the Patch Tester

Contact Dermatitis | Haptens | Patch Testing

Edition #4
October 2020

In this issue

Mask dermatitis in the wake of COVID-19
Teledermatology and Patch Testing
Literature Review

"The Patch Tester" is a quarterly e-magazine from Chemotechnique to the Patch Testers of the world.

We bring you the latest relevant news and developments in Patch Testing

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PURPOSE

The Patch Tester is an e-mag developed by Chemotechnique to serve as an information resource for all Patch Testers and other Dermatologists around the world; not just in Sweden, or Europe, or America, but wherever the English language can be read and understood. This first issue comprises a dozen pages with various different topics and features. Ultimately, we plan for The Patch Tester to become the forum for all of us to communicate and cooperate, in all directions.

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CHEMOTECHNIQUE DIAGNOSTICS

The trusted name in Patch Testing

Chemotechnique MB Diagnostic AB has provided Patch Test solutions since 1981 and is proudly recognised as the Trusted name in Patch Testing.

Through continuous research and development our range of products is constantly being updated, most recently with the addition of the **IQ Ultimate™** Patch Test Unit - our most advanced Patch Test Unit to date.

For more information on our whole product range, visit **www.chemotechnique.se**

Topical Haptens

Chemotechnique offers the widest range of commercially available high quality topical haptens. The 550+ different preparations are available for purchase in sets of series or as individual preparations. The composition of the various Baseline Series as well as the additional Screening Series has been carefully selected based on published studies and in close co-operation with leading contact dermatitis societies.

IQ Ultra™

Comfortable and chemically inert - **IQ Ultra™** is the reliable patch test choice. The **IQ Ultra™** is designed to take full advantage of the acclaimed IQ Chambers. The strong adhesive properties of the premium quality, hypoallergenic and latex-free carrier tape eliminates the need for extra reinforcement for patients with normal skin. The **IQ Ultra™ Patch Test Units** are most cost effective as filter papers and protective covers are not add-ons, but integrated into the design.

IQ Ultimate™

Elastic, transparent and water resistant. In addition to the features shared with the **IQ Ultra™**, **IQ Ultimate™** has the above-named added benefits as a result of the 25 micron thin carrier film. Allowing for both showers and moderate exercise - **IQ Ultimate™** is the ideal Patch Test Unit for the diagnosis of contact allergy in active patients.

Accessories

Chemotechnique provides a full range of accessories and spot tests that makes patch testing more efficent.

4 What's New in Patch Testing

North American societies update screening series

Approaching 2021, both the The North American Contact Dermatitis Group (NACDG) and the American Contact Dermatitis Society (ACDS) have announced updates of their respective baseline series. While the NACDG series is primarily used for research purposes, the ACDS encourage a broad use of their Core screening series.

While the NACDG series is intended for use by the NACDG members only, the series may be available for purchase by Chemotechnique by non-NACDG members if demand is high enough. The American Core Series will however be updated in January 2021 to reflect an update made to the ACDS Core series (89 of 90 haptens).

ACDS Core Series 2021

Position	Art no	Hapten	Position	Art no	Hapten
1	N-002B	Nickel(II)sulfate hexahydrate	47	L-001	Lavender absolute
2	A-004	Amerchol L-101	48	C-014	CINNAMAL
3	N-001	Neomycin sulfate	49	T-036	TOCOPHEROL
4	P-014B	Potassium dichromate	50	E-004	Ethyl acrylate
5	D-047B	DMDM HYDANTOIN	51	T-035B	Tea tree oil oxidized
6	Mx-07	Fragrance mix I	52	C-005	CHLORHEXIDINE DIGLUCONATE
7	C-020	COLOPHONIUM	53	P-022	Propolis
8	Mx-03A	Paraben mix	54	C-010B	CHLOROXYLENOL (PCMX)
9	M-035B	METHYLISOTHIAZOLINONE	55	H-014C	BENZOPHENONE-3
10	B-001	Peru balsam	56	T-010	Toluenesulfonamide formaldehyde resin
11	E-005	Ethylenediamine dihydrochloride	57	Mx-18	Sesquiterpene lactone mix
12	C-017A	Cobalt(II)chloride hexahydrate	58	C-019	COCAMIDE DEA
13	B-024	4-tert-Butylphenolformaldehyde resin (PTBP)	59	H-032B	Hydroperoxides of Limonene
14	E-002	Epoxy resin, Bisphenol A	60	B-027B	BENZALKONIUM CHLORIDE
15	Mx-06	Carba mix	61	H-023C	BENZOPHENONE-4
16	Mx-04	Black rubber mix	62	S-001	SODIUM BENZOATE
17	C-009A	MI/MCI	63	S-003	SORBIC ACID
18	C-007B	QUATERNIUM-15	64	Y-001	Ylang ylang oil
19	H-031B	Hydroperoxides of Linalool	65	Mx-29A	Compositae mix II
20	P-006	p-PHENYLENEDIAMINE (PPD)	66	Mx-16	Ethyleneurea, melamine formaldehyde mix
21	F-002B	FORMALDEHYDE	67	S-005	SORBITAN SESQUIOLEATE
22	Mx-05B	Mercapto mix	68	D-022	1,3-Diphenylguanidine
23	B-015B	2-BROMO-2-NITROPROPANE-1,3-DIOL	69	L-003	HYDROXYISOHEXYL 3-CYCLOHEXENE CARBOXALDEHYDE
24	Mx-01	Thiuram mix			
25	D-044C	DIAZOLIDINYL UREA	70	E-027	ETHYLHEXYLGLYCERIN
26	B-004	Benzocaine	71	T-030	Triamcinolone acetonide
27	T-031A	Tixocortol-21-pivalate	72	C-028	Clobetasol-17-propionate
28	G-005B	Gold(I)sodium thiosulfate dihydrate	73	A-029	Amidoamine
29	I-001A	IMIDAZOLIDINYL UREA	74	E-023	ETHYL CYANOACRYLATE
30	B-033A	Budesonide	75	P-025	PHENOXYETHANOL
31	H-021B	Hydrocortisone-17-butyrate	76	D-032	DISPERSE ORANGE 3
32	M-003B	2-Mercaptobenzothiazole (MBT)	77	B-005	BENZOIC ACID
33	B-032B	Bacitracin	78	D-006	BHT
34	Mx-25	Fragrance mix II	79	E-019C	ETHYLHEXYL METHOXYCINNAMATE
35	Mx-26	Disperse Blue mix 106 / 124	80	B-008B	BENZYL ALCOHOL
36	L-002B	Lidocaine	81	C-033	CETEARYL ALCOHOL
37	P-019B	PROPYLENE GLYCOL	82	n/a	Carmine
38	I-008C	IODOPROPYNYL BUTYLCARBAMATE	83	B-010B	BENZYL SALICYLATE
39	P-026	Polymyxin B sulfate	84	D-036	Disperse Yellow 3
40	C-018	COCAMIDOPROPYL BETAINE	85	J-002	Jasmine absolute
41	Mx-24	Mixed dialkyl thiourea	86	P-036	MENTHA PIPERITA OIL
42	D-053	3-(Dimethylamino)-1-propylamine	87	P-039	Pramoxine hydrochloride
43	H-010	2-Hydroxyethyl methacrylate	88	S-015	Shellac wax free
44	O-005	OLEAMIDOPROPYL DIMETHYLAMINE	89	L-004	Lauryl glycoside
45	D-065	DECYL GLUCOSIDE	90	C-008	p-CHLORO-m-CRESOL
46	M-013	Methyl methacrylate			

5 Guest Article

Teledermatology and Patch Testing

by Vincent St Aubyn Crump FRCP (UK)

A lot of discoveries and developments in medicine came about by accident: In 1895, a German developed a blistering reaction after applying a mercurial cream to treat tinea of his groin. He sought the professional opinion of Josef Jadassohn, a professor of dermatology and syphilology at the University of Bern. To "accustomise" the patient to mercury, Jadassohn applied a mercurial patch to the patient's arm. However, the patient returned a few days later with blisters at the patch site. Jadassohn instead of being deterred, saw potential. He described the observation as "Funktionelle Hautprüfung," or the functional exam/patch test, and proposed that this new technique be developed as a diagnostic tool for drug-induced reactions. This was the beginning of patch testing for diagnosing allergic contact dermatitis as we now know it.

