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MMSN Newsletter

Mountain Medicine Society of Nepal

Contents

Editor's Choice

The next level

Siddhartha Yadav

I am no longer a medical student and I am twenty-five years old. It would be fair to say that my life is moving into a different phase now. However, like many of my friends, I am undecided about the career path to pursue. At this stage, the US residency seems to be an attractive option.

"Make sure this is what you really want to do, and this is not just a blind commitment to the goods of this world", warns Dr. Basnyat however *('Shikhar' and 'Sukutis' versus trekking:pp 2).* It is indeed hard to shake off our materialistic tendencies while deciding on our future. Choosing the right career path is perhaps like making a successful clinical diagnosis: It is case specific and involves both, critical thinking and experience. So, in an interview in this issue, we ask Dr. Basnyat if he regrets his decision to come back to Nepal after his studies in USA and Canada*(An interview with Dr. Buddha Basnyat: pp7).*

Like the lives of many from my generation, MMSN is changing. MMSN is more than five years old now *(MMSN and five years; pp2)* and the goals that were set during its inception are expanding. We not only talk of AMS, HAPE and HACE but also of other co-morbidities at high altitude; Not only trekkers but also pilgrims; and now we have also started talking about medical rescue *(Time is life:pp 11; Surviving white death:pp14)* and emergency medicine at high altitude *(An interview with Dr. Hermann Brugger:pp 16)* in addition to prevention.

A part of this change is that new members are continuously being added to MMSN *(My first journal club:pp 4; Joining MMSN:pp 4)*. At the same time, old ones are leaving to pursue their own ambitions. Last month we bid farewell to Matiram Pun *(Farewell words:pp 12; The man from Rolpo: pp 13)*. It is hard to get used to not having his eloquent presence in our journal clubs. Good thing, however, is that members who are far away are still in touch with MMSN and write for our newsletter!!

So much has been happening. MMSN is moving on to the next level. Our lives are shifting to the next level. In this issue, we have tried to capture this change. We hope you will enjoy reading it. And yes, don't forget to drop an email to let us know what you think.

Dr. Siddhartha Yadav, Editor In Chief
MMSN Newsletter

'Sikhars' and 'Sukutis' versus trekking

Buddha Basnyat

Many of you are getting ready to go abroad and study. There will be pressure from your family and friends to do this or that. The ultimate decision has to be yours. "It is true that we may be so engaged in doing things to achieve purposes of outer value that we forget the inner value. Our life experiences on the purely physical plane need to have resonances within our innermost being and reality", as someone eloquently put it. I am not suggesting that you become a "sanyasi" and stay here. Of course not. Some of the best centres for medical learning are abroad in places like the US, UK, Canada and Australia. So it is natural for you to want to go there, besides of course the pay is better!! But make sure this is what you really want to do, and this is not just a blind commitment to the goods of this world. I say blind because this means total attachment to temporal things. Is this what is driving you to go abroad? Most of us including me like our worldly goods, but it is possible that with your medical degree and living in a very affluent society, you could take full advantage in a negative sense and turn out to be totally materialistic.

Of course you can be very materialistic even here in this land of the Buddha, but if I were a betting man, the chances are less here than there. Here there are lot of sacred shrines on the sidewalk, people are doing 'bhajans' and 'pujas' everywhere, and spirituality is not confined to one particular building or day of the week. It is on the mountain tops and in the wind. This ambient spirituality constantly reminds you of the temporal versus the eternal aspect of life here. (Sometimes more often than you want). In the Western world there is by comparison a dearth of such an atmosphere. Perhaps that may be the reason why some Nepali docs abroad have been known to start buying BMWs during their residencies. They will then at least potentially) be really off to the races, especially the kind where rats predominate !!!

To change the subject, you should go on a trek for at least about 2 weeks before you go abroad for studies. Or failing that make sure you do a trek or two during your residency or failing even that after you are board certified. You cannot be a true Nepali without visiting the magnificent mountains. This is just like in the old days in South Asia, you were not of the ruling class until you had your 'sikhar' (hunt) and ate some 'sukutis' (dried meat). So make sure you trek. Trekking is a more sacred pastime than 'sikhars' and eating 'sukutis'!! The more treks you do the better the mountains will look after you. Don't wait too long though because you know how time flies and before you know it you will be a fat Nepali-American doctor with obesity induced sleep apnoea predisposing you to excessive Cheyne Stoking and altitude sickness. And at that stage the last thing you want to do is trek to high altitude to show off your Nepali "pan" and face repercussions doing this, right?

So with these part thought provoking (hopefully) and part entertaining thoughts I wish all of you in the Mountain Medicine Society of Nepal (here and abroad) my best; and of course "muri muri" thankfulness for keeping this fun association going. I know all of you will continue to get young doctors motivated to join our society, present papers in our Journal Club meetings, write letters to editors of medical journals (follow the great Matiram Pun's example) and put high altitude research on firm track in 'hamro' Nepal. Jai Ho!

Dr. Buddha Basnyat, President
Mountain Medicine Society of Nepal (MMSN)

LETTER TO THE EDITOR

MMSN and five years

Santosh Pradhan

Time has flown unknowingly and it feels like a few moments ago when we were joking about "Lek lagne" phenomena with Pritam. It all started during a post-prandial hypnotic guff session in the dark room (of course no electricity in that region), crowded with Gosaikunda health camp 2002 group - myself, Pritam, Ramesh and other HRA volunteers. Pritam started with how we can do more in the field of altitude sickness, and how we can capitalise on our natural resources especially when most of the highest mountain and Himalayas are in Nepal.

We felt that it was an irony that people from other parts had published guidelines about Altitude sickness and we, the people of Nepal, land of Mount Everest and other high destinations, follow it blindly. We thought we should be the leading authority in High Altitude, and yet we did not have even a foundation to this field of medicine. This part of medicine was also missing in our graduate level curriculum.

Many undergraduates, junior and senior doctors and other health care professionals were unaware of this potential field though few had interest in this branch of medicine. We thought of organising a group or a society related with mountain medicine. Pritam came up with all sorts of funny new names; in the end we thought MMSN was a good one. Pritam is the one who persisted on and on about forming and organising this society. Only his perseverance could be counted on during those times, especially when some of us were in the transition phase of US and UK exams. He gathered all of us and pushed for a structured group including Sanjay, Puncho, Bhabi, Barun, Sajeev, Prajan, Prajwol and Devish. Of course Dr.Buddha has been (and still is) a

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constant source of inspiration and encouragement. I still remember his voice echoing, "If we could create some interest in our colleagues about mountain medicine…."

First few weeks of society organisation were as disoriented as expected and after all hard work finally the constitution "Vidhan" was drafted in 2003. We organised presentations, journal clubs and talks in our own college and other medical colleges and recruited members to our society. There were members of different calibre and each member contributed to the society to grow.

In 2004, I came to UK along with two other MMSN members Barun and Sanjay, and life has been a roller coaster ride since then. Other members had also gradually emigrated to US. New members like Mati had taken over with new zeal and vision. At all times Dr Buddha stood there for the members to give constant support and encouragement.

During the last five years, I have received regular news from MMSN about the journal clubs, seminars, conferences, members' achievements, publications, international recognition and contribution. It still feels like yesterday, when we were trying to convince new members about the scope of mountain medicine. And today, the society has achieved a standard of an authoritative organization which contributes not only in the field of mountain medicine but also to the world of research. I am proud to be a part of MMSN and whenever any of my colleagues ask me about Nepal, Himalayas and altitude, I rarely miss to refer them to MMSN. I hope to see MMSN grow exponentially in the coming years both in the field of Altitude Medicine and Research.

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Research at Gosainkunda

Michael Koehle

I have had the fortune to participate in two MMSN expeditions to Gosainkunda: in 2005 and 2008. Each of these times, the primary mandate has been patient care, but a secondary mandate has been to collect research data. I thought I'd take this opportunity to provide an update on the results that we have determined so far. In 2005, we collected data on heart rate variability, blood pressure and oxygen saturation in pilgrims with and without AMS. In both 2005 and 2008 we also collected DNA from cheek cells, to look at genetic associations with AMS.

The rationale for looking at heart-rate variability (HRV) was that there were previous studies that showed that there were changes in the low frequency to high frequency ratio (LF: HF ratio) during ascent to high altitude. As AMS is equivalent to a delay in acclimatization, we hypothesized that we could use HRV as a clinical tool to aid in the diagnosis. While working in Manang in 2004, I had collected some pilot data on myself and some friends that seemed to concur with this hypothesis. Thus we thought that Gosankunda would be the perfect locale to test this hypothesis. Unfortunately, we did not find any association between HRV and AMS[1]. We might have found some interesting data related to oxygen saturation but I cannot elaborate until it gets published (stay tuned).

The goal of the genetics studies was to look for polymorphisms of certain genes that might lead to an increase in the susceptibility to AMS. We initially looked at angiotensin converting enzyme (ACE), and other polymorphisms of the renin-angiotensin-aldosterone pathway, as there was some previous work that had indicated that one of the ACE polymorphisms was overrepresented in elite mountaineers. Unfortunately, we could not find an association between AMS risk and any of the polymorphisms in this pathway. I think that this discordance has to do with the different endpoints. That is to say the factors that make up a successful elite mountaineer are different from those that confer risk to AMS[2]. We next looked at the Beta-2 adrenergic receptor, and again found no association[3]. We did find an association to the eNOS gene involved in vascular function. This finding will be published in the future issue of High Altitude Medicine and Biology (currently in press).

There are a lot more genes to look at, and once an association is found this needs to be confirmed and then tested prospectively. The prospective testing will be done in Dr. Jim Rupert's altitude chamber that we have set up in our laboratory in Vancouver, Canada. So in conclusion, Gosainkunda is a great experience for clinicians wanting to experience altitude illness firsthand, and also a great natural laboratory to enhance our understanding of altitude illness. Most importantly, it has been a good opportunity to learn the Ramayana!

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My first journal club

Subarna Adhikari

Many a times, I had seen my seniors gather for "Journal Club" meetings in the Basic Science building. I had helped my roommate Saroj Dai edit his presentation once. And I had been to our batch mate Kamal's presentation where the Professor had been in a questioning mood. With this background, Siddhartha Dai told me that it was now my turn.

I was new to MMSN; helping enter data from the Gosainkunda trip to the computer was all I had done. I had seen my seniors and batch mates go to the Himalayas to assist in researches. But all this is of hardly any use when it comes to making a presentation. I got the article only a few days before the date of presentation. I went through it and I freaked out! It was crap, the whole crap, and nothing but crap. I wondered if all research papers were like that.

I consulted Mati Dai the evening before the date of presentation. I asked him what I was going to say about something that was all senseless. "Say it is senseless!" replied Mati Dai. Together, Saroj Dai and Mati Dai helped me cool down and form an outline for the presentation. They gave me ideas and reassured me that the Professor was always cool and Kamal's presentation had been an exception.

