case reports
THE CARE GUIDELINES

CASE REPORT

To encourage other practitioners to consider submitting a case report for the E – News, we have restructured the format in line with recommendations from July 2014 and have left in the key guides – should you be interested just e mail info@nutri-linkltd.co. We will send you the word doc.

Case reports are profesional narratives that outline the diagnosis, treatment, and outcomes of the medical problems of one or more patients. Information from case reports can be shared for medical, scientific, or educational purposes. They provide a framework for early signals of effectiveness adverse events, and cost. Case reports and the systematically collected data from which they are written also provide feedback on clinical practice guidelines.

Case Report of a 32 year old woman whose lifelong compromised immunity resolves with targeted Nutritional Therapy.

Abstract. *Summarise the following information if relevant: (1) Rationale for this case report, (2) Presenting concerns (eg, chief complaints or symptoms, diagnoses), (3) Interventions (eg, diagnostic, preventive, prognostic, therapeutic exchange), (3) Outcomes, and (4) Main lesson(s) from this case report.*

This case explores a nutritional focused approach to the resolution of a 'weak' immune system in a 32-year-old woman, Miss A.R., who had suffered regular, frequent colds during her life. Additional health issues to address included fatigue, reduced stress tolerance, bloating and wind and poor mood as a result of being consistently ill.

Since early childhood she had been the one with consistent rhinovirus infections (Rhinoviruses (RVs) chiefly cause upper respiratory tract infections, but may also infect the lower respiratory tract. RVs are the most common cause of the common cold), and it never changed as she went through her teens and into adulthood. In her own experience, she developed colds more than anyone she has ever met.

This case report does not address any specific disease or pathological process but does address the common cold in a single individual. It is common for most people to experience a cold or 2 or 3 times a year. However, for this woman 2 or more a month for a week or longer at a time is out of the ordinary and is uncommon.

A.R. has long since engaged in good hygiene and washed her hands carefully, not bringing her hands to her face, being careful what she eats off and out of and likewise with drinks. She also consumes a relatively sound diet so it was a challenge for her to discover the reason why she had rhinovirus symptoms so often, over so many years.

Typical medical treatment for colds is usually symptom suppressive, and does not address the underlying cause.

Key Words. *Provide 3 to 8 key words that will help potential readers search for and find this case report.*

Common cold, infections, immunity, virus, viral burden, Rhinovirus, Epstein Barr Virus, HHV-6.

Introduction. *Briefly summarise the background and context of this case report.*

Miss A.R. is an intelligent and articulate woman who works in the City of London and travels to the USA mainly, but also to countries in Europe as part of her job. She is multi-lingual and grew up in Switzerland.

Since her earliest memories, she has always been prone to catching colds, and this was more evident for her than her brother or sister or classmates at school. She became known for her immune vulnerability at school. In spite of visiting her GP on more than 100 occasions, not one visit had revealed why this was happening. She had eaten well, especially in the second half of her life.

Early on she had been prescribed antibiotics but these had been ineffective so they were not used again. Since the age of 10 at the oldest, A.R. had not utilised medications for her colds.

Whenever she developed a cold, a predictable experience as this occurred at least once a month of her life, she would feel very tired, have a blocked nose, sore throat and need to sleep a lot to recover. It rarely led to any other symptoms. However, over time, A.R. had become more tired, a reflection that she was not recovering so well, and she needed to take a day off work, something she had not done for the first decade of her working life.

Along with the fatigue, she was now also prone to abdominal bloating and wind, her stress tolerance to every challenge in life became diminished, & she felt a bit depressed. It may seem like anyone with so frequent an experience of illness might become depressed by it, but up until the past few years, A.R. remained the upbeat person she had always been. She was not sure if this was her natural character or if it was based on a decision she made when young as to how she was going to act, to be in spite of her colds.

Presenting Concerns. *Describe the patient characteristics (eg, relevant demographics—age, gender, ethnicity, occupation) and their presenting concern(s) with relevant details of related past interventions.*

A.R. is a white Caucasian woman of 32 years of age, with no children. She is 5 foot 6 tall and weighs 68 kg. She is quite muscular and strong (except she feels very weak when she has a cold). Her parents are English but they both worked in Switzerland when they started their family, so she and an elder brother and younger sister grew up in the foothills of the mountains, exposed to fresh mountain air and learned three languages (English, French & German).