Similarly, the Covid pandemic has forced doctors all over the world to practice medicine differently, and telemedicine has exploded in popularity out of necessity.

Teledermatology is an inevitable progression of telecommunications and digital technology, but Covid has fast-forwarded the progress by several years. Diagnoses in dermatology clinics are made a lot easier with the advent of smartphones; as when the patient consults the dermatologist, the rash has usually resolved, but most patients will bring in photos on their smartphone; which greatly facilitates a prompt diagnosis. Also, with the global burden of skin diseases and the shortage of dermatologists, especially in remote areas, these two factors make the potential benefits of teledermatology very attractive.

Is teledermatology compatible with patch testing?

In a study among 101 participants, comparing conventional, in-person (IP) grading of skin patch test reactions with store-forward Teledermatology (TD), 7070 comparison points between IP and TD final readings were analysed: Photographs of the NACDG screening series patch sites were obtained at 2 points (48-hour and final readings). Teledermatology assessments were completed by the same staff dermatologists who performed the IP readings; 48-hour and final TD photographs were viewed at weeks 4 and 8 after the IP encounter, respectively, to prevent recall bias. Staff dermatologists were blinded to IP grading results. The main outcome was percent agreement between IP grading and TD grading. 8 categories of agreement were created according to possible pairings of TD and IP reading results. The final outcome groups of “success”, “indeterminate”, and “failure” were defined based on clinical significance. Excluding negative/negative agreement, there was “success” of TD in 54% of final readings. “Indeterminate” agreement with possible clinical significance was present in 40% of final readings. There was “failure” (definite clinically significant difference) in 6% of final readings. This study concluded that Teledermatology may be a viable option for grading skin patch test reactions, particularly for clinicians who perform limited patch testing. However, a clinically significant “failure” rate of 6% was of some concern.
The main limitation in this study is the absence of real-time interaction between the patient and the dermatologist. The inability of a distant dermatologist to palpate any patch test reactions is probably the main reason for the decreased concordance with IP and TD. Therefore, if the readings were to be assessed by the nurse in the practice with the patient, but remote from the dermatologist, then the doubtful/indeterminate readings can be palpated, and the nurse questioned by the dermatologist remotely. Also, as technology and visual clarity improve, the application of teledermatology to patch testing will continue to improve.
In a letter to the Editor of “Dermatitis, Vol 31, No. 4 July/August 2020…, Patch Testing Interrupted: Virtual Patch Test Readings During the COVID-19 Pandemic, by Harriet S. Cheng from Dept Derm, Auckland District Health Board, she wrote 10 patients commenced patch testing at their tertiary public hospital with the application of patches and completion of day 2 reading. As a result of clinic closure due to the COVID pandemic, the final reading was attempted virtually, through clinical photographs taken by the patients, followed by teledermatology consultation. Patients were given instructions on how to take the photos. If a confident post-patch test diagnosis could not be made, or if there was a questionable reaction on the photographs to a potentially important allergen, a repeat patch testing was recommended. Not surprisingly, this study showed that irritant reactions were difficult to distinguish. Oblique photographs of individual patches were helpful in deciphering induration and epidermal textural changes, but it was still difficult to differentiate irritant reactions from weak positive reactions. Virtual readings were the easiest when all the patches were negative, especially when allergic contact dermatitis was not the preferred diagnosis. Overall, virtual patch test readings were deemed satisfactory in 8 of the 10 cases.
Additional study comparing virtual with face-to-face readings is suggested to further explore the role of teledermatology for patch testing.

Telemedicine Platforms offering videoimaging

Telemedicine vs Telehealth.
Telemedicine specifically covers all remote tools and processes that allow doctors to see and treat patients remotely. It only refers to clinical services.

How can agreement between the teledermatology and in-person gradings of patch test be improved?

- Do not use still images (photographs), but have a nurse doing real-time reading (with some video expertise)
- Ensure proper lighting
- Determine if there is spread between two reactions vs two positive adjacent lesions
- Ask patient to provide information about itching of all suspicious readings
- Provide tactile feedback (missing from photographs)

Whereas, telehealth, on the other hand, includes all remote clinical and non-clinical services. For example, doctors can use telehealth to attend remote administrative meetings and participate in continued medical education.

There are 2 main type of systems:

1. Hospital-bound dedicated systems (with special a/v equipment) with the patient in hospital and the doctor at home

2. Personal use systems (where the patient is at home and the doctor either in hospital or at home).

Two useful review articles of available telemedicine systems are:

- The Best Telemedicine Apps for 2019:
  https://www.healthline.com/health/best-telemedicine-iphone-android-apps

- Telemedicine Software:
  https://www.softwareadvice.com/telemedicine/

The author has personal experience from routine clinical usage of the MDLink system.

MDLink
In telemedicine, video is vital to delivering high-quality care. Doctors depend on a smooth connection and clear image to provide a proper diagnosis and accurate treatment. Through MDLink’s HIPAA-compliant mobile app and website, patients can connect with a Board-certified physician, such as a dermatologist, any time of day, from anywhere they have an internet connection. The technology behind these connections is an API that enables businesses to add real-time video into their web and native mobile applications.

MDLink utilises a high-quality, full-featured and open-source video collaboration application for telehealth, with enterprise-grade service for security and scale.

MDLink’s Programmable Video technology is secure and reliable, and is compatible with all browsers and works on both desktop and mobile platforms. There is maximum video quality for remote engagement regardless of network conditions, with support across Javascript, iOS, Android, and all major browsers.

The launch of MDLink v2.0 will soon also include remote skin examination tools available for physicians and patients.

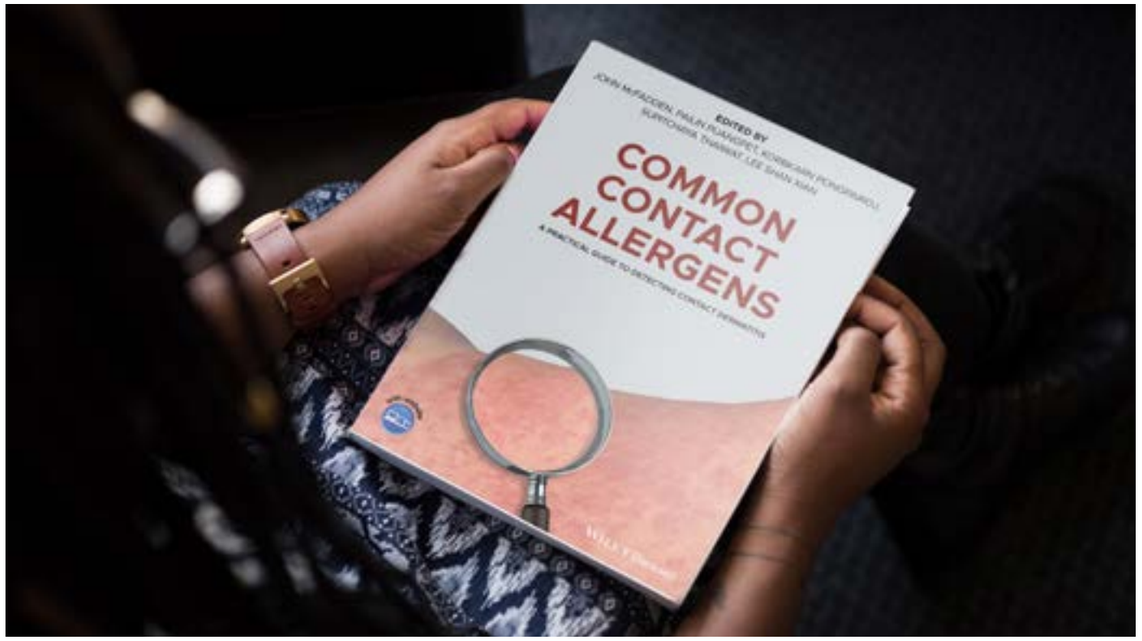
MDLink’s video technology quality scores rank 50% higher than the competition. Whether you’re on great wifi, cafe wifi, or LTE, you can set up seamless video calls in no time.

