring for your skin.

Or perhaps you would like to cut to the chase, and move straight to Part Three, where I set out some suggestions for skincare 'recipes' – how to put together a skincare routine to suit your particular skincare requirements.

Obviously, I think it should be read from the start (well, I would, wouldn't I?) but I appreciate that you may not feel the same. See what works for you.

And I know I've set the skincare part down as 'rules'. But as we all know, rules are there to be broken. I just think you should know what they are before you start bending and breaking them to suit yourself.

PART ONE

18 Home Truths About Skincare

Skincare is fundamental to keeping our faces looking good, and hence to how we feel about ourselves. It's an intrinsic part of grooming, of self-care. The skin, as I'm sure you'll have read before, is the largest organ in our bodies. It's our biggest natural defence organ against the outside world. It's a living thing. It needs constant, careful nurturing.

Before we get into the detail of which products do what and how to use them, there are a number of things you need to know about skin and skincare.

1. WHAT SKINCARE CAN DO (AND WHAT IT CAN'T)

So many people still think that skincare is 'hope in a jar'. It certainly used to be. Today, depending on what you choose, skincare can be powerful stuff.

Here's what skincare can do:

- Soften wrinkles
- Increase the hydration of the skin
- Reduce water loss from the skin to the air
- Firm and strengthen skin from the inside out
- Lighten pigmentation
- Improve skin radiance
- Clear blemishes and breakouts
- Smooth out rough dry patches
- Tone down the flush of rosacea
- Coax the fabric of your skin into better health.
- Make you look fresher and more rested

And here's what skincare can't do:

- Lift the skin
- Plump the skin more than a few micrometres
- Change the contours of your face
- Change your skin overnight

> WHAT IS A SKINCARE PRODUCT?
>
> A skincare product is a cosmetic cream – or lotion, liquid, or paste – that can be used 'topically' (in other words, applied to the skin) to improve the skin's condition and appearance.
>
> Skincare products are classed as cosmetic in the UK, so by law they should have only a cosmetic effect on the skin. Anything that has a far-reaching physiological effect on the skin should be classed as a medicine. There's more on this in the section '8. You Need to Use Skincare Like Medicine' on page 7.

2. IT'S ALL A MATTER OF OPINION

The key thing you need to know upfront is that most of what you hear about skincare is a matter of opinion, rather than fact. Should you wear sunscreen all year round? Should you exfoliate before you cleanse, or vice versa? Should you use a special eye cream or not? Should you worry about how 'natural' a product is?

This book is giving you my opinion on all these issues, and many more: my considered opinion, formed from 20 years of hearing it from all angles from facialists, formulators, dermatologists, skin doctors, cosmetic scientists, biochemists, aestheticians… but still, just my opinion.

With this book, I'm trying to give you enough knowledge that you can make up your own mind about what matters most to you for your skin, form your own opinions, and put together a plan to enhance your skin.

3. SKINCARE DOESN'T HAVE TO BE EXPENSIVE TO BE EFFECTIVE

How much do you have to spend on skincare? That's entirely up to you. It really is. What you need to think about is how many products you plan to use, and what budget you have for each of these.

Do you want one day product and one night product, and that's it? Or have you the time and energy, as well as the cash, for a full suite of cleansers, acid toners, serums, and masks?

It makes more sense, for example, to buy a cheaper cleanser – which is going straight down the drain – and splash out on a well-proven face-repairing serum, than vice versa. There are plenty of decent products at bargain prices which will do a good job for you if you use them persistently, as directed. In which case, I hear you thinking, why on earth spend more?

4. BUT EXPENSIVE PRODUCTS ARE OFTEN BETTER THAN CHEAPER ONES

Are expensive products better? The short answer? Sometimes. But not necessarily. I don't mean that to be unhelpful, but that's a really difficult question to answer, and here are some of the reasons why it's hard to answer, and why expensive products may or may not be better.

We assume that more expensive products must be, or at least ought to be, better than cheaper one. People love luxury skincare, and sales of it have consistently been booming.

But the past decade has also seen the arrival of a number of 'single-ingredient' brands such as The Ordinary, Garden of Wisdom, and The Inkey List that knock the established paradigm for six by offering products focussed on key skincare ingredients such as hydrating hyaluronic acid, or skin-repairing retinol, for a tenner or less.

Are these products cheap rubbish? Not at all. They're a good place to start if, say, you want to see what a particular ingredient that skincare bloggers are raving about might do for your complexion. So why buy anything else? Well, you need more than one

ingredient for the everyday health of your skin. These products can help with short-term issues with skin, but it's like hearing kale is the latest superfood and deciding to make kale the only vegetable you eat. It's not exactly bad for you, but it would be of greater benefit for your skin's health to have support from a variety of other ingredients.

Then you need to consider other factors, from the quality and complexity of the ingredients all the way through to the product packaging. The following sections discuss these factors.

Quality of the Ingredients

More expensive products may well contain more expensive ingredients. It's not dissimilar to finding ingredients for cooking, or composing perfume. Some of us are happy with a mass-market version of the ingredient which will give the right taste or smell and basically do the job; others will spend a lot of time and money seeking out the finest, most carefully sourced version of the ingredient which, to them, produces an entirely different result.

Complexity of the Ingredients

Some ingredients are straightforward, widely available, and cheap. Others are high-tech and their patents are closely guarded. Guess which costs more?

Quality of the Formulation

I'm often told that the formulations of cheaper products aren't that sophisticated. This may well be true, but it's hard to judge unless you are a cosmetic formulator. Will you get good results just from popping a layer of plain hyaluronic acid on your skin? Or would your skin derive more benefit from this ingredient if it came in combination with others? Usually, it's the latter.

Marketing and Advertising Costs

The marketing campaign. The poster and magazine and TV advertising. The celebs that feature in said advertising. Taking influencers and press around the world for a launch. (I once attended a launch in a chateau outside Paris where 15,000 long-stemmed

roses had been flown in for the event, along with a global selection of big-name influencers.) It all costs a huge amount of money, and that will be reflected in the price of the product.

Packaging

That beautiful packaging. The bottle cap that shuts with a beautifully engineered, soft magnetic click. It doesn't come cheap. Some people are happy to pay for this, and feel it adds to the whole experience of using the skincare.

Economies of Scale

The whole equation is then further confused by the fact that larger companies clearly have economies of scale – if they're buying ingredients, and packaging, by the tonne rather than the ounce, the production costs of each product will be less than if it is being made in small batches.

So if you're looking at a product with a clever new formulation engineered by a cosmetic scientist with a reputation for exciting skincare – it is likely to cost a lot, but it could well be worth it.

5. HOW MANY PRODUCTS YOU USE IS UP TO YOU

You don't have to become a complete skin geek to improve your skin, nor do you have to spend hours in the bathroom. As with how much you spend, how much you should bother about your skin is completely up to you. I'm not going to come after you if you don't cleanse twice a day. You could use one product a day; you could use 10 products. But the key point is, if you're trying to make a change in your skin, you need to be doing something different to what you've been doing before. And that implies a degree of being bothered to do at least something – maybe something more than you were doing before.