A.R. took regular exercise except when ill, and if she works out too long then this would precipitate a cold so she limited her workouts to 40 minutes' maximum. She found that resistance exercise suited her more than aerobic exercise because the latter would increase the incidence of illness.

A.R. works at a well-known bank supporting private clients with global investments. She has a degree in international business management and speaks five languages (the three above plus Spanish and Portuguese). She travels by plane at least 4 times a month, with at least one intercontinental round trip. Whilst she always gets a cold after a flight this has not really changed or increased the frequency of her colds. It just makes it more certain.

A.R. had managed to survive the regular colds without taking time off, but her life suffered since all she could do after a day at university or then at work was rest or sleep she had recovered. Over the past 2 years her energy was reduced more than before, she felt depressed when she had a cold but not at all when well, and as she became more bloated and windy, she felt more irritable and taxed by work and domestic life than ever before.

A.R. had taken 'hundreds' of remedies over the years such as homeopathic pills prescribed by a homeopath, nutritional supplements galore and had taken probiotics for years since she had last had antibiotics. She'd had the same blood tests time and again via her doctor which continually showed a low WBC (white blood cell) count but nothing else of clinical interest. She had never been told why the WBC might be low other than it was a reflection of her being ill.

A.R. had a section in her bookshelf on how to support and boost her immunity and she ate a sound diet, high in wholefoods providing an array of phytonutrients, vitamins, minerals, antioxidants, fibres as well as a balance of macro-nutrients. She had avoided dairy products since 8 or 9 years of age, and her mother was always trying something new to see if she could prevent her middle child from becoming ill. Her siblings did not experience the same degree of illness.

A.R. had no mercury fillings having had her 2 removed over 10 years ago. This had made no difference to her immune competence. The severity of the colds was manageable: on a scale of 1 to 10 with 10 being the worst cold imaginable she rated herself at a 5 or 6 but it was the co-symptoms that troubled her now more than before.

Her personal goals established at the first consultation were as follows:

1. To have a strong immunity and not catch colds
2. To have more energy
3. To be in good mood consistently
4. To improve stress tolerance
5. To be free of bloating and wind
6. To find out why I catch so many colds

Clinical Findings. *Describe: (1) the medical, family, and psychosocial history including lifestyle and genetic information; (2) pertinent co-morbidities and relevant interventions (eg, self-care, other therapies); and (3) the physical examination (PE) focused on the pertinent findings including results from testing.*

A.R.'s health record with her GPs only revealed that she had visited frequently to see if there was a solution. However, it has been a long time since she had seen a medical doctor for her immunity due to the lack of results from prior recommendations, which had for example been antibiotics or paracetamol.

Over the years, A.R. had seen numerous health practitioners in a variety of countries and had taken lots of different potions and pills. Sometimes, these remedies had proven beneficial but then the benefits wore off. She had seriously wondered if it was in her mind and so she had seen a psychotherapist for a short time.

There was no family history of colds or other immune compromised conditions and frankly there was no obvious explanation for why she should be contract so many colds. She was a positive person, a high achiever, but she also knew how to relax and at times she really needed to. She was accomplished at several sports but had never been able to take the sports further because her colds would interrupt training. She had a good sense of humour and mostly presented with a smile.

She had a strong physique, perhaps like a skater or a cyclist who lifts weights. There was nothing to give away the fact that she was ill so often. She was also quite tanned when I first met her, since she had taken a holiday in the USA before returning from her most recent trip. We were both aware of the importance of vitamin D and she had consistently taken this nutrient as a supplement when not in the sun.

She showed me copies of blood tests that dated back 10 years, which showed the analytes of haematology and complete blood count (CBC). The only consistent abnormal, out of the range marker was that her WBC count was low due to the neutrophils being low and the neutrophil count being consistently at about 30 in a reference range of 40-60 (expressed as a percentage of the total WBCs).

No other investigations had been conducted, although she had not pressed for any over the past decade.

Timeline. *Create a timeline that includes specific dates and times (table, figure, or graphic).*

In 1989, aged just 5, it was noticed that A.R. had more colds than others. More than her brother and sister and more than her new class mates. Attending school was the time when it became much more obvious, although in truth she had more colds even before then but her mother was too busy with bringing up and looking after 3 young children at that time to be able to stand back and take an objective view.