See more from MDLink Health

References
Katherine R Grey 1, Solveig L Hagen, Sara A Hylwa, Erin M Warshaw, Utility of Store and Forward Teledermatology for Skin Patch Test Readings Dermatitis 2017: 28(2): 152-161

Harriet S. Cheng Letter to the Editor, Dermatitis Vol 31. No. 4. July/August 2020

Patch Testing - an important knowledge



During the writing process of the recently published "Common Contact Allergens: A Practical Guide to Detecting Contact Dermatitis" I was asked to write a chapter outlining the role of patch test suppliers in the world of patch testing. Having proudly agreed to contribute I have been thinking of the intended readers of this book, the new generation of patch testing physicians.
During the four decades I have been part of the patch testing community I have witnessed how the field has grown from a niche activity performed by a relative few specialists to the diagnostic tool used by the many hundreds of practitioners forming the patch testing societies of today and I think that this book really is a great asset for newcomers to patch testing.
My hope and conviction is that we will see as many champions of patch testing in this new generation as we have seen in the past and that we are fast approaching a time where no case of contact allergy will remain undiagnosed due to lack of knowledge or willpower.

Yours Sincerely,

Bo Niklasson

"Common Contact Allergens: A Practical Guide to Detecting Contact Dermatitis" co-authored by Chemotechnique CEO Bo Niklasson is now available for purchase on the Wiley-Blackwell website.

An epidemic of mask-related dermatitis amongst health care workers

In recent months, in the journal Contact Dermatitis, there have been several articles on the topic of dermatitis and respiratory and related medical conditions due to the frequent and long-term use of PPE (Personal Protective Equipment) or RPE (Respiratory Protective Equipment) by healthcare workers. Some of these articles are briefly reviewed below. For further information, please read the original articles.

The current Coronavirus disease COVID-19 pandemic is highlighting the importance of occupational dermatology. Indeed, the very high prevalence of signs and symptoms of various disease conditions could even be said to be yet another detrimental side-effect of the pandemic.

Even during the previous Severe Acute Respiratory Syndrome (SARS) epidemic, several facial skin problems were reported and even respiratory complaints without skin lesions, due to the wearing of polypropylene N95 (FFP2) masks. Patch tests proved the clinical sensitisation to formaldehyde and releasers, and chemical analysis proved their presence in the masks.

Healthcare workers (HCW) caring for COVID-19 patients have to wear specific PPE and/or RPE for many hours on a daily basis and are therefore susceptible to PPE/RPE-related adverse skin reactions. But it is not only those HCWs who manage the COVID-19 patients, it is essentially all HCW in all clinical settings who are mandated to wear PPE and/or RPE for their working hours. Even beyond that, now most countries are recommending, and some are enforcing, the use of such PPE/RPE by members of the public in most situations.

The use of such PPE/RPE has led to a dramatically high incidence of skin lesions amongst primarily HCW, mainly affecting the nasal bridge, cheeks, forehead and hands. The more intrusive masks N95 (FFP3-level) masks seem to cause greater clinical issues than the lighter surgical masks, but no product seems to be free of potential risk, especially for contact allergy.

Topic of the Quarter

The Role of Occupational Dermatology in the COVID-19 outbreak

by C. Patruno et al

in **Contact Dermatitis, April 2020, Vol. 83, p 174.**

Up to 97% of HCWs show skin lesions not only related to the use of N95 masks but also to the use of goggles, which were implicated in most injuries. Coronavirus can exist for several hours on used PPE so double-gloving is recommended to be used to minimise the risk of contamination during glove removal. However, such occlusion of the hand skin can lead to hand dermatitis with symptoms that can vary from quite mild to debilitating, including dryness, irritation, itching and even fissuring and bleeding. The frequent use of alcohol-based hand washes can easily exacerbate any dermatitis due to the action of the alcohol to strip away protective sebum and oils naturally in the skin. The use of hand-creams and moisturisers will most probably be beneficial, but studies have shown only approx. 20% of HCW utilise these.

Surgical Mask Dermatitis caused by Formaldehyde (releasers) during the COVID-19 Pandemic

by O. Aerts et al,

in **Contact Dermatitis, April 2020, Vol. 83, p 172-173.**

A polypropylene surgical mask has been proven to contain formaldehyde and Bronopol (2-bromo-2-nitrpopropane-1,3-diol). A single individual presented to the clinic in Belgium with itchy, burning facial and periocular erythema lasting one year; also minor respiratory complaints. Due to her occupational exposure as a laboratory technician to potential sensitisers such as Bronopol and formaldehyde and MCI/MI she was patch tested with the Belgian National Series and a Cosmetic Series. She was shown to be sensitised to formaldehyde, Bronopol, MCI/MI, BIT and Thiuram Mix. She was thus diagnosed with occupational airborne allergic contact dermatitis. Both types of volatile preservatives were likely also involved in provoking the respiratory symptoms. The patient subsequently changed profession and started working as an auxiliary nurse. Five months later whilst working on a COVID-19 ward she suddenly developed a relapse of dermatitis a few hours after the prolonged use of a particular polypropylene (“plastic”) surgical mask. The manufacturer of the mask confirmed that formaldehyde and Bronopol may have been present in the mask.

Allergic Contact Dermatitis caused by Elastic Bands from FFP2 Mask

by F.J. Navarro-Trivino et al

in **Contact Dermatitis, April 2020, 83, pp 168-169.**

The elastic bands that are present in most FFP2 masks can also give rise to an allergic reaction in some HCWs and other wearers of masks. These tend to be easily visually diagnosed due to the proximity of the erythema to the location of the elastic bands. This particular patient tested positive to several chemicals associated with latex, but she was skin prick test negative to latex allergen. The rubber additives thiurams, dithiocarbamates, and mercaptobenzothiazole are the three main contact allergen groups involved in ACD to rubber bands in this type of mask.
Complete resolution of the symptoms was achieved within two weeks by changing the mask to a type with cotton cloth bands instead of the latex bands.

Topic of the Quarter

Skin Reactions of N95 Masks and Medical Masks among Healthcare Personnel: A self-report questionnaire survey in China

by Ying Zuo et al

in **Contact Dermatitis, April 2020, 83, pp 145-147.**

A cross-sectional study of HCWs in China recruited 407 participants of whom no less than 49% reported mask-related skin reactions of whom 85.4% had facial skin problems. 17.1% reported respiratory tract problems and 6.2% had eye problems.
Of the 129 participants with pre-existing Inflammatory Facial Dermatoses (IFD), 44.2% reported exacerbation, including 43.6% of acne patients, 37.5% with seborrheic dermatitis and 100% acne rosacea patients.
The most frequent symptoms were pressure related. Symptoms suggesting allergic or irritant reactions, such as itch, redness and rashes, were also prevalent.
N95 masks were associated with more reactions than medical masks.