Now it was my turn to put myself to work. Mati Dai had briefed me thoroughly about the article, and hardly any aspect had been left out. I went through it multiple times and formed my own opinions and analysis. To put amorphous garbage into concrete form demands skill and perseverance. I had to turn raw data and disorganized information into presentable charts and diagrams. It took me the whole of the next morning and the afternoon to get the presentation ready. I subjected it to Mati Dai and Saroj Dai's scrutiny and still there were a lot of loopholes to fix.

The turnout on the day of the presentation was massive and the Professor looked jolly and less scary than the last time. I presented without a pause and it was over in no time. What next? I was scared! I was asked to summarize the article and a few questions were raised. Then there came a series of admirations and applause, which was quite unexpected. Mati Dai and Kamal added to it appreciating the amount of effort I had put into it. But what was important was that the article was unanimously criticized by everyone, and the professor said it was full of flaws. What they called a research paper was all gossip. Hardly any prerequisite of a research had been met, hardly any preparation been done. The objective of the research was unclear and the conclusion seemed to be premeditated.

Everyday we get to hear about researches discovering bizarre things. That food causes cancer! This product prevents hair loss! This ayurvedic medicine cures pimples like anything! This beverage speeds growth of children! And all claim to be research proven. But what was the kind of research done? What was the sample and how was it randomized? How was bias prevented? Were pre-requisites met? We may even ask these questions to the MRs hovering about us in the OPDs. So we should first analyze the answers critically before forming opinions about anything. This is what I learnt from my first "Journal Club" presentation.

Subarna Adhikari, MBBS 4th year student
Maharajgunj Campus, Institute of Medciicne

Joining MMSN

Nikita Ale

From the time I was big enough to know about the Mount Everest and its earliest conquerors, I have fantasized about one day reaching the top of the world. I've been fascinated by the snow capped peaks all my life. On a clear day you can see some parts of the Himalayas from my house and every time I see them I can't help myself from falling in love with them all over again.

What is it about these magnificent creations that get me every time, I'll never know. Apart from the breathtaking beauty of it all maybe it's the way they stoically stand tall through all times, facing whatever nature has to throw at them. Maybe it's the way they remind me every time I see them about the greatness of creation. Or maybe it's the way they make me realize how small, insignificant and fragile we actually are in the big scheme of life.

Whatever the reasons may be, the fact remains that the mountains have never failed to impress me. Or to fill me with a lot of questions, like, how do some people live at such altitude? How do some adapt themselves to withstand such cold and harsh climate for days and manage to reach such high altitudes? How far can you push the human body to endure such conditions? And could I adapt my body to ensure that I reach the top of the world even though I've been living down here in the valley all my life?

One day, around this time last year, our physiology professor brought to our class this well dressed, well spoken gentleman and introduced him as Dr. Buddha Basnyat. At first I was a little wary thinking he might start asking us questions regarding our physio-topics. But then he said that he was going to talk about something out of the usual. He was going to talk about Mountain Medicine and MMSN.

Relief soon gave way to fascination as I listened to him talk about his experiences in high altitude and pretty soon I was hooked. Since then I had been nursing my interest in Mountain Medicine but hadn't had any time to do anything about it. When I found out that we would have nearly three months of leave after our Basic Science exams, I thought this was as good a time as any to join MMSN and to learn as much as I could about it.

So here I am now, a new-bee in the world of Mountain Medicine, still a little clueless about what's going on but learning a bit more everyday. I hope to be able to get closer to the answers to my questions and to those mountains that I still see from my house on a clear day. I know I have a lot to learn before I can do anything to contribute to understanding the workings of the human body at high altitude. Fortunately I have the best people to learn from and the best place to do so and that is MMSN.

Nikita Ale, MBBS 3rd year student
Maharajgunj Campus, Institute of Medicine

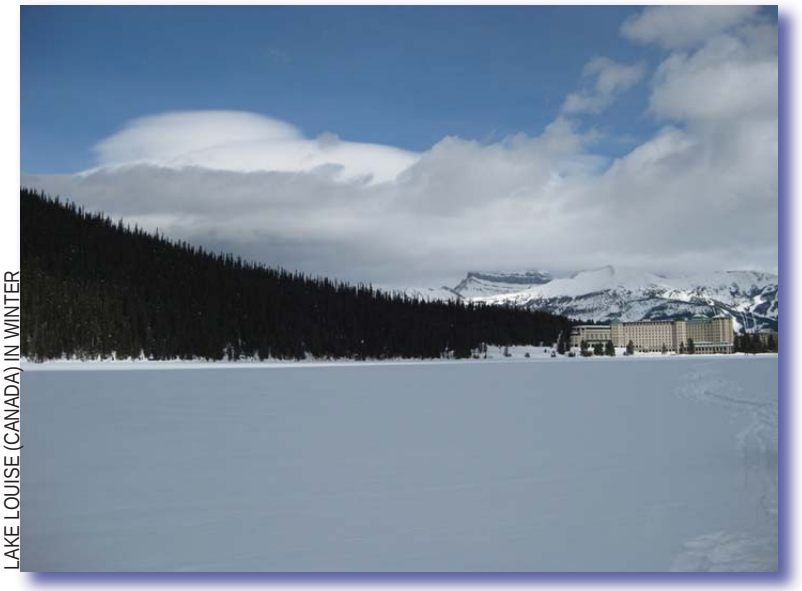
Dimensions hypoxia

Sanju Lama

As Dr. Rob Roach puts forth almost religiously in his opening lines in the biennial gathering at the International Hypoxia symposia 2009, the full moon night of March brings together an amazing group of scientists and aspiring ones in the frozen lake of Lake Louise, Alberta Canada.

To an Asian eye or rather so a Himalayan one, little oblivious and a little too short of the time and resources to acknowledge one's own gift of nature until the Westerners came and exclaimed at the mountains and passes, it was amusing to be asked quite frequently if one could ski or snow-board atop and along the Everest! "Well,,, (ahem)! At one's own risk, maybe.." is what I would say to myself, and put it in a more presentable manner that the terrains are quite rugged and people have tried and nosedived or catapulted and so forth. But more importantly, despite there being some beautiful ski slopes in the western Himalayan belt of Nepal, it is less explored, yet to be publicized for tourism purposes and that skiing is not a common Nepalese forte. An expensive sport to pursue or maintain as a hobby, when all that bothers a common folk at the end of the day is what or how to feed the family the next morning! But again, it's a different geography altogether, a whole different culture and fundamentally different stages of social and intellectual development that we are in, so perhaps making comparisons would not be as scientific. Everyone may agree or give a polite nod at least.

I could not help but be amazed at the way how "Hypoxia" connects everything under the sun, at least in the scientific community all over the world. Be it the presence and participation of the likes of John W. Severinghaus/ Tom Hornbein/John West/ Jim Milledge/ Cynthia Beall/Eric Swenson, wizards you would try not miss an opportunity to listen to… or the meeting itself being immaculately organized by the likes of Peter Hackett and Rob Roach with their thoroughly researched and personally hand-picked larger than life speakers and honorees. Or perhaps it is the ever so humble and heart warming visitation by our very own Buddha Basnyat (Buddha sir), this symposia clearly talks and means high altitude.



LAKE LOUISE (CANADA) IN WINTER

The meeting is a genuine amalgamation encompassing note worthy historical tribute such as the momentous Hypoxia honoree Tom Hornbein or the 'simply the best' (literally) highlights by John West, who never misses an opportunity to pay tribute to late Alexander Mitchell Kellas, the Scottish scholar of Chemistry and born explorer of the early twentieth century. How Kellas had predicted back in 1921 that Mt. Everest could be ascended by a man of excellent physical and mental constitution in first rate training, without adventitious aids [supplementary oxygen] if the physical difficulties of the mountain are not too great, and with the use of oxygen even if the mountain may be classed as difficult from the climbing point of view[1,2](1: posthumous publication)! It is surprising to realize how the presumed altitude related physiological compromise had been taken into due consideration back then. An observation so early in history, it had references to records from the mid or late nineteenth century and the preliminary concepts of acclimatization and oxygen consumption were pretty well accounted for. How Kellas himself had envisioned climbing the Chomolungma, until the dream was tragically cut short by his sad demise in June of 1921, presumably either due to cardiac failure as a likely complication of High altitude pulmonary edema or severe diarrhea or both[3,4].

On the other hand, the information flowing in this symposium gets equally pro-futuristic and running ahead of times with updates from Caudwell X-treme Everest: Physiology high up; and where we might be headed for in terms of our knowledge and understanding of high altitude hypoxia post Silver hut era. Equally interesting are the challenges and scope of information on the role of chemoreceptors, cerebrovascular responsiveness and autoregulatory mechanisms being rigorously studied in Sherpas as opposed to the non-Sherpas at high altitude. The future definitely holds immense promise and potential for neuro-critical, cardiovascular or pulmonary critical care avenues with respect to high altitude hypoxia related patho-physiological correlates, and of course in those related to general systemic medicine as well.

The post dinner sessions bring about more of an air of familiarizing and mingling over dinner tables; much to the humorous reminder by Dr. Roach on 'how we do NOT talk research after dinner!!!' It becomes more of sharing of stories by avid adventurers, the explorers and mountaineers, who reminisce about how they challenged their own limits, personal fears as well as those put forth by Mother Nature……on how they came out a winner in the end. Alive and kicking, basking in the triumph of breaking one's own record, living one's own dream, so much close to what the mountains themselves stand for and teach us every single day. How every decision counts in the face of adversity and how it becomes worthwhile second-

judging one's own quest of living the Everest dream and giving it up in rescuing a dying mountaineer Lincoln Hall - Andrew Brash teaches humankind on what remains truly important in the end. How doing what needs to be done changes lives, one of your own and of others and their families! These sessions tend to derive much emotion from the audience as well as the speakers, perhaps a wee bit intensified by the wine or beer gulped down over the exquisite banquet. Or it could just be the brain seeking a sheer mental relaxation after a taxing all-day sessions topped up by physical activities during the much coveted ski breaks (skiing, hiking, making snow-angels over the frozen lake….or maybe reading papers, dragging work along - thanks to technology…Hail hard drives and these portable screens and the never ending self-imposed deadlines of graduate students like me and many others... or sleeping or working out in the gym for some of us).

The conference not only aims at pulling together the strings of ongoing endeavors in hypoxia related medical science research, it brings together students and scholars to present their work and get a brief update on recent advances in the same. As Dr. Basnyat puts it, 'this is like my holy pilgrimage and an opportunity to brush up a bit or update on current medical pathophysiology.' A familiar sense of joy rushes through the mind as many a posters on studies of preventive role of Acetazolamide or spironolactone /Acclimatization and reacclimatisation/Altitude associated neurological disorder and correlation with optic nerve diameter/Comparison of pulmonary artery pressures between Sherpas and Westerners/Effects of acclimatization and cerebral blood flow on central sleep apnea at high altitude are put up and I get to see familiar names of friends and colleagues back home. It is true how we agree upon the relevance and possibility that this would definitely be a worthwhile meeting to attend for most of our fellow members/ students stationed around the world. It is equally a matter of joy and pride to have a sound representation from the students and researchers from the mountain medicine program and Faculty of Medicine, University of Calgary, along with our program co-ordinator Dr. Marc Poulin chairing one of the 'Hot topics in Hypoxia' sessions.