In 1991, A.R. was prescribed antibiotics twice but they had no impact, either in terms of improving her symptoms or making them worse or making colds more frequent than they had been before.

In 1992, antibiotics were prescribed once again and then, as far as A.R. is aware and after conversation with her mother, they were not taken again.

In 1993, aged 9, all dairy products were stopped and she had not eaten them since except on very rare occasions. This was a challenge at the time because of the widespread availability and cultural dominance of cheeses, yogurts and milks in Switzerland.

In 2000, still suffering from a monthly cold or two, A.R. moved to the UK. For her parents it was a move back to the UK, but for the 3 children it was their first time. Both sets of grandparents were quite close by. She performed well at school and in her exams in spite of her colds. No other ailments afflicted A.R. At school, she became known as the girl who kept on needing a sick note to be off games, although she loved PE and sports and was very good at most of them.

In 2002, she took a gap year and travelled and she told me that she did not really feel any different wherever she went in spite of very different environments and diet in South America, for example.

In 2003, A.R. attended university and four years later she graduated with a good degree. She had to forego being in the university teams due to her inability to commit to regular training times. She nonetheless had a great experience at Uni she told me and she remained positive and a happy person.

In 2008 she started her first job and loved the travel and the ability to use her languages and she earned a relatively good living for someone her age. Her persistent colds meant that her social life suffered rather than her work.

From 2008 onwards she had visited health practitioners seeking some answers but the positive outcome of some interventions always wore off.

In 2014, aged 30, A.R. began to feel the impact of her frequent illness (the colds) as it diminished her energy, increased her sensitivity to stresses of all kinds, and made her feel ‘blue’ when she had colds and she also started to get regular bloating and wind. This would come on after lunch in particular and then worsen until she

had a bowel motion at night or if not at night then the next morning. Sometimes she could eat a very similar diet and the symptoms would vary a lot. She wondered if wheat was a trigger for this and had stopped wheat, but not gluten for some months prior to seeing me.

In 2016 she was more and more affected by the fatigue and was not recovering from colds as she had done in the past. She was therefore seeking a plan to resolve what was going on. One of her bosses had seen me as a patient and referred her to me.

Diagnostic Focus and Assessment. *Provide an assessment of the (1) diagnostic methods (eg, PE, laboratory testing, imaging, questionnaires, referral); (2) diagnostic challenges (eg, financial, patient availability, cultural); (3) diagnostic reasoning including other diagnoses considered, and (4) prognostic characteristics (eg, staging) where applicable*.

In addition to having the evidence of the blood tests going back in time, I recommended a viral antibody screen for Epstein Barr Virus and HHV-6 (Human Herpes Virus 6). The results came back as positive for the IgG responses to EBV and HHV-6 and the Elispot LTT (lymphocyte transformation test). The values were some way above the reference range, as follows:

Analyte	Result & (reference range)
EBV-CA-IgG (ELISA)	**17.90** (<0.80)
EBV-EBNA-IgG (ELISA)	**29.10** (<0.80)
EBV-CA-IgM (ELISA)	0.30 (<0.80)
EBV LTT (lytic)	**13** (<2)
EBV LTT (latent)	**24** (<2)
HHV-6 IgG	**1:64** (< 1:16)
HHV-6 IgM	<1:16 (<1:16)

In my experience of having ordered over a hundred of these lab tests, the raised antibody and LTT counts were a reflection of a viral burden that could be responsible for A.R.'s weakened immunity, and could explain the low neutrophil counts in her blood tests.

As a result of these test results, which provided substance to a theory behind the infections and the low WBCs and neutrophils, and reversing these results into her case history, I decided to engage in a targeted anti-viral approach. This involved the use of therapeutic supplements and a minor change in A.R.'s diet to ensure that she supported he body with sufficient protein; she was inclined to have a green smoothie in the morning that provided at most 6-7 gms of protein whereas she needed more like 21-25 gms. During illness, the requirement for protein increases.