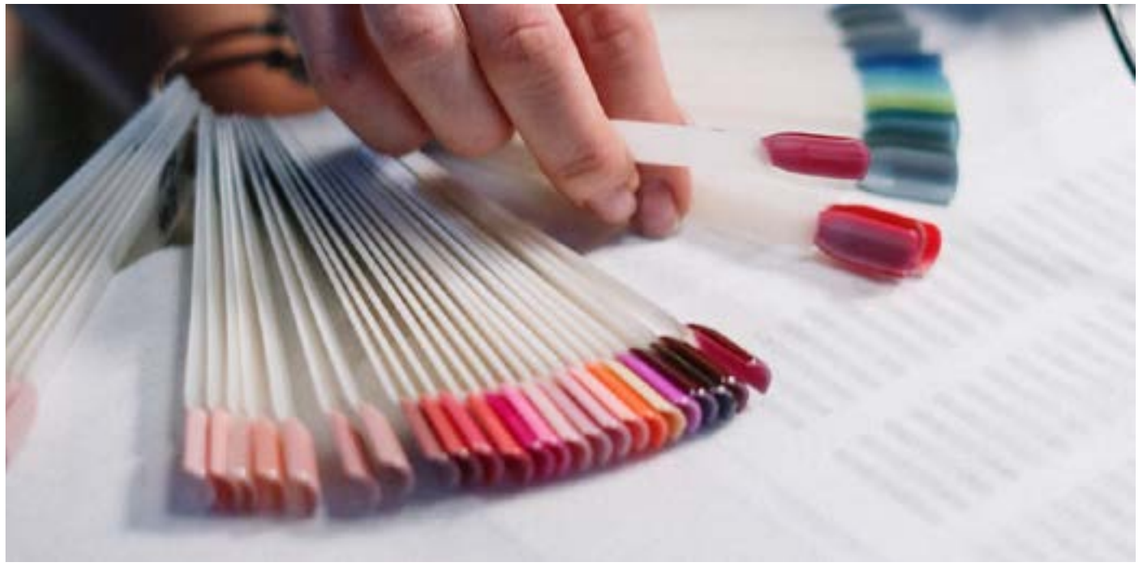
Short-term skin reactions following use of N95 Respirators and Medical Masks

by Wei Hua et al

in **Contact Dermatitis, April 2020, 83, pp 115-121.**

Hua and colleagues investigated various parameters of skin physiology and chemistry before and during use of these two different types of masks. Skin hydration, TEWL (Trans-Epidermal Water Loss), and pH increased significantly when wearing the Protective equipment. Erythema values also increased over baseline. Sebum secretion increased on the covered skin and on the uncovered skin. More adverse reactions were reported following use of the N95 mask than with the use of a medical mask, also with a higher score for discomfort and non-compliance. The overall prevalence of skin damage caused by enhanced infection prevention measures was 97.0% among first-line healthcare workers. A survey in Singapore reported 35.5% staff who used N95 respirators regularly reported adverse skin reactions, which included acne (59.6%) facial itch (51.4%) and rash (35.8%).

Although N95 respirators appeared to have a protective advantage over medical masks in laboratory setting, metanalysis showed that there were insufficient data to determine definitively whether N95 respirators are superior to surgical masks in protecting HCW against transmissible acute respiratory infections in clinical settings. It has also been reported that the incremental cost of preventing a clinical respiratory illness case with continuous use of N95 respirators, when compared to medical masks, ranged from US$490 to US$1,230.



Acrylates and methacrylates in Nail Care products

Acrylates and methacrylates are chemical derivatives that are polymerised or co-polymerised into acrylic plastics in either room temperature, with heat, or via UV radiation or visible light. They are used in a wide range of occupational settings, such as glues, adhesives, coatings, textiles, plastics, glass substitutes and nail aesthetics. Although acrylic plastic polymers normally do not cause contact allergy, their monomeric and dimeric forms are well known for their sensitising potential and for causing both occupational and non-occupational ACD. The relationship between cosmetic exposure and onset of ACD has been well documented for more than 5 decades. In recent years, however, the more widespread use of artificial nails and gel manicures has resulted in an increased frequency of sensitisation among nail technicians and their customers.

In recent months, in the journals Dermatitis and Contact Dermatitis, there have been several articles on the topic of the use of acrylates & methacrylates in nail care, causing ACD. These articles are briefly reviewed below. For further information, please read the original articles.

The Rising Incidence of Allergic Contact Dermatitis to Acrylates

by S. Gregoriou et al
in **Dermatitis, March/April 2020, Volume 31, Issue 2, Pages 140-143.**

Gregoriou and colleagues in Greece found that in their study to establish the frequency of sensitisation that no less than 74.4% of 156 nail technicians or their customers patch tested positive to one or more acrylates or methacrylates. Of their 116 positive cases, 88.5% were occupationally exposed (i.e. nail technicians) and 11.5% were consumers. In addition, they found an increase in sensitisation over a 10-year period, from 55% in 2009-2013 to 79% in 2014 to 2018. The most common sensitiser was found to be ethylene glycol dimethacrylate, which was found to be the culprit in 72.4% of nail technicians and 97.4% amongst their customers. The second most frequent sensitiser was found to be triethylene glycol dimethacrylate (32.7%) and third was methyl methacrylate (31.4%). Nickel sensitivity was also noted in 50.6% of cases. Interestingly, a background of atopy was identified in 25.6% of patients, which is a significantly greater incidence than in the normal population. Skin lesions mostly developed on the hands (96.8%), though ectopic lesions were also occasionally reported.

Gregoriou offers that the study has limitations including the retrospective design, and the fact that the population assessed were those seeking aid in a tertiary academic hospital. Results might differ in the general population of professionals and consumers of nail cosmetic services. However, the increased number of publications in the medical literature on acrylate/methacrylate sensitisation suggests that incidence is rapidly rising. Clinicians should have a high index of suspicion of acrylate/methacrylate ACD in patients who are either professional nail technicians or frequent users of such products and services.

CD Associated with Nail Care Products: Retrospective Analysis of NACDG Data 2001-2016

by S. Warshaw et al
in **Dermatitis, May-June 2020, 31 (3) pp 191-201.**

This 10-page article needs to be read in its entirety in order to gain the maximum information. Below are some pertinent points verbatim from the full article.

A retrospective analysis was conducted with the North American Contact Dermatitis Group data between 2001 and 2016 analysing the information provided to the CAMP database by participating practitioners using the NACDRG Screening 80 Series...

Nail care products represented a small portion of overall reactions; 2.0% of all NACDG patch–tested patients had positive patch test reactions or ICD linked to a nail care product source.
As long-lasting nail techniques become widespread, the prevalence of contact dermatitis to nail care products is expected to increase.
Of those with allergic patch test reactions attributed to a nail care product, 17.1% had reactions to allergens not on the NACDG screening series. So almost one-fifth of nail care product–associated allergens would have been missed without additional screening allergens beyond the North American Contact Dermatitis Group series, underscoring the need for testing to a broad array of allergens.
Of the 38,775 patients tested, 769 (2.0%) had:
1) more than 1 allergic patch test reaction associated with a nail care product (n = 746),
2) irritant contact dermatitis associated with a nail care product (n = 14), or
3) both (n = 9).
Primary body sites included the face (43.0%) and hands (27.6%).

The top 5 haptens were:

1.	2-Hydroxyethyl methacrylate	(H-010)	(273/482, 56.6%),
2.	Methyl methacrylate	(M-013)	(210/755, 27.8%),
3.	Ethyl acrylate	(E-004)	(190/755, 25.2%),
4.	Ethyl-2-cyanoacrylate	(E-023)	(12/175, 6.9%)
5.	Tosylamide	(T-010)	(273/755, 36.2%).