To put it in a nutshell, the common theme of the meeting remains 'Hypoxia' and so the beauty of it, which heralds ideas, philosophies, contradictions and consensuses among scientific communities around the world. Therefore it appears to make complete sense when a researcher from Europe presents the patho-physiological aspects of hypoxia in a pre-ecclamptic mother and effects on the progeny; or a Magnetic Resonance Imaging changes depicting Central Nervous System Wallerian degeneration in an animal model following cerebral hypoxia-ischemia; or hypoxic mitochondrial dysfunction or its effects in muscles. It is so brilliantly open and inclusive to researchers that the common language of communication remains "Hypoxia". So it is perfectly in tune with one's knowledge-thirsty mind when a transplant surgeon in the University of Oxford comes up with novel thoughts on hypoxia to ischemic organs and talks about selective gene regulation for protection against reperfusion injury!

Much could be said or reminisced about this meeting that holds peculiar significance to mountains and altitude medicine apart from its proximity to our very own (University of) Calgary culture and its association with the Nepalese Himalayas. By its standards, it could be one of the most well organized small group conferences (here, I mean specific subject-wise); with the elegance of the organizers and the friendly scientists, a worthwhile visit to catch up with each other in the silent, silvery Canadian landscape. It is also worth noting that the delegates can appear to get very confrontational in the process of criticizing the talks or ideas put forth, each one adamantly boasting about one's principle to be the correct one. But these very respectable gentlemen would be laughing or backslapping each other over lighthearted tea or coffee breaks soon as the sessions are over. A general cultural courtesy, maybe…. is what I deduce. How vital it is to set aside each other's personal differences in opinions and scientific hunches for the general, greater good!

One might as well have scratched one's head several times trying to make sense of the epi-genetic updates (a heritable change in gene expression not due to an alteration in gene sequence) and generations of evolution with respect to hypoxic physiological response and adaptation. But the five day meeting seems to have suddenly come to an end when a local Calgarian band hits the musical notes with an ambience of final gala celebration. One cannot help but dance the night away…Some head to the bar to chat with a few friends / associates over drinks before departing for home the next morning. Just as the much revered topics in hypoxia, music definitely is another universal language allowing cultures and civilizations to grow and bond over time. Can there be a better closing ceremony!

LAKE LOUISE (CANADA) IN SUMMER

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(Abstracts may be viewed @ http://hypoxia.net/2009_meeting/abstracts/index.htm)

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An interview with Dr. Buddha Basnyat


PROF. DR. BUDDHA BASNYAT

Dr. Buddha Basnyat is a leading researcher in altitude medicine and tropical diseases. He is also the President of the UIAA Medical Commission, Vice-Chairman of Nepal Health Research Council and President of Mountain Medicine Society of Nepal. In the following interview, MMSN editorial team has tried to explore the personal and professional life of this inspiring personality.

How were you as a young boy?

As a young boy I was very serious! That may have been partly (due to) the school I went to. It had a lot of what is right, what is wrong. I tried very hard to do well and despite trying hard didn't do very well! (…..laughter!!) . I was not good in maths, not good in physics, but I was good in memorizing and making emotional speeches! People said, 'oh that was a very good speech!' Then I also made this transition from being a very serious person to being a very relaxed funny person at the same time holding on to my serious nature.

You are very jolly and happy all the time, what is the secret o your happiness?

I am not sure there is a secret but I like to do what entertains me. Entertainment in the sense that my work and my play blend very easily. If you are burdened with 9 to 5 job and which you don't enjoy then you are obviously not going to be very happy. So luckily I am doing things that my heart is in!

When did you first decide to go into research?

I didn't decide to go into research. I mean I actually didn't think I would be cut out for research. I thought that research was for people like Einstein. When I came back from the US, I read simple high altitude research by Westerners going to the mountains and doing simple questionnaire studies, and I said may be I can do this, this doesn't look very difficult ! As I have told many people, I did my training, masters in respiratory physiology, in Canada, which was a thesis based masters program where you have to generate a hypothesis. I brought into use this training after seeing people doing researches in mountains.

Why did you go into mountain medicine?

I haven't left clinical medicine. I love clinical medicine. I feel privileged that I am able to do both; see patients, put my medical knowledge to use but at the same time be able to do research and figure out simple things that are doable and answer important questions, because there are all these questions, simple ones, not only in the field of high altitude medicine but also in infectious diseases, you know both of which we have in plenty over here.

You are very much impressed by lord Shiva. Can you tell us something about it?

Shiva, for me, is the ultimate God! I mean he is cool, he has wrathful aspect on one hand but also has very peaceful aspect and he also informs us about life. Life can be tough, life can be beautiful and we have to learn to deal with this with Shiva's help. And importantly, Shiva also doesn't say you have to follow this path, this is a more liberal approach to life. He predates almost all spiritual iconic figures that I know about! I mean we are not talking 2000 or 3000 years. They've found these images of Shiva about 8000, 9000 years old, I have to check that (laughs)!

You've been trained in India, Canada and US. What differences did you find?

Studying in India had more to do with memorizing. In Canada, big thing was that I got to do research and started thinking how a certain thing works, what's the methodology. In US, I basically did clinical medicine and I had access to good libraries. In US, what they do, they do very well and this was good exposure to a lot of fantastic patho-physiology for the internal medicine residency.

Why did you come back to Nepal? Is there any regret on this decision?

In the beginning, when I had a partial choice to stay back in North America , I felt like if I came back here, there would be many regrets- you know, political and financial regrets and I would go back to the US or Canada as soon as I had one big excuse. So I did have regrets initially but because I had burned my bridges, like I didn't have a green card or other provisions made , I was stuck. And I am very happy I did this because at the end of the day you are not going to say I ate five Mars Bars or that chocolate was great. Initially that would be attractive, but at the end of the day, at least for me, spiritually I feel more uplifted. So if you use that as a measure, then that's where to me the importance of Shiva that we just mentioned comes.

What do you think of the current trend of USMLE- the American 'residency path'?

I think that if you really want to do this, you should do it. US offers some of the best education in the world. But it would be nice if you were able to, or had an opportunity to, influence other people in the developing world, to help them, guide them or inspire them. One way of doing this is keeping in touch with a group like ours. At the end of the day, at least for me, this is the true 'meaning of life'. I mean, you can go to the US; you can be a fantastic doctor and practice there and have couple of BMWs, but for me that is just the superficial part and it doesn't answer the needs of my true inner self. This is what I mentioned in the editorial that we are potentially blinded by temporal attachments. There is a deeper meaning of our existence and I find that if we attach ourselves to this deeper meaning, we are better off as individuals. But if people want to live in US, I think it is fine. I think you should make up your own mind.

Why did you leave teaching medical students at IOM?

I taught for like 15/16 years on and off and I enjoyed teaching but saying five causes of this, today we'll do function of kidney and so on got boring after a while. I could only do it so many times. And then I saw so many other good teachers and I thought these guys are happy doing this so why not let them do it? At one time, there was no physiology teacher. I was the Mr. Department (laughs). Later, I found that I could devote myself more comprehensively to people who were interested in doing some research and I found that there was a niche here. And you guys are very smart, and this is the other thing- working with smart people makes me smart too. Don't forget that.

(Continued in Page 8)

(Continued from Page 7)

What do you think of the research field in our country, what can be done to improve it?

I think we should try to answer simple questions like why is there bothersome cough at high altitude--these things are answerable here. Also, I keep telling people that maybe doing a master's program that's thesis oriented, like Mati's doing, is an excellent start if you've interest in research. Because if you get caught up in clinical work and clinical degrees, which is fantastic, but it may also lead you away and force you completely off from the research domain.

Please tell us something about your involvement in NHRC and the opportunities available for young researchers.

My involvement in NHRC is the continuation of this research ideology. This is another avenue I found out about, where, in the national arena, I could help out and directly influence in promoting research. One theme is that, old doctors doing research is good, but even better is if we get the young people involved. NHRC is our National institution and I thought - what better a place to try to emphasize this point about youth doing research?

Please tell us something about your involvement as president of UIAA Medical Commission. How can MMSN maximize its benefit from this?

UIAA stands for International Federation of Mountaineers and Climbers and it's an old organization started in 1932 AD. One of its branches is the Medical Commission of which I am the president. On a worldwide basis, this is to promote safety in the mountains and we meet every year and I am just lucky that they made me the president. I think that in many ways, this was the politically correct move on their part. It's a very European organization and so I just happened to be the right guy at the right place. We hold meetings and we talk about how to keep the mountains safe- in the Alps, in the Himalayas, in South America.

We are having a meeting in Kathmandu, this November. MMSN members can interact with these doctors and get ideas from them. It can be a two-way stream—for them to learn from us and for us to learn from them.

Please tell us something about your personal life. Your love, marriage and family.

I got married when I was 24, and I married someone who was in Medical School in Delhi- Lady Harding. She used to give me her books and I found out that if I borrowed her books, it was like an understanding that perhaps I had to marry her(laughs). The books were very heavy and expensive like the Gray's Anatomy. I didn't have those so I got them from her and with the books I also had my wife (laughs). This was almost 25 years ago. In life, your marriage is also an important spiritual understanding. In the beginning you think it's only physical, but at the end, it's spiritual. It seems like I am talking like an old man (laughs). We have three children, Rishi, Rose and Ruby and they had a childhood where they were introduced to spirituality not by me but by my father who in our family is the ultimate Guru.

Together with Academic Excellence, there also has to be like what I've said in some of my write-ups...यो बद्धिले ज्ञान आर्जन गर्न सकोस् भन्ने I would like to emphasize because sometimes बद्धि can itself be devoid of ज्ञान and hopefully this is what we, starting from my father, have tried to make our children understand and hopefully this is the atmosphere we have brought them.

About your achievements in life- are you content or are there something yet to be achieved?

I feel that in life, the journey is the destination. I am content with how this life has worked out for me, but I think that life would be dull if we didn't sit down and have other research ideas, or try to think of how to write better sentences. Life has been fulfilling, but to keep it this way, I think that I would like to get excited by all these things like we are doing now.

I hope there will continue to be students like yourselves. We started with Pritam Neupane and group, and then Mati and you guys.To me this is part of the fulfilment of life: getting young people excited about things that are actually not in text book and writing these things up and doing your little bit. If you feel like I am part of this chorus, life would be fulfilling. And then you have your own thing like trekking, going into mountains. So all of these things I hope I can continually draw inspiration from.