6. CONSISTENCY IS KEY

Your skin needs looking after on a daily basis. It's also key that you're reasonably consistent with what you do with your skin. A lot of skin advisers are keen on using an analogy to exercise. You

wouldn't just go to the gym once a week and expect to get fit, they say. It's the same with your skin. You can't just deep-cleanse once a week and slap on a mask and hope that will do the trick. You need to give your skin regular, daily attention.

Though, as with exercise, you don't want to overdo it with skincare. Throwing too many different products at your skin may well result in flare-ups or break-outs, and if you've been using a lot of stuff, it will be hard to pinpoint what it was that pushed your skin to the point where it reacted.

Like many of my colleagues, I've had episodes of 'beauty-editor skin' after testing too many products in too short a space of time, to the point where my skin has gone haywire. Then, the only hope is to rein the regime right back and wait for everything to calm down.

7. HOW SOON WILL IT WORK?

Another common issue with skincare products is expecting them to work miracles within minutes. Ok, some of them appear to do exactly that, but that is more common with cosmetics, which may be full of clever light-diffusing particles that make your skin appear very different the moment you apply them.

With skincare, it's different. Some products do produce an immediate effect. Hydrating serums, for instance, which are absorbed into your skin and stuff the outer layers full of moisture, can give an immediate plumping effect. It's only fractional, this effect, seeing as how your skin is so thin, but it's enough to soften the appearance of wrinkles.

Moisturisers or serums that contain light-reflecting particles will make skin look instantly more radiant, but that's because they're having a cosmetic effect and bouncing back the light from the skin's surface.

If those moisturisers have a few silicones among their ingredients, they can make the skin look dramatically better at once. How? Those silicones can fill the tiny crevasses in the skin; the moisturiser adds some plumping hydration; and hey presto, your skin looks a whole lot smoother – but again, the effect is temporary.

Acids that gently resurface the skin can have a swift effect. Glycolic-acid lotions or creams that are left on overnight can show a small improvement by the next morning, though their real benefits – of improving skin radiance by clearing dead cells from the skin's surface, and of improving hydration – will come with consistent use.

But the way that skincare can create genuine change in the skin is a slower process. It takes weeks for new skin cells, which are formed deep down in the dermis, the lower layers of the skin, to work their way to the surface. In young skin, this process takes four weeks; but cell turnover slows down as you get older, so it will take more like six weeks if you are in your fifties. This means that any product which is claiming to change your skin by stimulating the growth of collagen will need time to work its magic, for its ingredients to take effect on the skin and, slowly, change the appearance of the skin, from the bottom up. So don't dismiss the latest wonder-cream that you have invested in just because you're not seeing any difference after a week or two. You need to be patient, and use it like medicine for at least two months, before you decide whether it is working or not.

Having said that, skincare companies are well aware that we're not generally very patient, and that if we don't see results, and soon, we'll be off to try another product. The canniest skincare brands take time to develop products which give an immediate, visible (albeit cosmetic) result to keep us happy while the key ingredients in the product continue its real work at a slower pace in the deeper layers of the skin.

8. YOU NEED TO USE SKINCARE LIKE MEDICINE

Many people are reluctant to believe that skincare will really change their skin. On the one hand, that is precisely what they want the stuff to do – why they keenly peruse the beauty pages and read up about the latest wonder cream. But on the other hand, there is a strong undercurrent in their mind that says, 'I don't suppose it will work for me'.

This may be a peculiarly British attitude, which persists in thinking that skincare is still 'hope in a jar', even when so many millions of pounds have been spent on clinical trials that can demonstrate very real results in improving the look and texture of ageing skin.

But the key to getting the best out of your skincare – particularly out of skincare products that are making some kind of promise to change your skin, and which have been shown by clinical trials to have produced this kind of effect on other people – is to take it seriously and to use it like medicine. If you are given a course of antibiotics to clear up an infection, you take them every day, as directed. You don't decide to skip them one night or not pack them when you go away for the weekend. In the same way, you need to use skincare as directed. Twice a day, without fail, or whatever it says on the packaging. That way, you stand a chance of seeing the results that the product claims to make.

You also need to bear in mind that it will take three or four weeks, or longer if you are older, of consistent use for a product to show results. That's because your skin cells are constantly renewing themselves, and new cells rise up through the epidermis towards the surface as the cells on the skin's outer surface die and are sloughed off. This cycle takes around four weeks if you are in your thirties, and slows down with age.

9. EMOTIONAL FACTORS INFLUENCE OUR SKINCARE CHOICES

Emotional factors? I'm talking about the feel and smell and image of a product. Actually, how a product feels on your skin is really important. If it glides on, spreads evenly, is well absorbed and leaves a smooth, comfortable-feeling surface, that's major. If it's hard to spread and makes the skin sticky, it's a complete turn-off.

The smell of a product is really important, too. On the one hand, a product's smell has nothing whatsoever to do with its efficacy, but for many people, an appealing smell is a big selling point. It absolutely shouldn't be, given that fragrance is the ingre-

dient most likely to provoke a reaction in skin that is sensitive to it, but there you go.

Then there is the intangible factor of what you think the product or the brand says about you. Again, that shouldn't be a thing, but it absolutely is. Lots of women have told me that they'd never use one brand or another, because it was 'my mother's cream', or 'my granny's one'. Fair enough – if your granny was using the products, time and cosmetic formulations will have moved on. But it does a disservice to brands like Olay which have a long heritage, yet now boast cosmetic technology that's world-class.

10. TEN-STEP REGIMES VS ALL-IN-ONE CREAMS

If you're into skincare, you'll have heard of – or maybe even tried – the complicated, multi-step skincare routines popularised by Korean beauty influencers. The sort where you, say, double-cleanse, exfoliate, use an acid toner, then a prepping essence, then an antioxidant serum, then a hydrating serum, then a barrier-boosting moisturiser, then a sunscreen, then a spray sunscreen powder just for good measure (and if that all sounds like double-Dutch, don't worry, Part Two will explain it all).

Yes, there are benefits to using all these products – but all at once? To my mind, it's far too much, and unnecessary.

What seems much more alluring, particularly these days when we're all time-poor and busy being busy, is the idea of an all-in-one wonder cream which is the only thing you need to use. I'll mention a few of these in due course, too.

A wonder cream is a nice idea, but I feel you need to do a bit more than that. There's a happy medium somewhere in the middle. As I'll try to make clear all through this book, there are some things to do with skincare which I feel are non-negotiable – such as cleansing, and wearing sun-protection – but everything else is up to you.

11. SKINCARE REALLY CAN CHANGE YOUR SKIN

Skincare can be really effective. How effective? Well, ideally, the company behind the product will have conducted enough tests on the product to give us some idea. What sort of tests? And what sort of proof can these offer?