Frequency of allergy to 2-Hydroxyethyl methacrylate (P = 0.0069) and Ethyl acrylate (P = 0.0024) significantly increased over the study period, whereas allergy secondary to tosylamide significantly decreased (P < 0.0001).

Although fully cured (meth)acrylate polymers are thought to rarely cause cutaneous sensitisation, monomers have significant allergenic potential. Sensitisation occurs when polish is cured inadequately, and residual monomers contact the skin. In addition to these well-known allergens, other contact sensitisers associated with nail care products include cyanoacrylates, formaldehyde (and related compounds), phthalates, benzophenones, and epoxy resin.
As compared with the previous 7 cycles, the most recent cycle found a significant increase in overall nail care product reactions (1.9% vs 2.4%, P = 0.0171).
Most patients were female, white, and older than 40 years.
Overall occupational relevance was found in 98 of 767 patients (12.8%). The most common occupation was hairdressers/cosmetologists (includes nail technicians; 66.3%).
Nail care product allergy was most commonly associated with dermatitis involving the face (43.0%; with the eyelids affected in 14.4% of patients), hands (27.6%), or a scattered/generalised distribution (12.1%). Subgroup analysis of individuals with only tosylamide or only (meth)acrylate allergy (excluding those with both) found that patients with tosylamide allergy had significantly greater involvement of the face as compared with those with (meth)acrylate allergy (60.5% vs 33.2%, P < 0.0001), whereas those with (meth)acrylate allergy had greater involvement of the hands (35.8% vs 10.9%, P < 0.0001).

Of patients with reactions to nail care products, the percentage of patients with a positive patch test reaction to 2-HEMA (P = 0.0069) and EA (P = 0.0024) significantly increased over the study period, whereas allergy secondary to tosylamide significantly decreased (P < 0.0001.
Frequency of positive reactions to MMA did not significantly change over time (P = 0.5329).
Other allergens, including epoxy, fragrance chemicals, and formaldehyde-releasing preservatives, demonstrated frequencies less than 2%.
Artificial nails, nail polishes/coatings/gels/strengtheners, and nail adhesives were the most common sources. Artificial nails were primarily responsible for patch test reactions to 2-HEMA (69.6%), MMA (66.2%), and EA (62.6%). Most reactions to tosylamide were associated with nail polish (83.9%), whereas the primary source for ECA was nail adhesives (50.0%).
The predominant body sites of nail care product–associated dermatitis were the face (especially tosylamide) and hands (especially [meth]acrylates) or included a scattered/generalised distribution.
Nail care product allergy among the general population has previously been estimated at 1% to 3%. Summary reports of patients referred for patch testing indicate a frequency of nail care product allergy of 1% to 8%. The authors found an overall frequency of 1.9% of NACDG patch–tested patients with more than 1 allergen associated with nail care products. Although this estimate comprises a relatively small percentage of overall ACD cases, nail care product allergy may have important consequences for affected individuals, particularly if allergy occurs secondary to (meth)acrylates. In fact, sensitisation to (meth)acrylate-based nail care products has been reported to lead to adverse outcomes when patients are exposed to (meth)acrylates in other sources, such as dental work and joint prostheses.

Anecdotally, ICD is commonly associated with nail care products; certain chemicals including toluene, formaldehyde, acetone, and (meth)acrylates are recognised irritants and can cause significant damage to the nail plate and surrounding soft tissues.26 Yet ICD to nail care products represented a small portion of the overall study population (0.06% of all patch tested patients). This finding is most likely due to clinical recognition of ICD to nail care products,26,27 obviating the need for patch test referral.
Nail care product–related dermatitis was associated with occupation in 12.8% of the patients. Hairdressers/cosmetologists were affected most frequently (66.3% of occupationally relevant cases). A previous NACDG study found that 17.1% of occupationally related allergic reactions in cosmetologists (including hairdressers) were related to a nail source. Nail technicians are at high risk of sensitisation to (meth)acrylates given contact with allergenic monomers before curing, penetration through gloves, and airborne exposures. Protective gloves should be worn by sensitised beauticians. Double nitrile gloves provide up to 60 minutes of protection, but thicker, 4H plastic polymer

gloves offer complete protection. However, those gloves inhibit the fine manual dexterity required by nail technicians.

In the United States, the National Institute for Occupational Safety and Health has provided guidelines for nail technicians, and in the United Kingdom, the Cosmetic, Toiletry, and Perfumery Association has provided detailed techniques for minimising sensitisation from artificially enhanced nails. Registered nurses and dental assistants/hygienists were the second most common occupation, who may become sensitised through occupational exposures.

CD Identifying Acrylates in Medical Adhesives

by Idy Tam et al,
Letter to the editor, in **Dermatitis, July-August 2020, Volume 31, Issue 4, pp 40-42.**

This is the first study to systematically characterise acrylates in medical adhesives, which highlights the presence and prevalence of certain acrylates in medical adhesives. Sixteen different medical adhesive products were tested, which was limited by the cost and complexity of the study. This included 7 medical/surgical tapes, 4 wound closure tapes, 2 hydrocolloid dressings, 1 transparent dressing, 1 transparent dressing with non-adherent pad, and 1 bandage. Adhesives used in the medical settings consist of various acrylates and colophony derivatives, all of which are potential contact allergens. Tape allergy is reported in 0.3% of patients. ACD to a medical adhesive can often easily be mistaken for a skin infection, leading to unnecessary antibiotic use. The exact compounds in medical adhesives remain largely unknown as manufacturers often withhold such proprietary information. Clinicians and patients therefore usually resort to a trial and error process to find a tape with an adhesive to which the patient is not sensitive.

After complex chemical analysis, 15 of the 16 medical adhesive samples had at least 1 detectable acrylate, 12 adhesives contained only 1 acrylate, 1 adhesive contained 2 different acrylates and 2 adhesives contained 4 different acrylates. Five acrylates in total were detected in the 16 samples:

- Triethylene glycol dimethacrylate in 12 adhesives (68,8%)
- Dimethylaminoethyl methacrylate in 4 adhesives (25%)
- 1,6-hexandiol diacrylate in 3 adhesives (18.8%)
- Tetrahydrofurfuryl methacrylate in 2 adhesives (12.5%)
- Tetraethyleneglycol dimethacrylate in 2 adhesives (12.5%)
- Abietic acid was detected in 5 adhesive samples (31.3%)

Seven of 16 adhesives were listed as “hypoallergenic” all of which contained acrylates and/or abietic acid, which can trigger ACD. It was also found that adhesives form the same company do not contain the same acrylates.

Multiple studies have shown that testing with the following acrylates will detect more than 90% of sensitisations to acrylates:

- Methyl methacrylate
- 2-Hydroxy-ethyl methacrylate (HEMA)
- 2-Hydroxypropyl methacrylate
- Triethyleneglycol diacrylate
- Ethyleneglycol dimethacrylate

Allergic Contact Dermatitis Caused by an Acrylic Nails Kit for Domestic Use

by M.J. Sanchez-Pujol, et al
in **Dermatitis, Jul-August 2020, Vol. 31, No. 4, pp 27-28**

Sanchez-Pujol and colleagues in Alicante Spain had a patient who presented with acute eczema of the hands with secondary generalisations affecting both wrists, forearms and thighs, as well as the lateral abdomen, neck chest and lower back. The patient had purchased online a home-use acrylic nail (also known as a porcelain nail) home kit for beginners. She had previously been exposed to long-lasting nails in a nail salon, with no associated adverse reaction. She was patch tested with the Spanish Baseline Series and an Acrylate/Artificial Nails Series from Chemotechnique. The test yielded positive reactions to several of the substances: 2-hydroxyethyl acrylate, ethylene glycol dimethacrylate, HEMA, and hydroxypropyl methacrylate. The product label showed that HEMA was present in the composition of the of the acrylic liquid.