You obviously enjoy reading. Which is your favourite book?

I read non-fiction and fiction. I love to read. One of my favourite artists is Joseph Campbell- the mythologist and a great scholar. He knows Sanskrit and the stories derived from there, the Greek mythology, Christian mythology and then he's able to put this into perspective. Another favourite author is A.J Cronin—the Scottish physician-turned-writer. He was very famous in the 50s and 60s. For e.g. The Citadel, The Stars Look Down. I love Indian writers writing in English, like Arvind Adiga who won the Booker's from the book The White Tiger, The Inheritance of Loss by Kiran Desai, which also won the Booker Prize ; and there's this book which exposes the underbelly of India very nicely done called Bombay- the maximum city by Suketu Mehta. These are three nice books written very very well, almost lyrically. I read a lot. I love to read and I think this has really helped me.

What suggestions do you give to your students who want to get published in journals of good repute?

My suggestion is start out with writing letter to an editor and keep writing. Once they publish some of your letters, you will be on a roll. Then maybe write a case report and after that bigger studies. Don't force yourself to write, but if something comes up, don't hold yourself, just write it. BMJ has the rapid response. So, take advantage of it, and take advantage of the internet facility. Now the playing field is much more level. You can't say 'Oh, I live in Nepal and you live in the UK and you have access to much more medical literature.' This is no longer true.

Finally, any message to our readers?

I think you have to take advantage of your ability to read, to comprehend and to analyze and then inspire yourselves. Start out with writing a letter to the editor. That would be an important message to the MMSN group: to get involved in MMSN activities, to maybe get interested in doing research this fall in the mountains. Take up path that you hadn't thought about before rather than taking a set path where there are no risks. So, take some other path and make life more interesting so that you would be able to help yourselves and in the process help other people.

From Namche to New York, Damak to Dallas, Fewa to Philly, Beni to Baltimore and more

Pritam Neupane

I have always believed that I possess what people generally consider to be the 6th sense. It is a strange feeling of an impending incident, usually something awful. I guess everybody has feelings or hope of good things happening to them so that doesn't count towards the 6th sense. I can give you plenty of 'evidence base' to support my theory.

For example, I had tapped a belly of a cirrhotic guy in Kharikhola, Everest region, when I was a volunteer there in 2005. This guy would come every day to the free clinic to be tapped. I took out about 2 liters daily with the intention to dry him out but avoiding acute hepatic encephalopathy or hepatorenal syndrome at the same time. On the night of day 3 before I went to sleep, when I was still in a twilight state, it occurred to me that this patient is going to complain of abdominal pain and would develop peritonitis (god knows whether it is primary or secondary). And guess what, early next morning he shows up in the clinic after his usual shots of local whiskey, complaining that his belly is hurting unusually. Luckily, I already had a plan for him.

Another 6th sense horror I stumbled upon was when my dad was admitted in TUTH with a MI. We were in the middle of basic science exams. He remained in the hospital when the exams were done. Everybody was having fun post exam but I stayed back as 'kuruwaa' in the basement below the CCU. I must admit, people snored so much there that I got really allergic to snoring. Till date, whenever I travel around US, if I anticipate sharing a room with someone, I carry my own ear plugs. Nevertheless, my dad eventually moved to a regular floor. It was a fine day when they planned his discharge for the next day. At that time some of my friends were going to Manakamana to have fun. (Of course 'dharma kamaunu' was the official agenda!) They asked me to join. After discussing the plan for discharge the next day with the docs taking care of my dad, I left for Manakamana. I had a lot of fun and I was drunk (GCS scale 4) that night by the bonfire. But early next morning at 6 AM I had a terrible feeling that something has happened to my dad and he wasn't going home as planned. By the time I got to a phone it was around 10 AM. Lo and behold, I found out over the phone that at 6 AM, he had an episode of symptomatic SVT requiring electric cardioversion. How dramatic can the 6th sense story get beyond this? I brought this up because I had it in the back of my mind that one of these days MMSN is going to ask for an article from me. And before anything, here I am, pushing a deadline. In this instance, I am the culprit because I didn't act on the 6th sense warning like I did for that cirrhotic guy. But needless to say, it is always a pleasure to write for my 'brain child'.

MMSN has gained momentum and attained newer heights. It continues to allure young enthusiastic medicos many of who have become real scientists. I am really proud and likewise I have nothing much to add in terms of academics in this section of the article. But I would like to take this opportunity to reflect on the events here in US pertaining to the MMSN members home and abroad.

We really don't have much high altitude around where I live. The highest spot in Maryland is Quirauk 'Mountain' and it is at 1730 ft. Thus any chat with my colleagues regarding high altitude rapidly fades away and more intense cardiovascular or other topics take stage. But the article in NEJM in January 2009 on Arterial Blood Gasses and Oxygen Content in Climbers on Mount Everest caused quite a stir and it was an opportunity for all of us here to revisit the chapter on extreme physiology. Surprisingly enough, this is one field where (if you are caught off guard) you can still say ' not a whole lot is known' and you will never be wrong. After what they did up in Everest in that study, the next step probably would be to measure pulmonary function at such extreme altitude. The general consensus at this time is that FEV1 and TLC do not change much with altitude however FVC starts to decline at around 2500m. Increasing residual volume mirrors declining FVC. The question in this context is what is the possible mechanism leading to this change? Is it pulmonary interstitial edema, redistribution of pulmonary blood flow, regional changes in lung elastic recoil? Or does it have to do something with mechanics that lower VC such as abdominal distension (gaseous distension/aerophagia) or some alteration of respiratory muscle strength? So far, God only knows. It is also interesting to note that our Sherpas (male and female alike) have demonstrated higher spirometric indices when tested in comparison to Caucasians. They also have slower decline of FVC with age.

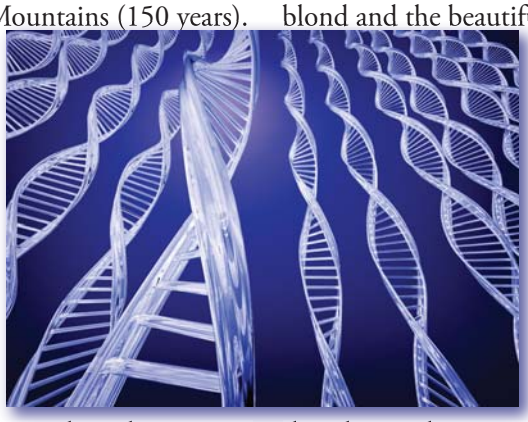
High altitude aside, what is more relevant in this part of the world is aerospace medicine and air travel physiology. As we at MMSN are constantly reinforcing clients to seek medical advice before they embark upon high altitude adventures, medical professionals here are struggling to detect those who could have an adverse outcome during air travel. The potential clinical conditions that could occur during air travel are DCS (decompression sickness) and SAGE (systemic arterial gas embolism) jointly referred to as DCI (decompression illness). I was shuddering at the thought of what could have happened to the passengers aboard Air France flight 447 which disappeared in the mid Atlantic early June. Sudden decompression in such situations can result in rapid hypoxemia secondary to reduced PaO2. This limits subjects to the 'time of useful consciousness' (a matter of seconds to minutes when they can still think straight) to remedy the situation before hypoxic syncope ensues. G-induced loss of consciousness (G-LOC) is a term used to describe the effect of rapid

change of gravitational force during air travel. It generally affects pilots of high performance aircraft, typically military fighter jets, in situations that require tactical maneuvering. The presumptive mechanism consists of decreased cerebral perfusion. This is to remind us that maybe sometimes we should also include topics on aerospace medicine in the journal clubs or MMSN workshops.

On the social front, my class just had our graduation ceremony. It has been good three years here at Hopkins. I have also really started to like Baltimore. But this is what happens as soon as you learn all the tricks of the trade, it is time to move. We have decided to keep in touch by Facebook. I have couple of residents from Peru as my colleagues. My interest in the Peruvian Andes has originated from reading 'Touching the Void' by Joe Simpson, a must read for all MMSN members. Since then, I have always wanted to visit that land and I am always friendly with Peruvians in the hope that someday when I go for vacation I will have a free place to live along with a free guide. We get along well not only because we are from similar economic backgrounds but also because we are from high altitude environments.

I am also struck by their resemblance to the Tibetan natives. To be honest, all Hispanics look like Tibetans but this particular friend of mine outstandingly appears like a Tibetan. Then I often ask them 'where did you come from or rather where did your ancestors come from?' I can easily Google the Peruvian homepage but in all seriousness of the matter, it is really intriguing when you compare different highland natives and try to study their DNA to explain, at least in part, the response of individuals or their adaptive changes to the challenges of high altitude environments. The three major regions where populations have been studied at high altitude are the Himalayas, the Andes and the Rocky Mountains. While the highland natives have many advantageous physiologic changes overall as compared with acclimatized newcomers, there are significant differences in the Tibetans and the Andeans or the Rocky Mountain residents.

For example, compared with newcomers, the residents of Andes/ Himalayas have less intrauterine growth retardation, have enlarged lung volumes, decreased alveolar arterial oxygen diffusion gradients and higher maximal exercise capacity. But compared with the Andeans or Rocky Mountain residents, Tibetans demonstrate even lesser IUGR, greater reliance on redistribution of blood flow than elevated arterial oxygen content to increase uteroplacental oxygen delivery during pregnancy, higher levels of resting ventilation and hypoxic ventilatory responsiveness, less hypoxic pulmonary vasoconstriction, less hemoglobin concentration and hence less susceptibility to CMS. Evidence suggests that people have lived in the Tibetan plateau the longest (around 50,000 years), then Andean Altiplano (around 12.000 years) and then the Rocky Mountains (150 years).



History also suggests that there is least genetic admixture in the Tibetan plateau than in either of the other two places. Tibetans made outside contact via trade. But even with Mongolian domination in the 13th and 14th century, (which was brief in itself, around 100 years) the major trade routes (e.g. the Silk Road) didn't cross the Tibetan plateau. Contrary to this, the Andeans have plenty of European admixtures after the devastating consequence of war in the 1500s. Rocky Mountain population on the other hand can be safely regarded as too premature for any genetic adaption to high altitude.

Likewise in quantitative genetic analysis (i.e. without identifying chromosomal locations, loci and alleles) revealed significant genetic variance in resting ventilation, hypoxic ventilator response, oxygen saturation and hemoglobin concentration in the Tibetans but only in the last two traits in the Aymara population of the Andes. Does this represent two different beneficial adaptations to the same stressor (high altitude) in these two populations? What then are the biologic pathways and the environmental influences linking the genotype to phenotype? Is this really the Darwinian evolution?

While these questions remain, based on the above discussion, my Peruvian friend probably is not related to the Tibetans. Further to my disappointment, there is evidence from dental morphology and mitochondrial and nuclear genetic markers that Tibetans are related to Korean, Siberian and Mongolian population whereas Andeans are probably the descendents of north –central Asian populations.