Studies Have Shown…

In 2006, Boots introduced a new product in its No7 range, the Protect & Perfect Beauty Serum. The product didn't garner much interest immediately. It was ahead of its time; few people understood what a 'serum' was, or why they should use it. But in early 2007, the serum featured in a BBC Horizon programme which flagged up the (extraordinary, back then) fact that No7 had conducted decent clinical trials on the product which had been 'shown scientifically to repair photo-aged skin and improve the fine wrinkles associated with photo-ageing.' In short, it reversed the signs of ageing created in the skin by sun damage, and genuinely did exactly what it claimed.

The product, which had been earmarked to be discontinued because it wasn't selling well, sold out within hours and remains a bestseller.

Ever since then, skincare companies have been scrambling to 'prove' how well their products work. How do they do this? With a trial of some sort. But not all trials are equal.

Clinical Trials vs Consumer Trials

Clinical trials are research studies carried out to discover whether a particular product or ingredient is effective.

Proper clinical trials should be:

- **Placebo-controlled.** Half the people in the trial are given a placebo instead of the real thing.
- **Double blind.** Neither the scientists conducting the study nor the participants know who is getting the actual product and who is getting the placebo.
- **Randomised.** People are randomly assigned to the two groups.
- **Independent.** Conducted by an independent laboratory.

- **Conducted on a finished product, not an ingredient**. Even if an ingredient has impressive clinical results, will it work its magic when mixed in with other ingredients? You won't know unless the finished formula is tested.
- **Closely supervised, and the results carefully measured.** It's almost too obvious to say, but being meticulous with the details and the data in a trial is crucial.

The longer the trial continues for, and the more people are involved in it, the better from the point of view of the resulting data. If a trial proves that a product shows measurable results in a lot of people – well, that's gold dust when it comes to selling the product.

Is a successful clinical trial real proof that a product works? Yes, though the real test is whether this well-proven product can replicate its results on your skin. Not everyone responds the same way to products, or ingredients; and even within impressive clinical trials, there will be participants who simply didn't get any measurable result from the product.

Why Don't All Brands Put Their Products Through Clinical Trials?

Because clinical trials are expensive. Nowhere near as expensive as the pharmaceutical trials a new drug product has to go through; but a double-blind, randomized, placebo-controlled trial will set a brand back upwards of £20,000; and the more complex the trial is, and the longer it goes on for, the more expensive it becomes, so they're beyond the range of smaller companies.

Consumer trials, by contrast, cost relatively little. It only costs a few thousand pounds to conduct a self-assessment survey among 20 or 40 women, after which a brand can legally claim that, for example, '90 per cent of women who tried this product felt their skin was more radiant'. That claim can go on the packaging, and looks impressive, but it doesn't carry the weight of a proper clinical trial – and this distinction may not be so obvious to those of us who haven't had the difference between these types of trials pointed out to us.

Trials like this aren't useless. The participants will have been asked to answer questions – possibly, leading questions – about

how they viewed their results. If 90 per cent of them felt their skin radiance was improved, well, that's great. But unless you know more about those participants, it may not mean very much. For example, did those women have dull skin that had failed to respond to other types of skincare? If so, that improved radiance would be quite a claim. Or was this the first moisturiser that they had ever used consistently? If so, it wouldn't be surprising that their skin looked better afterwards.

Ingredient Testing vs Product Testing

New skincare products are often promoted with impressive claims, though when you read the small print, the claim rests on the fact that an ingredient they contain has been shown to work in clinical trials. That's all fine and dandy, but it doesn't necessarily follow that, once mixed into the product formula, that result will hold true.

What's more helpful is when a company has put the finished product through trials (preferably clinical trials, as above). Then you know there's a chance that you might get the same results if you use the product with dedication.

In Vitro Testing vs In Vivo Testing

Then there's the question of how the ingredient, or the product, has been tested. *In vitro* is Latin for 'in glass', ie the test has been conducted in a lab, in a test tube or petri dish. If it works, great – but will it work on your skin?

In vivo, by contrast, means 'in real life' – the product has been tested on a living organism, in this case, someone's skin. If that gives decent results, that's better news.

12. THE FACTORS THAT MAKE SKINCARE MORE EFFECTIVE

Creating effective skincare is what every formulator is trying to do, whether that is with a simple moisturiser to keep the skin feeling comfortable; or a high-tech serum intending to rev up the skin's idling repair mechanisms into overdrive, and strengthen the skin; or hydrate it; or minimise pigmentation…

BEWARE OF MEANINGLESS TERMS ON PACKAGING

While we're on the subject of testing, can I just bring your attention to a couple of really meaningless terms that get inscribed on skincare packaging as if they were holy writ?

'Dermatologically tested' sounds great. It implies that the product has met some specific standard, demanded by dermatologists, before it can be unleashed on the market. But the term means little, as there is no standardised test that dermatologists must put products through. It only means that a dermatologist was in charge of the testing phase. It doesn't even mean that the product passed any particular test, like not causing irritation. It just means the product was tested.

'Ophthalmologically tested' is similar. This term means that an ophthalmologist – an eye specialist – reviewed the test that the manufacturer uses to assess whether the product could irritate the eyes. The product will have been tested to ensure that it can be tolerated in the eye area, but the term doesn't mean that the product is particularly gentle.

What makes the difference is whether the product contains decent quality ingredients, at sufficient levels of concentration to give a result, in a formula that gets them where they need to go.

Where do the ingredients need to get to? That depends:

- A moisturiser only needs to sit on top of skin and hold moisture inside the skin. Similarly, a sunscreen needs to sit on the skin and protect it from UV light.
- Exfoliating acid products also work on the skin's surface, to loosen the bonds that are tethering dead skin cells in place.
- Hydrating serums need to wiggle in a bit deeper, to plump up the top layers of the skin from the inside.
- But serums that work on pigmentation, or that stimulate collagen production in the skin, need to actually penetrate the skin in order to go to work on the lower layers.

What the Skin Can Absorb

There's a lot of talk on the internet about how the skin absorbs all the products placed on it, and that 'harmful chemicals' in skincare will be absorbed by the body and 'get into' the bloodstream. These websites will quote the fact that if you rub garlic onto the soles of your feet, you can taste garlic in your mouth within the hour. Or cite the popular use of stick-on patches that deliver nicotine or HRT (hormone replacement therapy) into the skin.

Those last two things are absolutely true. Garlic and the contents of nicotine patches can penetrate the skin and can be absorbed into the bloodstream – but they're exceptions. The skin is there as a barrier, to defend what's inside our bodies from the external environment, and it's a pretty good barrier. It is an impermeable membrane that makes us waterproof, so we can swim and bathe and be out in the rain without melting or swelling up like a sponge. Our skin keeps out dirt and viruses and bacteria. It's not keen to let stuff through. It really doesn't absorb very much.

The Trend for Miniaturised Ingredients

The fact that the skin is such an effective barrier is a challenge for cosmetic formulators, who have to devise delivery mechanisms that will ease their precious ingredients through the stratum corneum – the top layer of dead cells that sits on top of the skin – and into the lower layers of the epidermis, where they are needed, and where they can go to work.