These home use kits are potentially even more dangerous than the exposure to nail technicians, because they neither require formation nor include preventive measures in their packages.

Acrylates were named as contact allergen of the year in 2012 by the ACDS and were included in the ACDS Baseline Series in 2017. Sensitisation to acrylates has increased in recent years with HEMA being one of the most sensitising monomers. Methyl methacrylate has been banned in nail cosmetics in some states of the USA but many acrylates are still available in nail home-use kits, and there is therefore a need for stronger legislation to protect consumers from these highly sensitising allergens.

Palmar Eczema from Secondary 2-Hydroxyethyl Methacrylate Exposure – The Artificial Nail Grip Sign

by E. W. Kjeldsen, et al
in **Dermatitis, July-August 2020, Vol. 31, Issue 4, pp 26-27.**

Kjeldsen and colleagues in Denmark had a patient who presented with nail grip eczema caused by HEMA (2-hydroxyethyl methacrylate) due to her work as a florist that involved the gripping of plant stems and the consequent contact of the palm with her artificial nails.

Originally suspecting a sensitivity to the flowers, such as chrysanthemums, the clinicians were surprised by the positive PT reaction to HEMA. Subsequent testing with more related compounds showed sensitivity to also ethyl acrylate, butyl acrylate, 2-2-hydroxyethyl acrylate, hydroxypropyl methacrylate, ethylene glycol dimethacrylate, tetraethylene glycol diacrylate and tetrahydrofurfuryl methacrylate. So, a wide range of acrylates and methacrylates. Signs and symptoms of the hand eczema disappeared when exposure to the acrylates and methacrylates was removed.

Although other studies have shown distal signs and symptoms of sensitisation, with this patient the eczema was only very localised, where there was direct contact.

Dear Reader, if you have any particular article or book or website that you would like to have reviewed in a future issue of The Patch Tester, then please contact the Editor here.

Pandemic Haptens

Many physicians are now faced with the question of what haptens to test with when investigating contact dermatitis caused by protective gear now that COVID-19 has changed the working attire of many people, health care workers and citizens subject to COVID restrictions alike. The table below is derived from **Safety equipment: When protection becomes a problem** by E. Warshaw, et al in **Contact Dermatitis, February 2019.**

Possible haptens in face masks (N95/FFP3), scrubs , face shields, gloves and scrubs.

Name	Art no
Formaldehyde	F-002
2-BROMO-2-NITROPROPANE-1,3-DIOL	B-015
Thiuram mix	Mx-01
Mercapto mix	Mx-05
Carba mix	Mx-06
Mixed dialkyl thiourea	Mx-24
Nickel sulfate	N-002
PPD	P-006
Black rubber mix	Mx-04
Cobalt chloride	C-017
Mercaptobenzothiazole	M-003
4-tert-Butylphenol formaldehyde resin	B-024
Potassium dichromate	P-014
Colophonium	C-020
Bisphenol A epoxy resin	B-013
Diphenylguanidine	D-022
Iodopropynyl butylcarbamate	I-008
Ethyl acrylate	E-004

Old Contact Allergens and New Dermatitis: Pole dancing dermatitis

by A. Gutierrez Gonzalez, et al

in **Contact Dermatitis, Volume 82, Issue 6, February 2020, pages 411-412.**

A 35-year-old woman presented with pruritic erythematous and desquamative dermatitis on her abdomen, inner arms, legs and feet. She worked in a nursing home. It was not related to medications, food, hygiene or cosmetic products. Topical antihistamines and corticosteroids helped but symptoms reoccurred upon treatment withdrawal.

The clinical history noted that the patient used a gym for pole dancing exercise.
Patch tests were also done using the “Dry Hands” product that was utilised by the patient in her exercise.

Patch tests were positive for only nickel, with vesicles and infiltration.

A dimethylglyoxime test on the pole was positive for nickel.
The poles were replaced, and the symptoms subsided, though reappeared during long sessions.
It is hypothesised that wear on the surface of the pole, due to friction, allows greater exposure of the nickel component in the metal to the patient’s skin. However, that could be simply increased contact means greater interaction of the nickel component with the skin, or a lengthy session leads to increased sweating or even skin wear and tear, leading to increased reaction with the nickel.

So although nickel is a very common allergen and you thought you knew all the potential sources of the metal causing dermatitis, you now need to add poles used for pole dancing to the list.

Can Patch Testing with MCI/MI be optimised using a new diagnostic mix; Swedish CDRG

by M. Engfeldt et al

in **Contact Dermatitis, May 2020, Volume 82, Issue 5, pp 283 - 289.**

In the early 1980s a preservative called Kathon CG was introduced on the market. It contained a mixture of methylchloroisothiazolinone (MCI) and methylisothiazolinone (MI). Due to the conditions present during synthesis of this preservative, MCI was formed and found at a three times higher concentration than MI.

MCI/MI in the ratio 3:1 has been patch tested in Sweden in the concentration 0.02% aq. since the mid-1980s.

It has been shown to be an extreme sensitiser in both humans and animals.

In the early 2000s, MI by itself was introduced as a preservative in industrial products. The first cases of occupational allergic contact dermatitis from MI in industrial products were reported in 2004.

In 2005, MI by itself was allowed as a preservative in cosmetics. Because MI is a weaker preservative and also a less potent sensitiser than MCI, a higher concentration was allowed in cosmetics compared to MCI/MI. However, the use of MI became widespread and it was soon evident that the allowed concentration indeed did cause sensitisation, as an unprecedented rise in the contact sensitisation frequencies to MCI/MI and MI was seen, for example, in Europe.

In 2012, the Swedish Contact Dermatitis Research Groups (SCDRG) conducted a study in which MI 0.2% aq. was tested in parallel with MCI/MI 0.02% aq. It showed that by only testing with MCI/MI at 0.02% there is a risk that those with a weak MI sensitization are missed because the concentration of MI is too low in the test preparation (50 ppm). The SCDRG concluded that because several repeated open application studies had shown that also patients with weak allergies risk developing dermatitis if exposed under prolonged conditions, it is necessary to test with MI separately, and thus SCDRG recommended that MI 0.2% aq. (60 µg/cm2) should be included in the Swedish Baseline Series from January 2014.

This is the same concentration/dose as the one recommended in the European Baseline Series. Thereby, at present there are two patch-test preparations containing MI in the Swedish and European Baseline Series.

The aim of the present study was to explore the possibility of patch testing with an MCI/MI mix with an MI concentration high enough to detect also those with a weak MI sensitisation. Therefore, only one preparation would be needed in the screening of MCI and MI sensitisation, which would save space on the patient's back, and thus enable a wider screening of other contact allergens.

The study was to determine if an aqueous patch test preparation with MCI and MI in a mix of 0.015% and 0.2%, respectively, detects more contact allergies than the commonly used preparations of MCI/MI in 0.02% aq. and MI in 0.2% aq.

A total of 1555 patients with dermatitis in five Swedish dermatology departments were tested consecutively with MCI/MI 0.215% aq., MCI/MI 0.02% aq., and MI 0.2% aq.

The share of contact allergy to MCI/MI 0.215% aq., MCI/MI 0.02% aq., and MI 0.2% aq. varied in the test centres between 7.9% and 25.9%, 3.2% and 10.3%, and 5.8% and 12.3%, respectively.

MCI/MI 0.215% aq. detected significantly more patch-test positive individuals than both MCI/MI 0.02% aq. ($P < .001$) and MI 0.2% aq. ($P < .001$), as well as either one of MCI/MI and MI ($P < .001$).