I brought up the issue of anthropology and ancestry because we are witnessing a huge exodus of Nepali medics to the West. While the diasporas' genetic material (with its inherent intelligence) may be passed on to the blond and the beautiful or the dark and the handsome ones here, our lifespan is too short for any evolutionary cause. On the other hand, provided the will, our life span is quite adequate to lead and live for the places where we come from. I am thrilled to hear the news about someone wishing to build up a lung center in Kavre district. I am equally respectful to our graduates who chose to contribute their valuable years to MMSN and mustered to turn a blind eye to the green dollar bills and trotted the untraded path of research and physiology. I am extremely proud of the young folks who are active position holders of several journals and last but not the least the executive members who are the real spokes and wheels of MMSN.

Thus, may we one day each write a chapter or tell a story about New York to Namche, Dallas to Damak, Philley to Fewa, Baltimore to Bangemudha, Calgary to Chihaanghaari……
MMSN ki Jai.

Dr. Pritam Neupane, MD
Johns Hopkins University/Sinai Hospital
Baltimore, USA

Time is life

Pranav Koirala

Sounds a bit odd, doesn't it? Maybe that's because most of us are quite used to saying, hearing or reading "time is money". Ah! Now that makes sense! And that was like me too until I got the opportunity to attend a training program on 'medical rescue at high altitude' organized by HRA and ICAR medcom. Thanks to the MMSN, now I know how seconds count in separating life from death, how some extra minutes could be the most vital minutes of a life, and how important it is for us not just to rote the ABCDEs of rescue, but to understand and be able to apply it in life.

The seven day training program was attended by thirty participants, most of whom were Sherpas and guides, a number of mountaineers and ten of us that included medical students and doctors from different hospitals. A wonderful experience in itself, it also gave us the opportunity to be near the real conquerors of the mountains.

Emergency medicine is evolving in Nepal but we still do not have an organized system which has the authority and the full capacity for rescue. The prognosis of the victims, which should depend on the severity of injury, instead depends on the know-how of the first person to reach the scene and with all the superstitions and low level of awareness of first aid we have here, one should consider himself really lucky if he reaches a hospital in good shape. As for example, if a victim has sustained a 'C' spine injury and some ignorant "rescuer" reaches the scene and conjures some foolish acts of "rescue" then won't the ill-fated guy fall a victim twice?

The situation in the developed world however is different because of the efficient rescue system. In England the rescue is performed by people from different backgrounds but all trained in basic rescue skills. It is a volunteer service there while at some other places in Europe the rescue workers are dedicated professionals in rescue and emergency medicine. These ensure that the majority of the rescue missions are carried out by the trained manpower in the shortest possible time.

Though the situation in our country might look distressing, we found out that this was also the situation in the developed countries not very long ago. Also, if one really seeks something positive then it might be said that the good thing about not developing first is that we don't have to go through all the mistakes of the developers for establishing a good rescue system. That's some good news, but the real challenge is not just to copy a system but to incorporate it into our existing social, political and economic conditions.

With all the problems of difficult topography and weather and the lack of proper logistics etcetera, etcetera, it won't be an easy task to put up a system for rescue in Nepal, but hey, looking at the positive side. We are the ones who are really going to benefit as we harbor many of the best adventure tourist destinations of the world. Any such steps to make our place a safer destination is bound to boost up the tourism industry as well.

The training program has also opened our eyes towards the new opportunities present for those of us neither wanting to join the mainstream of medical profession nor quite willing to limit ourselves to the mountain physiology and also to those of us who really love the mountains. I am looking forward to being a member of a rescue team and performing a real rescue task in the mountains (had enough of tiresome drills with healthy patients for sometime-just kidding!!).

Pranav Koirala, MBBS 4th year student
Maharajgunj Campus, Institute of Medicine

All roads lead to altitude

Paras Parajuli

Back home in Pokhara this saturday, I had a chance to meet my school day friends. They were happy to share their bike hike experience to Mukti Nath on newly constructed gravel road. They had surplus of memory and were elated to have that once in a life time experience. Enslaved by the beauty of mystic Annapurna range with tinge of pilgrimage, they were back to keep up their resolution to quit smoking.

Interesting guff session reached its climax when Gautam dai told everything was fun except two episodes of vomiting near Muktinath. Being an MMSNian this matter struck me more than their rhapsody. For an instance, I sounded like high altitude medicine pundit asking him what he went through and I didn't miss a second to declare that he could have been through medical emergency and thanked his good luck. He reciprocated my warning with amusement adding bikers from other groups were also vomiting and vomiting was a normal phenomenon above there. Then a talk on acute mountain sickness ended our rendezvous. They left learning the name of diamox and made sure that next time they won't repeat the same unpreparedness while scaling heights.

This information made me inquisitive, various questions and ideas occupied me. I started counting roads at high altitude, starting from road to Mustang, proposed road to Everest Base camp, East-West mountainous Highway, road to Manang, Karnali etc. I was surprised to discover the number of roads and the range of altitude these roads are being built. Theoretically, all of these roads are means of sudden change of altitude which accounts for precipitating AMS. Could AMS be a public health burden in these regions then? Like our research on AMS in children, we can start our research on these road users too. We can access knowledge on AMS and their attitude towards acetazolamide as well. Is it necessary to establish acetazolamide prophylaxis practice to these road users? These are few questions to be answered.

Many Nepalese people are like my friends who don't know anything about altitude sickness. Apart from MMSN's academic role, I think we should extend our wings to public health role too. We can educate people about altitude sickness and its preventive measures. Being centered to these roads at altitude. we must first confirm a group, which will be effective for such education. Just like we trained porters, we can train public vehicle drivers and their helpers. Because, they will be the most common road users and on the other hand they are in continuous contact with public and can carter what they have learned about the sickness. We can design posters, stickers to distribute to these public transportation users as well as private drivers and bikers.

Locals who are happy to use these roads and reach home in a day must be prevented from sickness they would never suffer if they have walked all distance in a week. These roads at altitude are unique research opportunities for us MMSNians and we must grab it by playing both academic and public health role.

Parash Parajuli, Pharmacist
Department of Drug Administration
Ministry of Health and Population, Nepal

Farewell words

Matiram Pun

Thank you for the great farewell and the wonderful company! I enjoyed working in MMSN from its very early period and it was very nice to be in the academic business, circle and work. The society gave miles of speed and tons of weight to my academic interests and a huge platform as an outlet for my energy. Thank you, Dr Buddha, for your untiring, ever encouraging and humble profile to help young medicos from Nepal and around the world.

I can't leave without thanking the people of IOM administration who are running the undergraduate programs so unscientifically that we got delayed by many months to more than half a year while going from one phase to another!!! Thank you so much for giving me the duty-free time to foster my interests in research and to work for the research agendas! To all the juniors and friends who are still in the IOM, I'll say, you have a great opportunity to get such free time to do great things! Take it!!

Then there were all those great seniors whose foresight came up with the concept of forming this society. That was indeed a smart move! Their mentality and leadership skills are what gave birth to MMSN and made the platform for all of us to work in. Thank you Pritam-Sanjay-Puncho-Santosh- Prajan-Devish dai and company for conceptualizing and materializing MMSN!

I'm so lucky that I got the opportunity to work with people who are great and brilliant doctors and scientists here. Obviously, it is not easy to get such a chance in life and we (MMSN members) are indeed privileged to have it. Anybody (medics) at anytime is welcome to join and work with us. The accessibility, flexibility and helpfulness of some of these great and brilliant people must never be taken as their weaknesses or lead us to underestimate them. I believe we should observe the ground our feet are in and know our own height while working with somebody, rather than being a camel who realizes his/her tallness only when he/she approaches a mountain.

There are some people who will always grumble, hold a grudge against you and complain about small things. We get to meet all kinds of people who come in different permutations and combinations. This is pretty fine as long as you understand the simple formula of working. I worked in the best way possible, i.e. with the society's best interest in mind, which may not make everybody happy of course. Criticisms always help correct us, so they are great.

There are many smart people who think they can win the Nobel Prize from the work and lab they have behind their kitchen or laptop, but then there are many who need friends, team, society or family to do some good work. Ordinary people, like me, are like that. Therefore, we need a society like MMSN to bring out the best in us and we should be grateful for it. Shakespeare in his drama 'As You Like it' says, "There is no rudeness more painful than somebody becoming ungrateful". This is true!

It is up to one's mentality, personality and perception that tell us how to handle things and give us the ability to utilize time, opportunities and achievements!

It took me more than two years to get to the program, Mountain Medicine and High Altitude Physiology. I must have exchanged hundreds of emails for it and got many recommendations too! I was in Lobuche when this opportunity popped up and I then started corresponding after coming back down. I give my thanks to MMSN executive for keeping this open for all interested members to try and correspond for it.

I was neither the best nor the most brilliant candidate but I got it due to all work in altitude/MMSN. I had no idea this would be taken so much into consideration. My work even led to their overlooking some other tests, like the English Proficiency Test, needed for this program. It is important to get the program you are interested in working in. So it became important to me, though it is definitely different for many others, which is also absolutely understandable.

Many people who are in altitude even tell me, "Ok, so you are the next Buddha Basnyat?" and my obvious reply is, "No, I'm not. NEVER!"! This is not because I don't want to be like him but because I can't. I know whom I'm being compared with and all that he has done. I realize how long and how much hard work he has done and what my own capabilities are. I wish I could be that smart.

There are many good famous people about whom you can read and you see them coming in their cars to seminars but hardly come to work with you. They are instead discouraging and intimidating. A great person will leave their impression on you, groom the new generation and hand over the baton to keep their work going on for ages, generation after generation! This is

(Continued inPage 13)

MATIRAM PUN INSIDE HYPOXIC CHAMBER, CALGARY, CANADA

(Continued from Page 12)

the best thing to contribute to society and humanity and a great privilege for us to be with them.

We are like 'batuwas'. We come, stay a while and go our way. But the society remains. And though we go our way, we muster so much love, respect and attachment for it during our stay. Long live MMSN and it definitely will!

I kick started a new project, which was much talked about many years ago to release MMSN T-shirts! It has now been released. Therefore, get in touch with the Dr Saroj, Dr Siddhartha, Mani, Kamal, Nirajan and others for it. It is now being produced and distributed in bigger amount to raise a little bit funds. The embroidery itself is expensive, so MMSN will have minimal margin of profit.

There are still quite a lot projects pending and as Prajan dai and Kshitiz dai keep on reminding me saying, "Yes, this is it and this is how it works - step by step"! Yes dai, Thank you!

I think the attachment to the society and the 'we' feeling gets stronger and stronger even as we go physically further and the society gets older. Isn't that right Soni didi? You still feel so worried and attached to the society even now and so do all the first executives. They are becoming more and more active the more they are going ahead in life! That's the spirit!! It is great that Dr Sanju did mountain medicine program and now I'm joining. MMSN is getting tuned to seeing its members and products going places!