Therapeutic Focus and Assessment. *Describe: (1) the type(s) of intervention (eg, preventive, pharmacologic, surgical, lifestyle, self-care) and (2) the administration and intensity of the intervention (eg, dosage, strength, duration, frequency).*

I explained to A.R. that the low neutrophils suggested a chronic viral infection and that would be my first point of intervention. If the test were to reflect a recent infection, then the neutrophils of other WBCs would have been higher than the reference range, not lower. She asked me why she had not been told this before, and I replied by asking her to ask the doctors whom she had met and discussed the results with. Combine this with her case history and the test results, and I told A.R. that it was a reasonable premise, in my opinion.

So, the focus was on inhibiting the viral burden and supporting A.R.'s innate and adaptive immunity.

The most straightforward way to increase the protein for A.R. in the morning was to add a protein powder to her green smoothie, and I recommended rotating a pea protein then a hemp protein and then a soy (non-GMO) protein. There were also changes from her vegetarian lunches or dinners for A.R. and she incorporated a fish or an organic meat or chicken into these meals. She normally ate a high biological value animal protein every day, but now it was twice a day. Naturally, I recommended her to maintain her high intake of fresh vegetables and especially cruciferous ones.

We discussed her daily lifestyle and hygiene and there agreed was nothing I could add for her to do.

The specific supplements in her first programme were as follows:

First Supplement Programme	
Humic Acid Cell Membrane Active (ARG)	1 with breakfast & dinner
Intenzyme Forte (BRC)	5 tabs on empty stomach mid-morning & mid afternoon
BioImmunozyme Forte (BRC)	1 with each meal
S. Boulardii (ARG)	1 with each meal

I included proteolytic enzymes in the first phase because I have found that they can help to break down proteins and peptides (particulates of naturally occurring biofilm like assemblies) that may shield viruses from the immune system, in addition to helping to reduce systemic inflammation.

We met two months later to review her progress. A.R. had travelled as usual and led a very similar lifestyle to before. She successfully implemented the increased protein intake, readily finding a protein powder when she was in the USA so she did not have to carry it there.

She had been so extremely busy, however, that her diet was not as robust as it had been. She had been working 14 hour days sometimes, and she and her co-workers simply ate what was brought up to them in the office.

A.R. had slept on average 5 to 6 hours a night. She had not exercised much at all. She had felt on the verge of collapsing, and had told her boss about this. The company doctor had taken a blood test from her and the results were all completely normal including thyroid hormones, but A.R. did not have a copy of the results to show me.

A.R. had been ill just as often as she ever had been and was not surprised by this due to the intensive work schedule.

She had experienced bloating most days, and wind most evenings at least. She had felt depressed when she had become ill, and more tired than she had ever been. She wondered if she could cope with the job requirements.

I decided to alter the supplements and include 2 specific formulae which support resilience and energy.

Second Supplement Programme	
Humic Acid Cell Membrane Active (ARG)	1 with breakfast & dinner

BioImmunozyme Forte (BRC)	1 with each meal
BioDoph-7 Plus (BRC)	2 with breakfast & dinner
Bio-3B-G (BRC)	3 with each meal
Stamina Caps (ARG)	2 with breakfast & lunch, 2 at 6 pm

A.R. told me that the crazy time had come to an end and that she would be able to get more sleep. I also explained that it could take some months and up to a year or more to beneficially inhibit the HHV-6 capability for expansion.

We agreed to meet in a further 2 months. The reason for the relatively lengthy time period between appointments was that she was often away but also because this was a longer-haul programme and she was self-motivated and knew what she had to do. If this had been a patient who had needed more direct contact then the appointments would have been closer in time.

As it turned out we met 2 ½ months later.

A.R. told me that all of her symptoms were linked; they were all very much connected. She now had certainty about this because she had fewer colds than usual in that time period. Instead of 2 colds a month on average, and during the time before that she had been having a cold a week, so it had seemed like a non-stop illness, she was now having just 1 cold a month. This was a breakthrough. She had clearly noticed that when she was not ill, she had more energy, she had better mood, was less bloated and had less wind.

She felt like she was on track, although she was still yet to be convinced that this would be a lasting intervention because other interventions when she swallowed pills and potions had not been able to maintain their benefits beyond a month or two.

A.R. had been able to take some exercise and felt a little fitter and stronger than before. She had been able to revert back to her healthiest food intake and felt better for that.