In the patients only reacting to MCI/MI 0.215% aq., 57.7% were recorded as having a dermatitis that was explained or aggravated by exposure to either MCI/MI or MI.

The results speak in favour of replacing the preparations MCI/MI 0.02% aq. and MI 0.2% aq. with MCI/MI 0.215% aq. as the screening substance in the Swedish Baseline Series. This has been implemented in 2020. Now is perhaps the time for the European Baseline Series ot be similarly updated for MCI/MI.

Wells Syndrome (Eosinophilic Cellulitis) following vaccination: Two paediatric cases with positive patch tests to aluminium salts.

by C. Fournier, et al

in **Contact Dermatitis, Volume 82, Issue 6, February 2020, pages 401-402.**

With the ongoing COVID-19 pandemic and the imminent global-scale utilisation of various vaccines against the virus, then it is appropriate to be reminded of one of the potential problems of vaccines. In this case, the issue is with the aluminium salts that are contained in three thoroughly researched, documented and approved, and very commonly prescribed, vaccines for paediatric patients; Guardasil, Cervarix and Recombinax HB.

Both paediatric patients presented with a previous history of atopic dermatitis, and one of them with rhinitis.

In the 10-year-old male (Patient 1) the eruption appeared 12 days after he had received Hep B and HPV vaccines (Recombivax HB and Cervarix). Lab tests revealed eosinophilia. Biopsy showed dermal and subcutaneous lympho-eosinophilic infiltrate with rare flame figures suggesting Wells Syndrome. Prednisone treatment tapered over 6 weeks was successful.

The 12-year-old female (Patient 2) experienced eruption 14 days after receiving her second injection of HPV (Gardasil 9). There was also a reaction after the first injection. She too resolved with 2-week tapered prednisolone.

Both patients were patch tested for possible haptens contained in their vaccines.

Patient 1 was patch tested to aluminium chloride hexahydrate, aluminium hydroxide and formaldehyde. He tested positive at D4 with a ++ reaction to aluminium hydroxide.
Patient 2 was tested to Polysorbate 80, aluminium chloride hexahydrate and aluminium hydroxide. Reading at D4 revealed a ++ reaction to aluminium chloride hexahydrate.

In both patients, they had previously received vaccine injections containing the culprit haptens but without any cutaneous reaction.

Recombivax HB	Cervarix	Gardasil 9
Aluminium hydroxy phosphate	Aluminium hydroxide	Aluminium hydroxyphosphate sulfate
Sodium borate	Sodium dihydrogen phosphate	Sodium borate
Formaldehyde		L-Histidine
Sodium chloride	Sodium chloride	Polysorbate 80

The conclusion that can be drawn from these two cases may be that no previous reaction is no guarantee of no reaction with subsequent injections containing the same potential hapten(s).

Editors Note:
It should also be noted that the great majority of inhalant allergen immunotherapy vaccines that are administered by injection also contain the same aluminium salts.

These salts convey on the vaccine a depot effect whereby the active ingredients that stimulate the patient's immune system are adsorbed to the aluminium hydroxide and are released slowly over a period of time, instead of a bolus-type injection where all the active ingredients of a vaccine are presented immediately to the patients immune system.
Such a bolus-type injection may either overwhelm the patient's immune system or may invoke an adverse reaction (probably IgE-mediated) that is experienced as local inflammation, or distal inflammation, and ultimately possibly even anaphylaxis. There is much research ongoing into the use of alternative adjuvants such as mannose or calcium phosphate, etc, that act as a depot for the active ingredients and/or aid the presentation of the active ingredients to the patient's immune system without causing adverse reactions of their own.

Food Allergens in Skin Care Products Marketed for Children

by I. Adomaite, et al
in **Contact Dermatitis, June 2020, Volume 83, pp 271 - 276.**

Another article that illustrates the close links between contact allergy of classical Dermatology and Type I Gell & Coombs allergy practiced by Specialist Allergists.

The application of preparations containing classical food allergens such as milk, egg, soy peanuts, sesame and others can cause percutaneous sensitisation and subsequently elicit allergic symptoms in such sensitised children.

However, the occurrence and prevalence of such food allergens in cosmetic products used by children is not documented.

This study analysed this occurrence of such food allergens in skin care products used by children, and correlated it with claims of “natural” or “ecological” and also correlated with the price of the products. The investigators reviewed 276 skincare products for the presence of the classical food allergens milk, eggs, wheat, soy, oats, tree nuts, almonds, peanuts and sesame.

The dual allergen exposure hypothesis has been a pioneering theory that has transformed the understanding of food allergy pathogenesis. Previously, food allergen sensitisation was thought to occur solely through the digestive tract, and the primary means of preventing food allergy was the elimination of such sensitising food allergens from the paediatric diet.

The dual-allergen exposure hypothesis suggests that low levels of an allergen can cause percutaneous sensitisation, and early food introduction promotes food tolerance. Several studies have supported this hypothesis and found that percutaneous sensitisation can occur with allergen-to-skin contact. The use of food allergen-containing skincare products, subsequent sensitisation, and allergic reactions, have been reported in both children and adults in several studies.

The European Union regulations on cosmetic products do not require that potential food allergens are listed in the ingredients of cosmetic products.

The range of products comprised rinse-off products (shampoos, body washes, etc.), as well as creams and lotions, cosmetic oils, wet wipes, and baby powders.

The study found that over one-third (39.1%) of cosmetic products marketed for children in Lithuania contained at least one common food allergen. The most frequent food allergens found were almonds, wheat, and soy.

Case reports of children developing percutaneous sensitisation to food allergens and allergic reactions on account of cosmetic products describe alarming symptoms. In some cases, children experienced life-threatening allergic reactions. The scarcity of cases could be partially due to the limited recognition of skincare as an eliciting factor of food allergy, especially in milder cases. New-onset food allergy to previously orally tolerated foods, elicited by food allergen-containing skincare, was reported in adults to various foods, including goat’s milk, oats, egg, and soy. In most cases, patients

had atopic dermatitis, yet in other cases, no atopic diathesis was observed. These findings suggest that the application of skincare products containing food allergens may be hazardous to a consumer of various ages irrespective of their atopic status.

The investigators made many other interesting observations, too numerous for the scope of this review article. The reader is encouraged to access the full article for maximum information on this very interesting topic.

A Case report of Oral Lichenoid Lesions. Are Patch Tests Necessary ??

by F. J. Navarro-Trivino et al
in **Contact Dermatitis, Volume 83, Issue 1, March 2020, pp 59-61.**

A single case of oral lichenoid lesions in a patient with dental fillings and unresolved symptoms despite years of steroid treatment lead the authors to investigate the potential cause of the symptoms amongst the metal amalgams and materials used in teeth fillings by this patient.

Patch tests were performed with the European Comprehensive Baseline Series, a Dental Screening Series and a Metal Series, all from Chemotechnique. Patch tests were read on D2 and D4 and interpreted in line with criteria of the ICDRG.
The patient showed a positive PT reaction to mercury 0.5% pet, but negative to silver nitrate, copper, tin, zinc, etc.

ACD caused by mercury present in the amalgam fillings was diagnosed. The fillings were no less than 20 years old, though the clinical symptoms were only severe the past 3 years.
The amalgams were replaced with other fillings without mercury, and no other treatment, and by three months the symptoms had completely resolved.

Regarding associated symptoms, pain and burning sensation are characteristic, which worsens with some food and spices, although some patients remain asymptomatic. Lesions on the tongue appear typical for suspected contact allergy due to dental implants.
A complete medical history is crucial, including mandatory questions about previous dental implants (including tooth fillings), both recently or historically.