One approach that had seemed promising for this was the way that nanotechnology could miniaturise the molecules of skincare ingredients, so that they could slip through minute gaps in the skin barrier, and thus reach their targets. 10 years ago, there was a huge buzz around in the skincare around nanotechnology, and larger skincare companies were filing multiple nanotech patents. Recently, though, we haven't been hearing so much about nanotechnology.

The problem with miniaturised ingredients is that they would be no good to the skin if they slipped off into the bloodstream, so they need to be large enough to travel into the skin but no further.

Nanoparticles are also helpful for sunscreen ingredients such as titanium dioxide and zinc oxide, which produce a white formula

that can look chalky on the skin. When miniaturised, they give a clearer product with a better cosmetic finish.

Scientists have raised questions over whether nanoparticles of sunscreen are safe. Although the latest view of organisations such Australia's Cancer Council (cancer.org.au) is that nanoparticles in sunscreens don't post a risk, many companies don't want nano materials in their products while these questions remain unanswered.

The Case for Cosmeceuticals

What's a cosmeceutical? It's a skincare product that's halfway between cosmetic, available-over-the-counter skincare, and a pharmaceutical, prescription product. Or that's the idea. There's no precise, or legal, definition of 'cosmeceutical', but they're usually the sort of brands you will find in cosmetic clinics rather than in department stores, such as NeoStrata, Medik8, SkinCeuticals, iS Clinical, Alpha H, Elequra, Skinbetter Science, Paula's Choice, and ZO Skincare. You'll find I mention cosmeceuticals a good deal in this book, as they're the type of products I think are the most effective.

Is It Skincare or Is It Medicine?

How potent and effective can skincare get before it has to be classed as medicine? That's a good question.

Many non-pharmaceutical products have plenty of proof – in the form of clinical trials – that they work. But by law a cosmetic product should make only a cosmetic change to the skin. If it makes a physiological change to the skin – ie it actually changes the skin in some way, which is very much what most active skincare is aiming to do – then, technically, shouldn't it be classified as medicine?

The short answer is – no, as long as the product isn't making a medicinal claim. That applies even if the product is claiming to improve wrinkles. As far as the Medicines and Healthcare Products Regulatory Agency (MHRA) is concerned, wrinkles are not an adverse medical condition, so claims to reduce their appearance, or to increase the elasticity of skin, fall under cosmetic regulation.

If you want to read a longer piece I've written about this topic, follow this link to the GQ website: gq-magazine.co.uk/article/best-mens-skincare-moisurisers-serums-that-give-results.

How Skincare Affects the Way Our Skin Genes Behave

There are about 2,000 genes related to the way our skin ages. The study of genes and the way they function is called *genomics* – and Procter & Gamble, the pharmaceutical company behind brands such as Olay, has been studying skin genomics for over a decade.

'The genes you are born with won't change through your life,' explains Dr Frauke Neuser, Senior Director of Scientific Communications at Procter & Gamble, 'but what will change is how dynamic those 2,000 genes are. We know the group of genes that is important to make you look young. The next step is to overlay this with the active ingredients we have in our database and work out which skincare ingredients can affect gene expression.'

Even skincare products in this area are not classed as medicines. That's because, even if they are improving the expression of certain genes – for example, switching back on the ones that make collagen – the products are not making medicinal claims.

13. NATURAL, ORGANIC, VEGAN, 'CLEAN'

Natural beauty sounds like a lovely idea. Organic beauty, too. We all have a romantic notion that natural things are good for us – and often they are – and we like to extend that to skincare. If we want to eat natural, unadulterated foods, preferably organic, why wouldn't we want to use 'natural', unadulterated products that are 'kind' to our skin?

I've put those inverted commas because – reality check – when it comes to skincare, it's not that simple. There's no agreed definition of what 'natural' means in skincare. Many brilliant natural-beauty brands (eg Weleda, Green People, Dr Hauschka) have clear standards and follow them scrupulously; but in marketing terms, it's quite possible to slap the word 'natural' on a product if there is just one natural ingredient in it – say, lavender oil.

Organic skincare is more precise. In order to meet the standards for organic certification, a product has to be made from organically farmed ingredients. You can read more about this on the Soil Association website, www.soilassociation.org.

As for vegan skincare, there's no legal definition of precisely what makes a vegan beauty product; but vegans will have a pretty clear idea of the types of ingredient that they want to avoid, ie anything that is animal-derived. So no beeswax and no collagen (which all comes from animal sources); but – perhaps less obviously – no retinol, which is usually derived from animal sources. Other ingredients, such as hyaluronic acid and glycerin (which is everywhere), can be either animal-derived or plant-derived; you'll need to check which.

Then there's the point made by cosmetic scientists, that skincare products made with natural or vegan ingredients won't be as efficacious as those containing synthetic active ingredients. Why? Because plants have cell walls made from cellulose, which don't get broken down by the enzymes on the skin, so a plant cell won't really deliver its nutritious ingredients quite so well.

And I'm not against any of these – each to their own, and all that – but the clean beauty movement really winds me up.

Why 'Clean Beauty' Drives Me Mad

Clean beauty? If you haven't heard of it, it's the beauty equivalent of 'clean eating'; and in the same way, it demonises a great many good beauty brands and products and ingredients by implying they're not as 'clean' as they should be.

Clean beauty is one of the biggest skincare movements just now and, if you ask me, one of the most maddening. It has grabbed the moral high ground on dubious reasoning – and it somehow manages to imply that all other skincare is, by contrast, 'dirty'. Not a good word.

Why I find the concept of clean beauty particularly irritating is that it manages to wrap all the standard arguments in this area into one big virtuous package: the supposed supremacy of natural skincare; the hackneyed 'natural' vs 'chemical' ingredients issue (see

the section 'Making Sense of the "Natural" vs "Chemical" Debate' on page 18 for more on this); scaremongering about the need to avoid 'nasties' (a generic term for ingredients that clean beauty fans deem to be bad or, worse, 'toxic'); and give longstanding, well-accredited ingredients – such as parabens, mineral oil, and sulphates – a real bashing along the way. Clean beauty does all this by using emotional arguments and banking on people's lack of understanding of science to create a sense of alarm and worry, that by using products that aren't 'clean', people are actively harming their skin and their bodies.

Oh, and clean beauty usually grabs a part of cruelty-free beauty and 'free from' tagging for good measure.

An added annoyance for those of us in the beauty industry is that the sweeping popularity of this movement is dragging cosmetic formulations back decades by chasing older, more 'natural' ingredients and ignoring the extraordinary new ones that cosmetic science is conjuring up just now.

Also, they're just wrong, if you ask me. Why do I say that? Here goes.

Natural Doesn't Mean 'Better'

I'm not 'anti-natural'. I'm really not. I just feel it needs saying that not everything 'natural' is 'better' for the skin. Also, I object to the way that people who are passionate about the supposed benefits of natural products argue their case by appealing to people's emotions rather than by using scientifically based facts. Even an emotionally-driven, non-scientific person like me can see that that doesn't make sense.