I feel like I'm still working with MMSN even though I'm going far away for further studies. I'm very confident that the next team can take MMSN to newer heights. Go ahead friends and work! Thanks a lot for the great job in MMSN till now and I know you will do great things with it in the future too.

Thank you!

Dr. Matiram Pun, Post-graduate Student
Mountain Medicine and High Altitude Physiology
University of Calgary, Canada

The man from Rolpo: Matiram Pun

Buddha Basnyat

(This was Dr. Basnyat's speech during the farewell program to Dr. Matiram Pun)

As I said in the President's section, we are so engaged in doing things to achieve purposes of outer value that we forget that inner value, and the rapture that goes with it.

For me, being able to nurture the talent and motivation of Mati Ram has been a real privilege and this makes me happy and contended about having come back to Nepal. Helping people like Mati Ram is my small contribution toward my country and personally an example for me about this "inner value" thing.

PROF DR. BUDDHA BASNYAT WITH MATIRAM PUN

Mati to me is the real man from the hills, or the true hero from Rolpo (He is actually from Dang, from a village adjoining Rolpo, and I have used Rolpo as his village for dramatic effect). Being totally motivated and possessing more than adequate intelligence, he has shown us what we can achieve in life if we try hard. I think someone should write his biography!

He has decided to take the research path, a relatively untraversed path which probably is in keeping with Mati's desires and abilities. While most of his colleagues have chosen the American 'residency path" Mati has stuck to research (come hell or high water) and for this I take my hat off. I am convinced it is the untrodden path like his that has the potential of being more exciting, fulfilling and importantly, "boredom proof". One of the reasons I am involved in research is because clinical medicine alone becomes boring after a while. There are only so many COPD patients you can see per day without your creative instinct bearing the brunt of this. I love COPD patients and their stories; but the disease process becomes repetitive after a while, even if you make oodles of money. As Christ said, "Man does not live by bread alone".

How many people from his remote village in Dang in Western Nepal have been able to get into IOM? Probably zero besides Mati and yet he has found success all the way. In research too with his grit and persistence he will do very well. He is already well published with, among other articles, interesting letters to the editors of prestigious journals like the BMJ and the Annals of Internal Medicine. The last time I met Dr John West, he half jokingly said, "Who is this Dr Mati Ram Pun from Nepal that keeps on writing letters for the articles I write?" Dr West is an icon of high altitude medicine in the west, and I can clearly see Dr Pun in later years wearing the same mantle for this part of the world. This would be well deserved for the man from Rolpo.

In the field of mountain medicine he will represent our country and be its ambassador. With his background, experience, drive and knowledge, how could it be otherwise? Importantly he will continue to exhort and inspire our young doctors to be involved and engaged in mountain medicine. Going to study abroad for Mati will not be "mission accomplished", as it was for President George Bush after his initial attack on Iraq. Mati clearly wants to do more to help enhance the knowledge in this field. Let us all pledge to help him in this sacred endeavour which even Kailash pati Mahadev will surely bless.

Dr Buddha Basnyat, President
MMSN

Surviving the white death

Sanjay Yadav

AVALANCHE: WHITE DEATH

Avalanche accidents or 'the white death' comprise one of the most common causes of death in mountaineering. According to the available data, the Alpine countries of France, Austria, Switzerland and Italy and the mountain ranges of North America experience the greatest number of avalanches and loss of life annually.

The Nepalese Himalayas observe a significant number of avalanches throughout the year but the lack of hazard mapping system, scanty monitoring and forecasting technologies and unavailability of rescue services contribute to an enormous infrastructural damages and human morbidity and mortality. The first detailed analysis of deaths during expeditions to Mount Everest summit found that the largest class of deaths was trauma involving objective hazards such as avalanches, icefall collapses, crevasses, and falling rocks.[1] These findings alert mountaineers, people inhabiting the avalanche-prone areas, workers in mountain related services including the mountain medics to be 'avalanche aware' and brace themselves with the knowledge of rescue techniques and avalanche survival.

European researchers found that the most common cause of death in avalanche is not traumatic injury, but suffocation. A retrospective study to determine the severity and pattern of injury in avalanche victims admitted to the University Hospital of Innsbruck between 1996 and 2005 found the majority of fatalities (91.7%) were due to asphyxia.[2] The common goal of various rescue technology is to keep victims breathing and enabling rescuers find and uncover the buried. The following article is a brief introduction to some concepts, techniques and equipments applied in avalanche rescue. The advisory mentioned below is more relevant to alpine mountaineering and ski resorts where the rescue services are a radio-call away. This article aims to generate interest among Nepalese mountain medics to discuss practicalities and explore avenues for establishing such avalanche rescue system in (Nepal) the areas of highest need.

A) Techniques

Look for further hazards

The first reaction following an avalanche accident is to look for any residual hazard and if it is safe for the rescuer to work on the avalanche site. This follows a quick visual search. If no visual clues are present and the rescuer is not equipped with transceivers, immediately summon for help. Once the incident is established, consider to maximize the number of searchers.[3]

Initial search

After determining how many people are missing, it is critical for all rescuers to have his or her transceivers in search mode. The transceiver search should be done in conjunction with a thorough visual search for partial burials and articles as clues. Ideally locating someone with transceiver quickly and be able to deal with multiple burial situations would be most important. Probes and shovels should be assembled quickly in order to do the final location and extrication. If there are enough searchers, random probing of likely areas can result in quick location. The team should begin looking for clues on the surface (a hand or foot, piece of clothing), beginning with the point where they were last seen. The idea would be to move down the slope, kick over any large chunks of snow that may reveal clues. Marking the spots as we would move across would help defining the location.

After searching for clues, or using transceivers and/or probes if it still does not reveal the location of the victim, it may be time to rely on outside help. In European Alps and North Americas the nearby mountain rescue teams are usually staffed with personnel experienced to handle these situations. They have equipment to locate the victims and dig them out and they may also have avalanche dogs that can help find victims. Ski area patrollers usually also have first aid equipment.

Digging and extrication

Efficient shoveling in relation to burial depth is important. If the burial depth is greater than a meter, starting to dig away from the center and ideally moving snow in a downhill direction helps. If there are two people available to dig, it is usually easier to have them dig rapidly one at a time and spell one another off as soon as they start to tire.

It is often easier to have two people shoveling quickly and have them replaced often. Extra care should be taken when getting closer to the victim as shovels and probes can seriously injure a person. Clearing the face to allow the person to breathe would be the priority. The victim's beacon should be turned off as soon as possible to facilitate searching for others. Once everyone is found, all beacons should be put back on send mode.

First Aid

Although the primary concern is suffocation, avalanche victims are often injured. As with any first aid situation, the ABCs (airway, breathing and circulation) protocols are to be followed. Hypothermia is a potential complication to avalanche burial. In the multiple person burial situations, difficult decisions may be required on whether to continue with resuscitation attempts or to continue the search for others which also largely depends on the number of rescuers and victims.

Evacuating and calling for help

Once everyone is accounted for and injuries are treated the subsequent step would be to consider evacuating injured victims. Good communication

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capability will make a difference. If this is not available, you will need to send someone for help. Organized rescue services will need to know the location, time of the accident, number of people to evacuate and nature of injuries. Knowing the weather and the terrain at site is required to make an assessment on helicopter access and landing sites. The rescue team may also decide to move to a different location for safety considerations.

Communication

Mountain rescuers in the Western nations use programmable radios that can access mountain top repeaters that are located in a number of locations. These repeaters are not there for public use and accessing them requires permission from the owner and a license for the radio. Mobile phones are virtually useless in most backcountry areas. Satellite phones have come a long way over the past few years in terms of size, reliability and price. They are the most reliable way to access outside assistance and can be rented for short durations.

Rapid extrication is absolute priority

Once the victim is found, it is critical to unbury them as quickly as possible. Survival chances decrease rapidly depending on how long a victim remains buried.

B) The equipment useful in avalanche recue:

Portable shovels made of plastic and aluminum is lightweight and compact enough that they can be carried in a pack. Digging with a shovel, as opposed to using hands or ski poles, can dramatically decrease the time it takes to dig out a victim.

Collapsible probes or ski-pole probes are easy to carry along. Collapsible probes usually consist of two-feet long tubular steel that join together to make a probe some ten to twelve feet long. Ski-pole probes are made so that grips and baskets can be removed. The two poles can then be joined together to form a probe. Probing is essential to finding a buried victim if there are no visible clues on the surface.

Electronic Transceiver: They provide the fastest way of locating a victim. When a victim is buried, the transceiver will emit a frequency that other transceivers can home in on. A transceiver will not help locate a victim who is not wearing a similar one. Likewise, a victim with a transmitting beacon may not be found unless someone else has a transceiver to pick up that signal.

Avalanche cord: An avalanche cord is a fine brightly colored nylon cord that is attached to one's body and drags free.

PROBING TO FIND A BURIED VICTIM

It is most effective if the free end has a helium-filled balloon attached to it.

Snow tools: A light weight snow-saw if available is useful for isolating columns in snowpits.

Mountaineering rope: If available can be used for crossing snowfields, descending steep slopes and locating victims when an avalanche has occurred.

Tympano-thermometer for core temperature

Airway warming device to administer warmed moistened oxygen

Air pocket: During the snow burial, cupping your hand or an arm over your mouth will create an air pocket that allows you to breath and increases your survival time. There are artificial air pocket devices to serve for the same purpose and are routinely used during mountain activities in avalanche prone areas.

Some rescue equipments can be hastily improvised for example, ski poles can be used as short probes and skis or snowboards when available can be used as shovels.

C) The calculated survival probability using a large scale data between 1981 and 1991 in relation to the length of time buried under the snow states that at 15 minutes the survival probability (92%) are markedly higher, but the survival function then drops precipitously to only 30% at 35 min, representing deaths through acute asphyxiation. Thereafter, survival is impossible without an air pocket. After 90 minutes, victims gradually succumb to hypoxia and hypothermia unless the air pocket is open to the outside.[4]

Burial time under 35 minutes

Survival depends on preventing asphyxia by rapid extrication and immediate airway management; cardiopulmonary resuscitation should be immediately instituted for unconscious victims without spontaneous respiration.

Burial time over 35 minutes

Survival depends on combating hypothermia. Thus, gentle extrication, core temperature monitoring and body insulation are mandatory; unresponsive victims should be intubated and pulseless victims with core temperature < 32°C (prerequisites being an air pocket and free airways) transported under continuous cardiopulmonary resuscitation to a health care facility for extracorporeal rewarming.[5]

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Dr. Sanjay Yadav, MBBS
MMSN Member
Currently in USA

Interview with Dr. Hermann Brugger

Dr. Hermann Brugger is from the Dolomites in Italy and is the president of the International Commission for Mountain Emergency Medicine (ICAR MEDCOM). A General Practitioner by profession, he has been involved in mountain rescue since the early 80s. MMSN team caught up with him when he was in the town for the ICAR's training on 'Medical rescue at High Altitude.'