I admit that I was pleasantly surprised by the definite reduction in frequency of her colds given her lifestyle. I adjusted her supplement programme to include a digestive enzyme and I asked her to finish one of the two resilience supplements in order to help make the programme more manageable but at the same time, as focused as possible. When enzymes are taken it helps the pancreas to make its own, over time, because the enzymes can effectively be recycled and support daily production. I suspected that when she was tired, that the capacity to make digestive enzymes was reduced and this contributed to her bloating and wind.

Third Supplement Programme	
Humic Acid Cell Membrane Active (ARG)	1 with breakfast & dinner
S. Boulardii (ARG)	1 with breakfast & dinner
Stamina Caps (ARG)	2 with breakfast & lunch, 2 at 6 pm
Full Spectrum Digest (ARG)	1 with each meal (with food only).

We met two months after she started the third programme. A.R. came in with her usual smile and looked well, just as she had done when we first met. However, then she had been suffering a cold every few weeks and somehow managing to hide the way it affected her and it left her fatigued. Now, A.R. told me that she had only had a cold once since we last met. It was a mini miracle, and beyond the threshold of time at which the other interventions had stopped working.

As a result of her now-much-less-frequent illness, her energy was soaring compared to what it had been. She was in much better mood and was not depressed at all, except when she had the cold but, knowing as she did that they were becoming less it was not such a black experience as it had been. Her bloating was considerably less and she told me that she felt the digestive enzymes had helped.

I reviewed the health goals that were written down when we first met over 6 months before.

1. To have a strong immunity and not catch colds – significantly better, 1 cold in 2 months vs 5-6 colds previously
2. To have more energy – much better, directly linked to NOT being ill so often
3. To be in good mood consistently – much better, directly linked to NOT being ill so often
4. To improve stress tolerance – much better, directly linked to NOT being ill so often
5. To be free of bloating and wind – much better, the enzymes help & directly linked to NOT being ill so often
6. To find out why I catch so many colds – understood & being addressed.

A.R. had done some research on EBV and HHV-6 and we discussed this subject. She told me that she had found a lot written about EBV but less on HHV-6 but also how they could act in synergy in the body. She wondered if she had had both since she was a young child which is why she had the colds from that age. I replied that I considered this notion was plausible. We also discussed how it was perhaps fortunate or curious that there was no other manifestation of this low-grade viral burden. No other conditions had emerged, and for this she was grateful because she had read that sometimes these viruses can lead to more serious conditions.

A.R. asked me about re-testing and I explained that the antibodies could remain elevated for at least some months after the viruses were 'dormant' which is what we hoped for. In my experience with patients with HHV-6 it can take a full year of anti-viral treatment with Humic Acid and others before the virus is deemed quiescent, and another number of months before the antibodies diminish to below the threshold. A.R. confirmed that she wanted to have the repeat test done.

In the meantime, A.R. was more than willing to follow a maintenance programme since she had suffered from a cold in the past 2 months, and I agreed that there was no intention of her stopping now. A.R. continues to take this programme as I write this case report.

Fourth Supplement Programme	
Humic Acid Cell Membrane Active (ARG)	1 with breakfast & dinner
S. Boulardii (ARG)	1 with dinner & 2-3 X a day when travelling
Stamina Caps (ARG)	2 with breakfast & lunch, 2 at 6 pm on days when needed (A.R. to decide)
Full Spectrum Digest (ARG)	1 with a meal when needed (A.R. to decide)

Ultimately, we do not know if this programme, or a reduced version of it, will be required in the long term for A.R. or whether it will achieve the goal of either eliminating or achieving successful T cell mediated dormancy so that they no longer cause an immune compression. We do know that it is currently working and is more effective than other remedies that A.R. has used, and it has positively changed her life just when she needed it most.

Supplement Information

Bio-3B-G (BRC)
A low dose B vitamin formula with 3 active B vits, which supports energy, neurotransmitter levels and functions and nervous system resilience.

BioDoph-7 Plus® (BRC)
A mix of 7 strains of probiotics of the lactobacillus & bifido strains. The 10 strains of probiotics appeared to have been effective to support A.R.'s immunity as part of a rotated programme. These strains have the potential to reduce inflammation & support a balanced immune response.

BioImmunozyme Forte (BRC)
A multi-nutrient and glandular support specifically for immune health.