Making Sense of the 'Natural' vs 'Chemical' Debate

I have put the words 'natural' and 'chemical' in inverted commas because in scientific terms, every substance in the world, including every substance used in making skincare and cosmetics, has a chemical formula, whether it's water or beeswax or a new kind of high-performance anti-wrinkle neuropeptide. Using the word 'chemical' as a stick to beat much of modern skincare with is the sort of thing that drives cosmetic scientists mad.

Ten years ago, the Royal Society for Chemistry announced that it would pay a £1million bounty to the first person who could show them a chemical-free skincare product. Of course, their money is quite safe as no such thing exists; they were doing this to make a point, and the offer still stands.

'The challenge has been set because research by the UK's cosmetic and toiletries industry reveals 52% of women and 37% of men actively seek out chemical-free products, demonstrating the deep-seated public confusion about the role and application of chemicals in daily life,' said the RSC's press release at the time, adding that the popular perception of chemicals was 'something harmful to be avoided, a view shared by 84% of consumers who feel at some level concerned about the health impact of the chemicals in their everyday products'.

You might say that's nit-picking, but I think it's a point worth making. And, semantics aside, you may well prefer skincare products based on natural ingredients. What I'd ask is, 'Why?'

An answer I often get when I ask this is that people want to avoid 'harsh chemicals'. That sounds fair enough – but seriously, what are these 'harsh chemicals'? Every formulation for every skincare product that goes on sale, from kitchen-table concoctions to mass-market brands, is subject to EU cosmetic regulations, specifically to ensure that it contains nothing harmful. No one puts lead in cosmetics, as was the popular practice in the 16th century. The main purpose of those regulations is to ensure 'human safety'.

WHAT HAPPENS TO COSMETIC REGULATIONS IN THE UK IF THERE IS NO FREE TRADE AGREEMENT AT THE END OF THE BREXIT TRANSITION PERIOD?

Here's what the website of the Cosmetic, Toiletry and Perfumery Association (CTPA) says:

If the UK leaves the EU single market without a Free Trade Agreement at the end of the implementation period, trade between both parties will operate under WTO (World Trade Organisation) Rules. The UK will have a standalone regulatory framework, but the spirit of the legislation will remain, providing safe and effective products that consumers can use safely with confidence.

When pressed on what these 'harsh chemicals' are, naturals-fans will name categories of ingredients such as parabens, which are used as preservatives; sulphates, which are foaming ingredients; and mineral-oil derivatives. (I'll get onto the ins and outs of these below.) 'They're dangerous,' they'll say. 'I've read so much about it online. You really shouldn't use these things.'

Ah yes, online. I hope we are all a little more aware now of how easy it is to get into an echo chamber of views online, which applies as much to skincare as to politics. Once you're in there, it becomes harder to believe that so many people could be wrong… Yet those types of ingredients mentioned above are all absolutely safe to use on the skin. Also, it's worth noting that many of these feared ingredients are natural derivatives. Parabens are found in coffee and blueberries; sulphates such as sodium lauryl sulphate can be derived from coconut oil or palm oil.

For sure, lots of natural ingredients are great for the skin, but natural ingredients aren't without issues. Any kind of fragrance can be irritating to the skin, and that includes essential oils. Any ingredient derived from lemon or other citrus fruit sensitises the skin to sunlight. But as with most things in life, there are few blanket rules of good and bad here; and as with many modern beliefs about skincare, things get taken out of context and blown out of proportion.

Lavender oil has a long-standing popular reputation for helping repair burns and heal wounds. Yet if you search online for 'lavender oil causes cell death', you will find a number of references to stand this up, including the studies showing that lavender oil is indeed toxic to skin cells. But this experiment was done 'in vitro', in a lab, and exposed cells directly to lavender oil. In real life, skin cells live among other tiny structures in a swamp of cellular fluid in the dermal matrix of the skin, and are protected from the world by the stratum corneum, the outer layers of the epidermis, so you'd never get that oil directly onto a skin cell, even through wounded skin. So using lavender oil on pulse points to calm you down (a very real effect; I'd strongly advise you not to do this when driving) or to heal a burn is not going to kill your skin cells. Honestly.

I could go on.

Years ago, I chaired a debate at the Royal Society of Chemistry on behalf of the Society for Cosmetic Scientists (SCS). The debate was about Cosmetics, Chemicals and the Truth, and we waded through either side of these issues until the panel and the audience were both feeling exhausted. One moment of clarity for me came when a younger member of SCS stood up to speak. 'Look,' she said, 'I'm a cosmetic formulator. I just want to put forward the idea that there is no right or wrong; what there is, is just options and choices. So, for any given brief, I can choose natural or synthetic chemicals. You have got to look at the performance of the product you are trying to achieve, the price point that you are retailing it at, and also the aesthetics. With that in mind, you come up with a formulation involving a cocktail of chemicals which will be a mix of both natural and synthetic.'

A choice – that's what it comes down to. I don't want to start sounding as if I'm a 'chemicals-only' sort of person – I'm really not – but I do find it tiresome that many people, particularly the fans of 'natural' beauty products, seem to assure that big beauty companies are in some way out to get them, and to ruin their skin, by selling products containing dangerous ingredients, which simply isn't the case.

14. 'NASTIES' AND 'TOXIC' INGREDIENTS

To recap what I said above, there are no toxic ingredients in skincare. There really aren't. I really object to the word 'nasties', too, which is used vaguely to demonise a whole host of cosmetic ingredients. So why do so many people think that many common ingredients are such a problem? Let's take a look at the key ingredients, or ingredient groups, that people think are problematic.

What's Wrong with Parabens?

If you've heard of parabens, the chances are that you won't like the sound of the word. They're bad, aren't they? So many skincare products proudly proclaim that they are free from parabens. Surely, parabens must be bad?

In a word – no, there's nothing wrong with parabens. They've been unfairly demonised through a combination of bad science, media hype, and popular hysteria.

WHAT ARE PARABENS?

Parabens are commonly used preservatives, which are good at doing their job – preventing the growth of mould, fungi, and bacteria in cosmetic products – without irritating the skin.

Parabens are derived from para-hydroxybenzoic acid (PHBA), which is found in foods like blueberries and onions, so our bodies are used to dealing with the stuff. The parabens in cosmetics are not naturally derived, because it's cheaper to make them in the lab than to extract them from blueberries, but they are 'nature-identical', which means they have the same chemical formula, so our bodies convert them to PHBA and dispense with them.

WHAT ARE PARABENS CALLED, AND WHAT DO THEY DO?

What are parabens called on the packaging label? Parabens have names such as methylparaben, ethylparaben, butylparaben, propylparaben, isopropylparaben, and isobutylparaben. 20 years ago, you would find such parabens in most cosmetic products that had water in the formulations, as preservatives to prevent contamination.

WHAT DO PEOPLE THINK IS WRONG WITH PARABENS?

But a research study published in 2004, which found parabens in breast cancer tissue, changed all that. Could the parabens have found their way into the tumours from the beauty products these women might have used? Was common skincare causing cancer? I remember reading the headline at my desk at the *Evening Standard* and, like most other women who read it, feeling complete horror – were we killing ourselves in the pursuit of beauty? The media seized on the story, and it shot around the world, raising more questions than it answered. Were parabens dangerous? How had they got into the breast tumours? Had they caused the tumours? Was it deodorant that was to blame?