DR. HERMANN BRUGGER

Could you please tell us something about the ICAR?

ICAR, the International Commission for Alpine Rescue, was founded in 1949 in the Alps by South Tyrol (Italy), Austria, Germany, Switzerland and Slovenia. The main goals of ICAR were to improve rescue equipment, techniques and procedures in the Alps. Meanwhile it has increased to 29 member countries. Nepal is a corresponding member and Japan has joined us recently. Maybe Australia and New Zealand will be the next members. So it has become a worldwide organization.

ICAR consists of four sub-commissions. We have the air rescue commission, the avalanche commission, ground rescue commission and the medical commission. The medical commission aims at improving pre-hospital treatment of casualties in the mountains. We do a lot of research and publish the results of our scientific work. In addition, we try to teach doctors and paramedics of our member countries in Mountain Emergency Medicine.

How is the ICAR MedCom trying to standardize the medical rescue in its member states with different medical systems?

This is a critical point and I must admit there are hardly any standards in technical rescue on the ground. There are some standards in avalanche rescue, good standards in air rescue techniques and in the medical on-site treatment. In the last 10 years, we've been able to establish 18-20 recommendations and to publish them in renowned scientific journals. They're all available on the internet for free. And they should guarantee a minimum standard for emergency medical treatment in the pre-hospital phase. But in technical ground rescue this is rather difficult.

How much does ICAR deal with preventive aspects related to altitude?

We are not dealing with preventive medicine as much. Prevention and treatment are like two sides of the same coin. We have divided our tasks: preventive issues belong more to UIAA and emergency treatment is our main goal.

How did you come up with the idea to conduct this training in Nepal?

We do a lot of research and training in the European Alps. But so far we did very little in the other member countries. So there is a gap. That's why we go to these countries with a small faculty to teach mountain emergency medicine instead of bringing the attendants to Europe. For the first time we run a course in 2005 in Patagonia (Argentina) that was a great success. Many participants came from almost 3000 miles along dirty roads. I think this was the first kick for us to go ahead.

Three years ago I met Dr. Buddha Basnyat, who's a very good friend of mine, an excellent researcher and also very interested in Mountain Emergency Medicine. At a World Congress in North America I presented the Patagonia course and Dr. Basnyat showed great interest. Two years later we met again in Aviemore in Scotland where we fixed the date and agreed to run the course in Nepal.

How different is the course content of this training from your regular trainings in other countries?

Not a great difference because we have standardized the course program. The agenda of the course is approved by UIAA the International Climbing and Mountaineering Federation, ISMM the International Society of Mountain Medicine and by ICAR. So we have to comply with these minimal requirements during the courses.

By training us, what do you expect at the end of the course?

Motivation. Motivation is the most important issue. Everything in the world starts with an idea. We cannot produce professional mountain rescuers in one week, this is not possible. But the basics can be taught in one week and this would be a stimulus to work in this field.

Do you have plans to extend this program to other Asian countries like Pakistan or Tibet?

We would be willing to do this. It is a question of the readiness of those countries. If they show interest in organizing it, which is not that easy, then we'd be ready to help.

What do you think of the present rescue situation in Nepal?

It is comparable with the situation in South America. Similar situations are present in many other countries. It is also comparable with the situation in Europe some decades ago. In the 1960's and 70's we evacuated almost only dead bodies and nearly no rescued casualty was alive unless he was uninjured. To bring down a heavily injured person from a mountain was very difficult. At that time some rescue operations took not only hours, but even days. So the situation was similar to Nepal, I remember very well that we started like that. It took us 50 years to improve the situation. You'll be faster.

If the current rescue situation improves in Nepal do you think the number of tourists coming to Nepal will also improve?

I think safety is as important as it never has been in history. People do like fun, they take risks but they do never want to die. There are many new sports activities like canyoning, rafting, hang gliding, base jumping etc. etc. it is incredible. All these activities go in the same direction: more adrenaline, more risk, but people don't want to die because of it. So, safety has

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Interview with Dr. Brugger

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become more and more important for sport equipment, rescue techniques and medical treatment.

What are the things you would suggest to improve the medical rescue situation in Nepal?

There are many countries where mountain rescue is well organized, such as Switzerland, Austria or Italy that have good organizations. They could be examples. But on how to organize rescue operations in Nepal, I couldn't answer this question in a few words. I'm sure it takes a lot of work and time.

From the medical point of view, this depends on the strategies. There are two different systems in the world for pre-hospital medical treatment of casualties. There are paramedic based and physician based systems. In Europe most of the countries have physicians who go out for rescue operations with the ambulance car or with a helicopter trying to bring the doctor to the patient and not the patient to the doctor. By contrast, in the UK and especially in North America and in most South American countries, doctors don't go out of hospital. They have paramedics working in the field who are equally trained. They follow the same treatment protocols and they're as good as doctors. Training is the most important issue. You can choose either, both systems have the same goal: to bring the treatment to the patient and not the patient to the treatment.

Which system might be better for Nepal?

I'd rather say the paramedic based.

Had you been to Nepal before? What do you think of Nepal and Nepalese people?

This is my first time here. It is a fantastic country, I love it. Nepalese people are great and have a delightful sense of humor as we have in the Alps (laughs). We feel much enthusiasm and I would like to thank the Nepalese and the Himalayan Rescue Association for the great hospitality and excellent organization of this his course

Thank you Dr. Brugger

The lodges of Langtang

Ravi Shankar

Langtang is a Himalayan region due north of Kathmandu. During the Dashain and Tihar vacations last year I got a chance to visit this beautiful region. I had previously trekked in the Annapurna and Everest region and was fortunate to have spent two months on research projects at Pheriche and Lobuche in the Everest region. I usually trek in the autumn during Dashain and Tihar holidays as there is vacation for the college, the days are sunny but not hot; the monsoon has ended, the dust settled and the mountain views spectacular. Unfortunately this is also the 'high' season for trekking in Nepal and the lodges are very crowded and the trails full of trekkers and trekking staff.

Annapurnas and Everest are the two most popular trekking regions. The trek often becomes a hunt for accommodation, a place to sleep at night. The large groups send their guides ahead and corner the limited accommodation leaving little behind for ordinary mortals like us.

I was pleasantly surprised while trekking in Langtang. The lodges were not as fancy compared to Annapurna or Everest but were perfectly adequate and comfortable. There may be occasional problems for accommodation at Syabrubesi at the start of the trek (as lodge owners keep their rooms for the 'kuires' who reach by evening) but afterwards good lodges are relatively un-crowded. The people are friendly and the scene less commercialized. The first stop for most trekkers is Changdam better known as Lama Hotel. There are seven lodges at this clearing in the forest and all the lodge owners were requesting my custom. It was a pleasant change to be so much in demand among lodge owners instead of having to hunt for lodgings!

This was to be the trend throughout the trek. There is a national park check post at a place called Ghore Thabela and permits are checked here. Ghore Thabela is at around 3100 m and the trail climbs out of the narrow valley carved out by the Langtang Khola and enters the U shaped upper valley.

I met a lodge owner from Langtang who was on his way down and he requested me to stay at his lodge in Langtang village. The lodge was a large one situated towards the other end of the village. Immediately on entering Langtang I became the center of attraction. Lodge owners were all requesting me to stay in their place. Many proposed that I could stay at their place for free if I ate my meals at their restaurant. Dal bhaat was costing around Rs. 180 at Langtang but many were offering me discounts and I could have eaten my fill at around Rs. 150.

The lodges did not have fancy dining rooms, designer bathrooms or cozy bedrooms like in the Annapurna and Everest region. The dining rooms were adequate, and heated by wood burning stoves which made my 'green' conscience uneasy. The bedrooms were neat and tidy, blankets and siraks were available and the chef (actually the lady of the house) turned in tasty and wholesome food. Many lodge owners had relatives who operated lodges up or down the valley. The valley bottom route till Langtang village did not have villages and the habitations and lodges were created for the benefit of trekkers. I was requested to stay at a particular lodge in Kyangjin. The lodge was small but the lodge owners took extra special care of me.

The view was magnificent and I was offered more blankets for the night if needed. The food was tasty and the dining room warm. The owners requested me to come back another time and spend more time exploring the spectacular upper valley. They were ready to provide tents and a guide if needed. The lodge was more than adequate.

I am a simple man with simple tastes. A hot shower, a reasonably clean bed, and a clean toilet, what more can one ask for. I am not finicky about sheets being changed everyday and the bed linen and table clothes being disinfected.

The Langtang lodges are small, adequate and comfortable. The owners are friendly, the place not highly commercialized; the scenery beautiful, the trekking not strenuous and the crowds are missing. There are enough people for companions along the way but not enough for a crowd. Our MMSN members should enjoy the gentle magic of the lodges of Langtang.

Dr. Ravi Shankar, Pharmacologist
KIST Medical College

Gosainkunda health camp 2008: A scientific adventure

Ghan Bdr. Thapa (Kamal)

'Life is a journey.' I used to agree with this simple statement but I never thought the journey of life could be so wonderful filled with joy and ecstasy experiencing a constant flow of bliss. And this is possible especially when the road ahead leads to a fascinating destination. Yes, it was during last year's Janai Purnima festival when I was destined to be at Gosainkunda with some great people for the noble cause of conducting a free health camp and research organized by Himalayan Rescue Association Nepal (HRA) and Mountain Medicine Society of Nepal (MMSN).

Gosainkunda, a sacred lake at an altitude of 4380m, is indeed a paradise on Earth! The beautiful waterfalls, the crystal clear water, the green grasses, multicoloured flowers and trees, steep and lofty cliffs, and the beautiful landscape on the way give an immeasurable joy during the journey!

The magnificent nature, quite different from the hustle and bustle of the city and far away from the polluted streets and thoroughfares of Kathmandu, is itself a great book that teaches something more than the printed words of the text.

From the vastness of its beauty, a poet could borrow some words and make a rhyme, a painter could borrow some colours for his canvas, a musician could borrow some tunes and a singer could borrow some mellifluous songs! I imagined how the people like Shakespeare, Wordsworth, Eliot, Ghalib, and Laxmi Prasad Devkota would have described it if they were lucky enough to be there!

It being a rainy season, those snow–deprived mountains made me more imaginative and more creative. I could imagine how the snow-capped mountains would look when reflected in the water of the lake in the winter!! I realized that a place so far away from the modern attitude of people (no artificial way of life, no roads, no cars, no luxurious hotels, no discotheques, no pub, no fun park, no movie theatre….) could be so much wonderful! In fact, every moment was glorious, every breath was satisfying! The fresh air (though we call it hypoxic!!) made us free from the bookish boredom for few days and it really revitalized and reenergized us.