Full Spectrum Digest (ARG)
Full spectrum, vegan, clinical strength digestive enzyme with the ability to degrade casein, whey, soy, gluten and gliadin. This formula provides these enzymes: Glutalytic® (endo & exopeptidase), Protease, Aspergillopepsin, Protease DPP IV 125 DPP IV, Amylase, Lactase, Lipase & Alpha-Galactosidase.

Humic Acid Cell Membrane Active (ARG) - Humic acid has antioxidant activity, helps neutralise and remove toxins, and supports a general sense of well-being. It may also be effective in supporting the body's ability to address viruses. Do also view these articles on our website: 'Great Moments in Humic History' - & 'Earth's Gift: Ancient Soil Deposits Yield Potent Antiviral Potential'.

Intenzyme Forte (BRC) - proteolytic enzyme formula that contains trypsin and chymotrypsin which are effective for reducing systemic inflammation & tissue damage in order to reduce the arthritic joint pain, as well as to help bowel regularity.

S. Boulardii (ARG)
The well-known and well-studied 'probiotic' yeast that supports SIgA levels which is integral to mucosal immunity, and can also reduce inflammation, and supports gut lining integrity.

Stamina Caps (BRC)
This formula provides thiamin, pantothenic acid, L-Carnitine, octacosanol, coenzyme Q10 & OOrganik-15™, which may serve to aid in energy production and to increase stamina. In my clinical experience this formula has made a positive contribution to energy and supports nervous system functioning.

Discussion. *Please describe (1) the strengths and limitations of this case report including case management, (2) the literature relevant to this case report (the scientific and clinical context), (3) the rationale for your conclusions (eg, potential causal links and generalizability), and (4) the main findings of this case report: What are the take-away messages?*

Strengths and limitations of this case report including case management
The case history detail from childhood was integral to the pursuit of the viral burden, which was also supported by blood testing of neutrophils going back at least 10 years but at the time had been paid no attention. Having the positive findings from the viral screening test was also very confirming and led to a straightforward clinical decision in terms of what course of action to take.

It would be ideal to repeat the viral screening but this will need to occur in the future when there is a much greater chance that the immune readings will reflect a more relevant result Vs the reference range.

The literature relevant to this case report
Common clinical knowledge rather than peer-review scientific papers supports a good understanding of this case. A chronic incidence of colds alerts any health practitioner to there being a diminished innate and acquired immunity and this leads on to exploration of the cause of the burden on the immune system. A chronic low-grade viral infection is a likely explanation for changes in an individual's immunity. This was shown to be the case in with this woman.

The rationale for your conclusions
The rationale was straightforward in this case. All the pieces fell into line; the experience of the patient, the blood test results, the failure to respond to immune supportive remedies in the past, the inability to undertake more enduring exercise, the persistent colds and then the positive viral screen blood test results.

The main findings of this case report: What are the take-away messages?
This was a straightforward case from the perspective of a model of health which assessed the individual and their history and aims to account for all relevant factors before making a decision about intervention. However, over 3 highly trained medical doctors had seen the blood test results for A.R. over the past 10 years and none had even considered the possibility of a chronic viral infection?

The take-away is that a detailed, functional medicine process, whole-life case assessment combined with relevant laboratory tests is a robust approach to support a patient's health, and some chronic viral infections can be addressed successfully with specific NT.

Patient Perspective. The patient should share his or her experience or perspective of the care in a narrative that accompanies the case report whenever appropriate.

A.R. is truly delighted with the progress she has made. Not only has she significantly reduced the frequency of the colds, she has also resolved the co-symptoms of those colds and feels much more energetic and well than she did. In addition, she finally has an understanding of the reason why she suffered so much in the past.

Informed Consent. *Did the patient give the author of this case report informed consent? Provide if requested.*

The patient is not aware her case history is being used, and all identifiable data has been removed. A.R. are not her real initials.

Case Report Submission Requirements for Authors

1. Competing interests. *Are there any competing interests?*

None Known

2. Ethics Approval. *Did an ethics committee or Institutional Review Board give approval? If yes, please provide if requested.*

This case was not presented to an ethics committee.

3. De-Identification. *Has all patient related data been de-identified?*

All patient data has been re-identified

4. Author. *Name of Author and practice*

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