My alarm soon turned to bafflement, because when I turned to my expert contacts for information – the toxicologists, the skincare

formulators, industry experts – it appeared that the story had got ahead of the facts. The study, it turned out, was fundamentally flawed. It didn't compare the breast tumour tissue to healthy tissue, and what went unreported was the fact that concentrations of parabens were also found on the control slides, the blank slides with no breast tissue on them. Could that have been because all the slides used in the experiment had been cleaned, before use, with a solution containing parabens? In which case, were the parabens in the original tumour slides actually just on the slides, and not in the tumours at all?

Discrediting the study made absolutely no difference to the ongoing storm in the cosmetics industry and the consumer hysteria around the potential dangers of parabens. Companies hustled to remove parabens from their products and find alternative preservatives. However natural the natural lobby would like their products to be, the products need preservatives, or else they'll develop (entirely natural, but unpleasant) mould and become unusable.

And so parabens became the bad guys. There's a lot on the internet about their 'oestrogenic potential' – the ability of parabens to mimic the effects of oestrogen in the body. Yes, that sounds really damning. But cosmetic scientists and toxicologists beg to differ, pointing out that the oestrogenic potential of parabens is vanishingly small – thousands of times less than oestrogenic substances in food such as chickpeas and linseeds. You'd need a dose of butylparaben 25,000 times higher than what is used in a cosmetic, to see this effect.

There have been many further studies on parabens and breast cancer, but none of these has found any link between the two. The parabens-are-bad lobby persists, citing the 'cosmetic cocktail' effect, suggesting that a small effect may become more of a problem if a person uses many paraben-containing products in a day. Cosmetic formulators and scientists dismiss the cocktail theory, and I'm totally with them. Most skincare products and their ingredients sit on the surface of the skin. It's a struggle to get them into the skin tissue where they're needed. They don't simply slip down through the layers, get absorbed into the bloodstream, and start creating havoc.

The European Scientific Committee on Consumer Safety considers parabens to be safe. So does the American FDA. But that isn't going to stop the rumour-mill or put the parabens-genie back in its bottle. The misinformation has spread widely, and the natural-and-clean beauty movements have perpetuated online concerns around parabens. Making this worse, most of us don't understand science well enough to argue effectively against the misinformation and distortions. As a result, people have decided that parabens are a bad thing, and see 'free from parabens' as a clear benefit when it's stated on packaging. As a journalist, I find editors have little interest in stories along the lines of 'old-style preservatives not as bad as they've been made out to be'.

Many skincare companies have told me privately that they don't have a problem with parabens, but the companies can't include parabens in their formulations because consumers fear them so strongly. This topic isn't going to go away, but honestly, there's nothing wrong with parabens.

One last thought: Parabens are widely used in the food industry as preservatives. I suspect an awful lot of people who fear parabens in skincare don't know they're eating them…

> The race to remove parabens from cosmetics created further problems, as one of the first preservatives called into play was methylisothiazolinone (MI), which works well enough as a preservative but also provokes contact allergy in many people. Dermatology centres, such as the Leeds Centre of Dermatology and the St John Institute of Dermatology at Guy's Hospital in London, reported rates of contact allergy due to MI and its close cousin MCI rising sharply around 2011/2012 to around 10 per cent. In the past, preservatives which had this effect were banned by the EU, but MI/MCI is still around.

What's Wrong with Mineral Oil?

Another ingredient condemned by natural beauty fans is mineral oil, one of the longest-standing, cheapest and most commonly used cosmetic ingredients.

WHAT IS MINERAL OIL?

Mineral oil is a by-product of the process that makes petrol, so it's not remotely 'green' or environmentally friendly – but is it actually bad for the skin, as people think? No, it's not.

WHAT DOES MINERAL OIL DO?

Mineral oil makes a really effective moisturiser because it is so 'occlusive', which means it sits on the surface of the skin and holds in moisture.

Many people love using Johnson's Baby Oil on damp skin after a shower, to 'seal in' moisture; many others love Bio-Oil for softening the skin. These are both made from mineral oil.

Petroleum jelly, another by-product of petrol manufacture, which most of us know as Vaseline, works well to keep lips soft (again, by sealing in moisture).

So mineral oil has its uses. But it has been demonised over recent years by the popular and vocal natural-skincare community, to the extent that most people think they should avoid it because it is somehow 'bad'. It really isn't.

WHAT DO PEOPLE THINK IS WRONG WITH MINERAL OIL?

Here's what people think is wrong with mineral oil:

- **It 'clogs' the skin.** Mineral oil is very effective at keeping moisture in the skin – hence the longstanding practice of using oil on damp skin after a shower, to 'seal in' moisture.
- **It blocks pores and causes spots.** Well, technically, highly-refined mineral oil is non-comedogenic (which means it does not contain ingredients that are known to block pores), because its large molecules are too big to stuff themselves into the openings of pores. But because it is so effective at sealing over the skin, if your skin is buzzing with acne bacteria and has pores that are already threatening to block because of hormonal imbalances, mineral oil is not a helpful thing to spread all over it. So no, just don't use mineral-oil products if you're prone to spots.

- **It 'suffocates' the skin and stops it from 'breathing'.** The skin doesn't have a respiratory system; it doesn't 'breathe', so covering your skin in oil won't stop it breathing (and no, Jill Masterson, the character in the Bond film *Goldfinger*, who died from 'skin suffocation' after being painted with gold paint – that couldn't happen IRL). But, as I've said, mineral oil makes a very effective barrier, so it can help stop water escaping from the skin, which keeps skin better moisturised.
- **It is thought to be cancer-causing.** Some components of industrial-grade mineral oil have been found to be carcinogenic, but these components are not found in cosmetic-grade mineral oil. Other concerns include the suggestion – no more than a suggestion at the moment – that mineral-oil hydrocarbons may 'contaminate' the body, possibly by being absorbed through the skin, though we also absorb these pollutants from food and from the air.

So depending on your views about skincare and its origins, you may want to avoid mineral oil.

Do I put mineral oil on my skin? Yes, but not often, just because I am always trying out new products, and most newer products don't contain it.

Mineral oil may not be a modern or eco-friendly choice for skincare, but it is not evil incarnate. I know a couple of cosmetic doctors who apply it at night on top of their expensive skin-renewing and hydrating night serums, specifically in order to keep moisture in the skin, even around the eyes. And yes, I do still reach for the Vaseline as a lip-smoother or Vaseline Intensive Care lotion as a body moisturiser from time to time.

What's Wrong with Sulphates?

Another widely used ingredient that draws widespread vilification is sulphates.

WHAT ARE SULPHATES?

Sulphates are a group of ingredients that help products to foam up and produce lather. Sulphates are detergents – effective de-greas-

ing agents – so you will find them in body washes, bubble baths, and foaming face washes, as well as shampoos and toothpastes.

WHAT DO PEOPLE THINK IS WRONG WITH SULPHATES?