While working on the health camp, I realized how useful and practical were the books and the articles that we used to read, the things our sir, Prof. Basnyat, used to talk about, the matter we used to discuss in our journal clubs and the theoretical knowledge that I had learnt while working on translation of the book Travel At high Altitude.

I was filled with pride and pleasure to be able to help the hundreds of people amongst the thousands of pilgrims who were there to the shrine of Lord Shiva to take a holy dip in the holy lake. We should always respect the beliefs of people (like washing away all the evils and sins of their lives by taking a holy dip!!) but the only surprising thing was their ignorance and the lack of proper counselling about altitude sickness. One of them was an old man with COPD and some neurological problem who was going up to pray to lord Shiva to get rid of the problem. The joys and sorrows, hopes and frustrations that I could read on the faces of human beings were the things that I learnt besides high altitude medicine and emergency care.

LAKE GOSAINKUNDA, 4380M

It may be a surprising fact that not only that old man, but also some of us are quite ignorant about altitude sickness! I remembered one of my classmates asking 'does something called altitude sickness really exist?' He would have got the answer if he were there seeing all those unacclimatized people complaining of headache, dizziness, nausea, shortness of breath, sleeplessness and other symptoms related to hypoxia and high altitude.

Another thing I came to realize was that we doctors are made not only for well equipped sophisticated modern hospital cabins but also, we should be able to work in such extreme conditions in a limited space and with limited resources for the welfare of human beings. And yes, in this world of extreme selfishness, I learnt SERVICE and learnt to cherish the respect to our profession!

For this, I am very much grateful to HRA, MMSN and to those one hundred children who were part of my study. With the vibrant festive feel and with the increased appetite for research and mountain medicine, our journey, a scientific adventure fortified with spiritual ecstasy, ended for this year. But, no doubt, time will go on. We may get replaced by somebody else and like we did this time, they will be working there and enjoying the beautiful song : 'Aakash bata ke udi aayo veda ko uun jasto, maya ko photo mai khichi lanchha purneko jun jasto". And this tradition, our MMSN, and the service will live for eternity!

Finally, hey glorious Gosainkunda, see you again!!

Oh! I almost forgot, hey Lord Shiva, sorry!! We didn't take a holy dip even once! But you might have seen our service for whole of the three days, wasn't that as holy as the holy dip?

Ghan Bahadur Thapa, MBBS 4th year student
Maharajgunj Campus, Institute of Medicine

Research in Khumbu

Kerstin S. May

I had always wanted to visit Nepal to trek to Everest Base Camp, likely inspired by some majestic photo of mountaineers I once saw in a magazine. So when the opportunity arose to do an altitude sickness research in the Khumbu, I sent out my application and accepted the position as quickly as I could. Packing for such a trip was an adventure in and of itself - how many shirts do I bring? Do I need a heavy coat? Gloves vs. mittens? After a lot of preparation and a few VERY long plane rides, I arrived in Kathmandu in the middle of the night. We spent a day sight-seeing in Kathmandu, and met Dr. Buddha Basnyat, who had established our contacts with the Himalayan Rescue Association. Early the next morning we boarded the flight to Lukla and the trip began.

Our group was the second of the study - there was already a group who had been collecting data for a month. The research team consisted of medical students and residents from all over the United States - California, New York, Georgia, Montana – and my group was lucky enough to have a Nepali doctor (the esteemed Dr. Yadav) and a Nepali medical student as well. We met up with the first research group in Namche Bazaar for a handoff of equipment and information, and from there continued upward towards Pheriche, Dingboche and Lobuje. We broke into smaller groups and took turns staying in Periche and Dingboche to enroll study participants, and hiking up to Lobuje to collect data. From Lobuje, the highest data gathering site, we made a day trek to Gorak Shep and then on to the base camp and Kala Pattar. Trekking through continuously higher altitude was difficult. We had to stop every 10 minutes to rest, but as soon as we began to walk again, our legs felt heavy and in need of more oxygen. We had brought pulse oximeters to measure the research participants saturation levels, and at the top of Kala Pattar (5643 m), my pulse was 120 with 76% saturation - at rest! While it was a difficult climb, we found ourselves with a 360 degree view of some of the highest mountains in the world, to say the least, of Mt. Everest itself. I felt such a deep sense of awe and wonderment at the majesty of these peaks. Truly, I have never seen anything more beautiful!

Back down in Periche and Dingboche, we spent our days meeting people working in the tea houses, at the Himalayan Rescue Association, porters, and trekkers from all over the world. We were able to see first hand just how ill people can become with altitude sickness. Europeans, Americans, Australians and Nepali lowlanders alike - it is fascinating and alarming the spectrum of how differently people can be affected by the same altitude. One member of our group assisted a porter down from Lobuje with florid pulmonary edema, foaming at the mouth, with oxygen saturation of 53%. We all saw people with the entire spectrum of symptoms from simple headache, to symptoms of increased intracranial pressure, cough to pulmonary edema. More than a couple of us experienced Cheyne-Stokes breathing of our own at night. I continued to remain tachycardic with decreased appetite, myself. Luckily however, Dr. Yadav seemed to be able to keep his appetite!

When we had enrolled enough participants, we started to make our way back down. We took the long way back down to Namche carrying our own gear, through Gokyo and over Cho La and Renjo pass. By the time we finally reached Namche, we were exhausted. Between all of the trekking, decreased appetite from the altitude and episodes of gastroenteritis, we all had lost quite a bit of weight. All the more reason to eat more momos when we returned to Kathmandu! However, every single day I was astonished and humbled by the beauty of our surroundings. Nepal is a beautiful, beautiful place, with equally as beautiful people. Though I may have started my journey to Nepal thinking seeing Mt. Everest was going to be the best part, I left knowing that the people and places along the way are what made the trip so special. I am grateful to Dr. Basnyat for helping us to conduct our study in Nepal, and for all of the experiences I had along the way. I look forward to returning to Nepal to visit the friends I made, and to explore more of this amazing country!

MT. EVEREST AND LAKE GOKYO AS SEEN FROM RENJO PASS

Dr. Kerstin S. May, Resident Doctor
Buffalo, USA

MMSN News desk

1. A training program for porters going to high altitude was conducted by MMSN members Dr. Jhapindra Pokharel and Dr. Rashmi Banjade at the office of Himalayan Rescue Association (HRA).

2. Dr. Siddhartha Yadav and Dr. Saroj Neupane participated in the South Asian Forum for Health Research (SAFHeR) meeting held in Kathmandu and organized by Nepal Health Research Council (NHRC). Dr. Giselle Jones from the BMJ and Dr. Jeremy Farrar from Oxford University were amongst the external speakers of this meeting.

3. Six MMSN members participated in the week long training (24-29 may) training, 'Medical rescue at high altitude', organized by International Commission for Mountain Emergency Medicine (ICAR MEDCOM) in coordination with Himalayan Rescue Association, Nepal (HRA). The MMSN members who participated in this training were Dr. Subash Khanal, Dr. Siddhartha Yaday, Dr. Chhabindra Nepal, Ghan Bahadur Thapa(Kamal), Mr. Pranawa Koirala and Mr. Nishant Dhakal

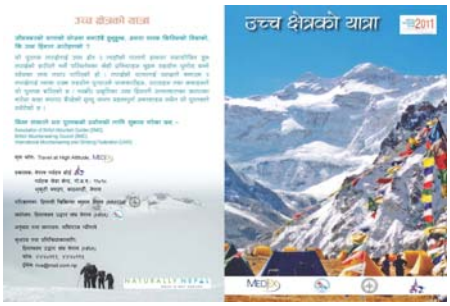
4. On 3rd May 2009, MMSN organized a farewell programme to Dr. Matiram Pun at basic science building of IOM. MMSN is grateful for his contributions to the society and hopes that he will continue doing so and also wishes him a successful future!

5. Dr Matiram Pun participated as altitude doctor in T-20 cricket (Tenzing team and Hilary team) tournament held at Gorekshep(>5000m) on 21st April 2009.

6. Dr. Matiram Pun accompanied a trekking group as a group doctor to Everest base camp in the second week of March 2009.

7. Dr. Saroj Neupane participated in a month long elective in Oxford University, UK which was organized and coordinated by MMSN.

8. With the coordination and concept of Prof. Buddha Basnyat, MMSN worked with MEDEX society of UK, and Mr. Maniraj Neupane translated the book 'Travel at High Altitude' in Nepali. Also, Prof. Basnyat initiated the project with his generous and non-refundable financial assistance required for the translation and the Nepali typing. Thank you sir!!



9. The Documentary show 'Everest: Doctors in Death Zone' was a huge success at TUTH seminar hall with more than 150 viewers.

10. Dr. Siddhartha Yadav and Mr. Pradeep Chapagain participated as investigators in Ibuprofen Study (ASCENT trial, ISRCTN91790322) in Nov 2008.

11. MMSN members Dr. Saroj Neupane, Dr. Siddhartha Yadav and Mr. Ghan Bahadur Thapa(Kamal) participated in a scientific paper writing training on 5 sep 2008 at Hotel Annapurna , organized by Nepal Health Research Council(NHRC).

12. The AMS study done in children in Gosaikunda by MMSN members Dr. Santosh Pradhan, Dr. Pritam Neupane, Dr. Sanjay Yadav and Dr. Prajan Subedi in 2003 has now been accepted for publication in Wilderness and Environmental Journal as Brief Report. Congratulations!!

13. Journal clubs are being held at regular intervals. Four journal clubs have been held till July in 2009. Mr. Ghan Bahadur thapa, Mr. Subarna Adhikari, Mr. pradeep Chapagain and Dr. Ashish Lohani were the presenters of these journal club.

14. We are proud of MMSN members who have taken leadership in research and academia also in fields other than mountain medicine. Keep up the good work. Here are few examples:

- Dr. Matiram Pun, who was awarded the best research department award of 2008 by Journal of Young Investigator (JYI), has now been appointed as the Senior Research Editor of JYI. Congratulations!!
- Dr. Siddhartha Yadav and team secured 2nd runner up prize in paper presentation competition on HIV/AIDS in East Asian Medical Students' Conference held in Kuala Lumpur, Malaysia in Jan 2009.

15. MMSN members are also writing regularly in international journals of good repute. Here are few examples:

- BMJ. 2009 Jan 9;338:b41. doi: 10.1136/bmj.b
- Ann Intern Med. 2009 May 5;150(9):653.
- BMJ. 2009 Jun 29;338:b2628. doi: 10.1136/bmj.b2628
- Also, see blogs by Dr. Matiram Pun and Dr. Siddhartha Yadav on BMJ blogs and BMJ doc2doc website.

Keep on writing !!

16. MMSN now has its own official t-shirts. This was made possible by the active work of our secretary Dr. Matiram Pun (See the photographs).

MMSN T-SHIRT: FRONT AND BACK

Send us your feedback at sid.siddhartha@gmail.com

MMSN Newsletter

Mountain Medicine Society of Nepal