In summary the role of patch tests is very important for a complete study of such patients, who are often diagnosed with oral lichen planus without any response to prescribed treatments such as steroids. It is necessary to know the composition of the implants/fillings if that is possible. It is also necessary to test for the entire dental series in order to ensure no problem components are missed in an abbreviated test panel.

Amongst the most commonly reported allergens., mercury is the main culprit, followed by copper. Conventional amalgam is low in copper and non-gamma II amalgam is high in copper, and these are the two main types of amalgam used, which are regulated by ISO standards.

After patch testing and the identification of the problem allergens, the patient must be referred to the dentist to change the dental material. Amalgam can be replaced by gold composites, glass ionomer cement, porcelain, metal-ceramic crowns, or titanium. This replacement of problem allergens can be an expensive exercise for the patient, and so the confirmatory evidence from positive and negative patch tests should be a mandatory prerequisite.

Several published studies have shown that such action is enough to produce a complete resolution of the lichenoid lesions in up to 97.1% of the cases.

Website Review

You are invited to notify us If there is a website you would like to have reviewed in a future issue of The Patch Tester or if there is a society or other website that you would like to have included in these lists.

Dermatology Society Websites

ILDS:	*International League of Dermatology Societies*	www.ilds.org
ICDRG:	*International Contact Dermatitis Research Group*	www.icdrg.org
EADV:	*European Academy of Dermatology & Venerology*	www.eadv.org
ESCD:	*European Society of Contact Dermatitis*	www.escd.org
ACDS:	*American Contact Dermatitis Society*	www.contactderm.org
APEODS:	*Asia-Pacific Envmntl & Occupational Dermatology Society*	www.apeods.org
EAACI SAM:	*European Academy of Allergy & Clinical Immunology*	www.eaaci.org
BAD:	*British Association of Dermatology*	www.badannualmeeting.co.uk
AAD:	*American Academy of Dermatology*	www.aad.org
PDA:	*Pacific Dermatololgic Association*	www.pacificderm.org
APD:	*Association of Dermatology Professors*	www.dermatologyprofessors.org
NDA:	*Nordic Dermatology Association*	www.nordicdermatology.com
GDA:	*German Dermatology Society*	www.derma.de
FSA:	*French Society of Dermatology*	www.sfdermato.org
CDA:	*Caribbean Dermatology Association*	www.caribbeanderm.org
ACD:	*Australian College of Dermatologists*	www.dermcoll.edu.au
NZDS:	*New Zealand Dermatology Society*	www.nzdsi.org
DNA:	*Dermatology Nurses Association*	www.dnanurse.org
DermNET NZ:	*Dermatology Infomation Resource for Patients*	www.dermnetnz.org

Dermatology Meeting Websites

www.eadv.org
www.aad.org
www.dermatologymeeting.com
www.asiaderma.sg
www.dubaiderma.com
www.cairoderma.com

NZ Dermatology Society

www.nzdsi.org au

The NZ authority on Medical Dermatology, Surgical Dermatology and Cosmetic Dermatology. The New Zealand Dermatology Society website at www.nzdsi.org is the professionals resource, though it can also be used by the public to identify and find a Dermatologist within New Zealand using a map with the contact details of individual Dermatologists.

Dermatology was first recognised as a specialty in New Zealand in 1948. Then, the General Secretary of the British Medical Association wrote to Dr Alison, Dermatologist in New Zealand, with agreement to proceed with the formation of a Dermatological Society in New Zealand. From that time, the BMA was to become closely associated with the fledgling NZ Dermatology Society.
The inaugural meeting of the Dermatology Society in New Zealand was held in the BMA rooms in Wellington in 1948. Dr P E Alison was elected President and Dr R G Park elected Treasurer. The annual subscription fee was set at two guineas.
The initial membership of the Society was eight members, and now in 2020 there are more than 70 Dermatologist members of the Society, doubling in the past decade.
In 1954 the NZDSI was accepted for membership to the British Association of Dermatologists.
In 1959 discussions were held over the formation of a combined Australian and New Zealand College of Dermatologists. A regular yearly clinical meeting was undertaken and in 1964 a merger was entertained between the newly formed Australasian College of Dermatologists and the New Zealand Dermatological Society. For various reasons the merger did not occur but there has been ongoing close contact, with clinical coordination and combined meetings ever since.
In addition, yearly Scientific meetings of the NZDS continue to be held.

In the last five years there has been considerable sub-specialisation, particularly in the surgical field with the addition of Mohs Micrographic Surgery Group and Advanced Dermatologic Surgery Group (ADSG), encompassing cosmetic and liposuction techniques.

Dermnet NZ

www.dermnetnz.org

Supported by the New Zealand Dermatological Society, the website DermNet NZ was launched in 1996 by Dr Amanda Oakley and a small team of New Zealand dermatologists.
Not to be confused with www.dermnet.com which is a skin disease atlas.
Their mission is to make authoritative information about the skin available to anyone in the world with an internet connection.
DermNet is supported by, and contributed to, by New Zealand dermatologists on behalf of the New Zealand Dermatological Society Incorporated.
Patient information sheets were an early information resource for patients. Nowadays Information Cards are available in packs for purchase by Dermatologists to give to their patients.
There is a very extensive index of conditions, supported by numerous photographs and descriptions, to aid the patient to make their own diagnosis.
Since the modest beginnings, DermNet NZ has grown into a world-renowned online resource for information on skin conditions. It has been contributed to by many NZDSI members, trainees, as well as other NZ and international health professionals.
Viewers can choose from more than 2,000 topics, and can print their own Information Sheets.
Quite possibly this should be the default online resource for English-speaking patients globally.

NZ Dermatology Nurses

www.nzdermatologynurses.nz

The society's broad aims are to promote excellence in the care of people with dermatological conditions through communication, education, research and professional development. Also, to increase recognition of New Zealand dermatology nurses and nursing nationally and internationally.

The NZDN produce an impressive e-mag for members, which can be downloaded from the website.

An NZDNS conference is held yearly alongside the NZ Dermatology Specialists Conference. It is held at various venues around the country, usually in August. There are attendees from New Zealand, Australia and around the world. Unfortunately, the 2020 conference was cancelled due to the ongoing COVID pandemic, but the 2021 conference is in planning and preparation now.
The conference's aim is to gather like-minded nurses and allied health professionals for two days to share information, networking and inspiration. They welcome education, which is evidence based and peer reviewed, and encourages the improvement of dermatology nursing.
Once again, whatever New Zealand and New Zealanders get involved with, they punch far above their weight, in Dermatology as in so much else.

Contact Dermatitis / Patch Testing

~~**14th - 16th December 2020**~~
~~**ESCD Congress**~~
~~Amsterdam, Netherlands~~
~~*www.escd2020.com*~~
Cancelled

19th to 23rd March 2021
American Academy of Dermatology
San Fransisco, USA
www.aad.org

1st to 3rd September 2021
European Society for Contact Dermatitis
Amsterdam, Netherlands
www.escd2021.com

Dermatology - International

28th October to 1st November 2020
EADV Congress
~~Vienna, Austria~~
~~*www.eadvvienna2020.org*~~
Online

12th to 14th May 2021
ESPD Annual Meeting
Vienna, Austria
www.espd.info

15th to 18th September 2021
Ibero-Latin American Congress of Dermatology 2020 (CILAD)
Madrid, Spain
www.cilad2020.org

22nd to 25th September 2021
European Society for Dermatological Research
Amsterdam, Netherlands
www.esdrmeeting.org

22nd to 25th September 2021
14th World Congress of Paediatric Dermatology
Edinburgh, Scotland
www.wcpd2021.com

10th to 13th November 2021
International Congress of Dermatology
Melbourne Australia
www.icd2021.com.au