Sulphates can irritate the skin. Also, depending on their concentration, many people feel sulphates can wash rather more natural oils out of the skin than is good for it. And 'detergent' sounds a bit blunt for a product you'd be using on your face, doesn't it?

The main types of sulphates that come in for criticism are:

- **Sodium Lauryl Sulphate (SLS).** This is an effective lather-producing ingredient; it's also cheap, so it's widely used. But SLS is also a well-known skin irritant. In fact it is irritating enough to be used as a control in tests for skin irritancy of other substances. This is what has led to its bad reputation. How could we deliberately put an ingredient – or as many would phrase it, a 'chemical', which makes it sound even worse – into products that everyone uses? The simple answer is because almost every product SLS is used in is a wash-off, and most people aren't sensitive enough to SLS for it to be a problem in products that are only in contact with the skin for a short stretch of time as a shampoo or a face-wash. But if you *are* sensitive to SLS, then it's one to avoid. And whatever the scaremongering websites may say, SLS is not carcinogenic.
- **Sodium Laureth Sulphate (SLES).** This is a close cousin of SLS, but not as cheap and a bit less irritating to the skin. But then both these sulphates have the potential to irritate the skin, as does any other ingredient ending in -sulphate which is used to replace SLS and SLES. Sulphate-replacement ingredients like cocomidopropyl betane, which is usually just used as a lather-booster, don't have the same ability to produce lather on their own.

The bottom line? Sulphates are only a problem if you are sensitive to them – in which case, look for products with alternative foaming ingredients; and bear in mind that foam is the most effective way of transporting dirt away from the skin.

What's Wrong with Silicones?

Silicones are another hapless group of ingredients that has fallen foul of popular opinion.

WHAT ARE SILICONES?

Silicones are ingredients derived from sand which are used in skincare and make-up to give a silky, velvety feel to products, to help them spread, and to help moisturise the skin. Silicones are used in haircare to smooth the hair and protect it from heat styling and humidity.

What are silicones called on the packaging? The one you see most often is dimethicone, which is a silicon polymer. Other ingredients whose names end in *-cone*, such as methicone and phenyl trimethicone, are also silicones, as are ingredients ending -*siloxane* (such as cyclopentasiloxane).

WHAT DO PEOPLE THINK IS WRONG WITH SILICONES?

People's objections to silicones are much the same as with mineral oil products. Silicones are thought to smother and block the skin and to provoke breakouts of acne, to prevent active ingredients getting to the skin, and to be hard to remove.

Do silicones deserve this bad reputation? No. Because they spread well and form a smooth covering on the surface of the skin, they're good at helping hold moisture in the skin – they're often recommended for helping scars heal, for this reason – but they're still permeable to gas and moisture, which means that they're not forming a watertight seal on your skin. They don't block pores, so they are 'non-comedogenic'.

Silicones don't stop active ingredients getting into the skin. They themselves will stay on the surface of the skin, but active ingredients within a formulation that contains silicones will find their way downwards into the skin through them. In make-up products, silicones can help kick back the light, to blur the look of wrinkles, which is always helpful for a dull complexion.

The bottom line: there is nothing wrong with silicones. They won't hurt your skin, nor cause spots, nor damage your hair, nor

harm the environment, for that matter. But if you find they don't suit you, then of course, look for alternatives.

If you don't like any of the above ingredients, fair enough. It's entirely your choice. I just wanted to point out that they're not quite such bad guys as they are usually made out to be.

15. SUSTAINABILITY MATTERS

In the beauty world, as in other areas of life, sustainability has become a huge issue, and not before time.

Over the past decade, beauty consumers have woken up to the fact that sustainability is a genuine need rather than an add-on choice, and the younger generation is particularly keen on brands that emphasise their sustainability credentials.

And many of us are starting to shop with our consciences. That's certainly how it looks to the skincare-industry bosses.

'We are seeing a real movement, rapidly gathering momentum, where shoppers are no longer prepared to accept products that may have a harmful impact to the environment,' says Victoria Young, general manager for Europe of global skincare brand Yes to Skincare. 'According to Euromonitor, 54 per cent of shoppers think that they can make a difference to the world with their purchases.'

Then there is the issue of sustainability among the residues of personal care products.

'It isn't just about how ingredients are sourced,' adds biochemist Nausheen Qureshi, 'it is how they are washed off in our sinks, not dealt with by waste water treatment plants, and swept into our oceans. They must be sustainable in how they are broken down, too. The formulations themselves must be sustainable.'

If you're concerned about sustainability, keep the following points in mind when evaluating a company or a product:

- How are they minimising their packaging?
- Is the packaging recyclable?
- How are they reducing their carbon footprint?

- How much energy is involved in the manufacture of their products?
- How much water is needed for production?
- Are the formulations sustainable?
- How do the ingredients break down when washed off?
- Do they use plastic? Are those plastics recyclable?
- How much waste do they create?
- Can they trace the origins of their ingredients?
- Are the human rights of their employees protected?
- Are their actions transparent to customers?
- Do they seek to have a 'net positive' effect – putting more back into society, the environment, and the global economy than they take out?

16. OTHER PACKAGING CLAIMS AND WHAT THEY MEAN

In this section, I discuss three other claims you may find on product packaging – that the product calls itself 'anti-ageing', that the product has not been tested on animals, or that it is free from specific ingredients.

Which Products Can Call Themselves 'Anti-Ageing'?

When you see the words 'anti-ageing' on skincare and other beauty products, look further, to see how and why the product claims to work its magic. Some claims are more valid than others.

Most of what we think of as the signs of ageing in the skin – age spots, rough texture, the breakdown of collagen – are due to the damaging effects of ultraviolet light, which add up over time. Sunscreen protects the skin from UV light. So any product containing sunscreen can claim to protect against the signs of ageing. That's a reasonable claim.

With random beauty drinks, the claims are more tenuous. Here's an example. Beauty drink X contains vitamin C. Vitamin C in the diet is proven to contribute to the generation of collagen in the skin (it's a permitted health claim, according to EU

regulations). So that beauty drink, which may well be flavoured water with added vitamin C, can say 'proven to maintain the beauty of skin'. But if you look at the small print, the drink contains 40mg of vitamin C, less than the amount you might hope to get from a small glass of orange juice. Pop a standard vitamin-C supplement, and you will get 500mg of the stuff, around half of which will be absorbed by the body (doses of ascorbic 200mg or under are well-absorbed; larger doses much less so). If you take a liposomal form of vitamin C, around 98% of the vitamin C will be absorbed (see the section 'Vitamin C Supplements' on page 165 for more about liposomal vitamin C). Yet we don't tend to call vitamin C supplements 'anti-ageing'.

If you really want to improve your skin by supplementing vitamin C in your diet, I'd suggest you do it with a liposomal vitamin C, rather than a random beauty drink.

Animal Testing: 'Not Tested on Animals'

Pretty much everyone hates the idea of testing cosmetic products on animals. It shouldn't be done, particularly now that there are many other scientifically accepted ways of testing cosmetics for safety and irritancy.

But here's the thing. Animal testing has been banned in the UK since 1997. That's over 20 years. So the fact that 'cruelty free' is often touted as a 'benefit' on many skincare brands really puzzles me. 'We don't test on animals,' says the brand. Great news. Because neither does anyone else who sells products in the UK or the EU – so it's a claim any company in those markets could make.

Yes, there have been loopholes. The 1997 ban was on testing finished cosmetic products, but 2013 saw a European ban on the testing of any individual cosmetic ingredients that were used in products sold in the EU.

But what about China? That is a problem, because China requires all imported cosmetic products to be tested on animals. So companies that sell their products in China currently have to agree to, and pay for, animal testing on any product sold there. However, there is real hope that this is about to change. Last year (2019), the

Chinese government announced its intention to lift the requirement on animal testing for imported cosmetic products in 2020, so we wait to see. Meanwhile, some smaller British manufacturers are involved in a pilot scheme that works around the current animal testing requirements by importing their own ingredients and manufacturing their products locally in China – because domestically produced cosmetics are not required to undergo animal testing.

But it's sad that this is still an issue when there are an increasing number of options for testing products for safety, efficacy, and irritancy without resorting to cruel and outdated animal tests. There are types of lab-produced skin such as Episkin (owned by L'Oréal) and EpiDerm (owned by MatTek), which can be used, and which are available to cosmetics companies worldwide.

(So why does L'Oréal get so much grief from the anti–animal testing brigade? Because it has continued to sell its products in China…)

'Free From'

'Free from' claims are a bit of a minefield. They sound appealing, but they can be manipulative. If a product claims that it is 'free from preservatives', it needs to be able to prove that it doesn't contain any ingredients shown to have a protective effect against micro-organisms. That's fair enough, isn't it?

These claims are fine where they're helping inform decision making, which is one of the common criteria for justification of claims, as laid out in EC Cosmetic Products Regulation. Saying a product is 'free from animal-derived ingredients' helps vegetarians decide whether it is appropriate for them.

The trouble comes if the claims make us, as consumers, feel that products with 'free from' claims are better or safer than ones that don't have these claims – which isn't true, since, as above, all cosmetic products have to be safe for use, by law.

Then there's the aspect of fairness, another of those common criteria. 'Free from' shouldn't be used to imply a denigrating message, based on a negative perception about a group of ingredients

which are judged safe by that same Cosmetic Products Regulation. Is it fair to say 'free from' about parabens, for example, when this denigrates the entire group of parabens?

Nor should 'free from' be used in a dishonest way, by referring to ingredients that aren't typically used in a particular type of product. You wouldn't find 'free from preservatives' found on a bottle of fragrance, just because the product contains so much alcohol that it doesn't need any other preservatives. You can read more about this issue on the website of the Cosmetics Toiletry and Perfumery Association, www.ctpa.org.uk. Meanwhile, when you see a product that claims to be 'free from' something, take a closer look to decide whether it's a helpful claim or a manipulative one.

17. KNOW YOUR SKIN TYPE

One of the first questions that anyone selling you skincare will ask is, 'What's your skin type?' And the options for describing our skin are usually laid out as Dry, Normal, Oily, or Combination. Which is useful up to a point, but these really only address skin oiliness or otherwise.

What else could we add in? Let's start with these options:

- **Dehydrated.** Your skin looks and feels dry, however much product you pile on.
- **Reactive/sensitive.** Your skin is likely to kick off, with no warning, if you use products it doesn't like.
- **Stressed.** Your skin is dull, prone to flushing.
- **Acne-prone.** Your skin may break out in spots when you use the wrong products.
- **Fatigued.** Your skin is dull and lacking radiance. It looks like it needs a holiday.
- **Erratic.** Your skin is fine some days, but not others.
- **Balanced.** (You lucky person… you lucky, lucky person!)

Not sure about your skin type? It's straightforward to assess how oily your skin is. Cleanse your skin, and then leave it alone for an hour; then press pieces of thin tissue (a normal tissue pulled in half) to your face and see if the tissue picks up any oil. If the tissue

comes away with any oily patches on your forehead, nose and chin, then you have combination skin. If there's oil all over, then clearly your complexion is oily. If there's no oil, it's on the normal-to-dry end of the scale (normal, if your skin feels just fine without moisturiser; dry if it feels a bit tight or rough).

Talking of normal, relatively few of us have 'normal' skin. Perhaps 'well-balanced' skin is what we should be aiming at. Experts say that around 70 per cent of us have combination skin. That's not just a marketing conceit, designed to get us to buy more stuff, but a reflection of the fact that there are more oil glands on the forehead, nose, and chin than there are on the cheeks or the neck. It's also worth knowing that just because your skin is oily, or sensitive, at the moment, it doesn't mean you're stuck like that for life. Your skin may have a tendency to be like that, but using the right products will help steer it back into a better balance.

18. UNDERSTAND AND USE THE INCI LIST

How do you know what's in a product? You read the small print on the back, which tells you all the ingredients.

The list of all the ingredients that a cosmetic product contains is known as the INCI list, which stands for International Nomenclature for Cosmetic Ingredients. It's the one printed in such small letters that I've got into the habit of keeping a magnifying glass beside the bathroom sink as well as on my desk.

What the INCI List Will Tell You

The INCI list shows the ingredients in the formula, using the names that are internationally recognised by the scientific community. Ingredients are listed by weight, starting with the largest, in descending order, until you get down to one per cent, after which the remaining ingredients can be listed in any order.

How do you know when you're getting to the less-than-one-per-cent tail end? Scan the list for an ingredient called phenoxyethanol, which is a common and widely used preservative. This can by law only be used at a maximum of 1% in cosmetic

formulations. So anything that is listed after phenoxyethanol is only present in tiny quantities.

If a key ingredient in a product is present at less than one per cent – is that a problem? You might expect if an ingredient is being talked about as being vital to the effectiveness of the product, that there would be more that one per cent of it in the formula. But it depends on the ingredient. Hyaluronic acid, for example, is always present in serums at less than 1%, because that is the optimal amount.

If you are allergic to specific ingredients, scan the INCI list for them. Ingredients known to be allergens have to be listed, by law.

What the INCI List Won't Tell You

The INCI list tells you which ingredients a product contains, but it won't tell you the following:

- **How the ingredients were sourced.** The INCI list doesn't give an ingredient's source – for example, whether it is derived from plants, derived from animals, or made in a lab.
- **The quality of the ingredients.** As with most substances, you can get cheap versions of cosmetic ingredients as well as expensive, carefully sourced ones.
- **Exactly which fragrance ingredients are in there.** Manufacturers are allowed to list all the fragrance ingredients as 'parfum' (although, as above, potential allergens will be listed). If you're sensitive to some fragrance ingredients, or to fragrance in general – and fragrance is the ingredient most likely to set off skin sensitivities and allergies – you'll want to keep an eye out for that.

To find out more about an ingredient, look it up in the EU Cosmetic Ingredients Database (ec.europa.eu/growth/sectors/cosmetics/cosing_nn).