



As a specialty trainee in Restorative Dentistry, one of my primary roles is the management of patients who have lost teeth as a result of head and neck cancer, severe trauma or those who have developmentally absent teeth. One commonly utilised treatment option for replacement of missing teeth in these patient cohorts are dental implants. The International Team for Implantology education week, held at the Centre for Continuing Dental Education within the University of Bern, was a comprehensive course on implantology. The course taught an evidence based approach to risk assessment, planning, surgical placement, restoration, maintenance and management of complications of dental implants.

The University of Bern is a center for excellence for dental Implantology and the course directors are prominent clinicians in this field, including Prof. Buser, Prof. Belser, Prof. Bragger and Prof. Sculean. In addition to an excellent faculty of course speakers, being taught by world renowned clinicians and researchers ensured the academic and educational value was maximized. The course learning objectives were:

- Learn why a comprehensive preoperative analysis and risk assessment is important to establish the basis for successful long-term outcomes with implant supported restorations
- Understand the basics of restoration-driven implant placement and the concept of contour augmentation using GBR to optimise aesthetic outcomes
- Know the indications and clinical step-by-step procedures for screw-retained and cemented implant restorations
- Learn how to maintain dental implant longterm and how to treat and prevent complications with implants and implant restorations

Situated in the Swiss capital, the University of Bern was founded in 1834 and is the 3<sup>rd</sup> biggest university in Switzerland. The University is highly research active, particularly in the field of Dentistry, and produces clinical research key to the development of implant protocols across the world. Set against the backdrop of the beautifully preserved City of Bern, this modern academic institution is at the forefront of dental Implantology innovation.

The education week consisted of 5 days of lectures, hands on practicals, live surgeries and case based discussions providing a comprehensive curriculum including all key areas of implantology. Individual elements within the structure of the course complimented each other to reinforce the underlying principles learned.

The first day focused on oro-facial anatomy, principles of osseointegration, risk assessment of patients and generic treatment options available for dentate, partially-dentate and edentulous patients. This was taught predominantly through lectures from experts in each area. At the end of the first day delegates were challenged to utilise the information gained in the planning of an advanced case requiring an implant based reconstruction, using a patient centred and evidence based manner.

The second day commenced with a case based discussion of the previous days case. Participants were encouraged to discuss all aspects of the case and consider alternative options, which may have different risks and benefits. Day 2 focused on the practical aspects of implant

surgery, restorations of dental implants in partially dentate patients, options for guided bone regeneration and grafting and prosthetic options for edentulous patients. Lectures were interspersed with 3 live surgical demonstrations in which patients had dental implants placed using a variety of techniques. While the surgery was performed, and shown via a high quality video and audio link, the surgeon explained individual steps of the procedure and the rationale for doing so. Within the lecture theatre another surgeon was present to take and communicate questions to the operating surgeon, discussing key points as the surgery progressed. Day 2 closed with a practical placing tissue level dental implants in a model, utilising techniques explained in lectures and live surgeries.

Day 3 opened with another practical focusing on the placement of bone level dental implants and guided bone regeneration procedures; developed, researched and published by the University of Bern. The lectures on day 3 focused on the maintenance of dental implants, management of dental soft tissues around implants and the provision of aesthetic restorations on dental implants. These lectures again were supplemented with 3 live surgeries evidencing the assessment, challenges and procedures involved in the placement of dental implants. Wednesday closed with another case presentation requiring delegates to use information gained to formulate a plan for a patient managed at the University of Bern.

The 4<sup>th</sup> day began with a discussion of the potential management of the case presented on the previous day and an explanation of the management provided by the treating clinicians. Lecture topics for this day focused on anatomy of the aesthetic zone, changes following tooth extraction, implant placement protocols in the aesthetic zone and subsequent restoration of these dental implants. Didactic teaching also focused on the development of digital techniques for planning and dental reconstruction with implants. Course delegates participated in a hands on practical learning different techniques to optimise impressions of dental implants (to facilitate fabrication of restorations) on both bone level and tissue level implant platforms.

The final day began with a practical teaching the different techniques for fabrication of aesthetic dental provisional (interim) restorations. This was followed by lectures on the handling of complications associated with dental implants; biological, prosthetic and surgical. The second half of the final day gave an overview of procedures utilised in patients with inadequate bone volume for dental implants, i.e sinus floor elevation, complex GBR and bone grafting, and also the prosthetic handling of extended edentulous regions which often results in challenges for clinicians managing these patients.

On reflection I felt this course was extremely valuable for my continuing professional development and intimately linked to my training and role working as a specialty trainee. The course was a comprehensive overview of dental implantology which had the ideal combination of theory and practical applications. The intense nature of the course was effective in providing a wealth of information and reinforcing the key learning points. Having the opportunity to learn from prominent clinicians in the field of dental implantology, particularly those involved in relevant clinical research, optimized the value of this course to my training.

At the end of each day I was fortunate to have the chance to explore the picturesque city of Bern. Prominent tourist art actions such as the historic bear pit, new bear enclosure and the historic architecture were very enjoyable. The non-academic highlight of my trip was the chance to participate in Urban Swimming, a popular local and tourist activity involving swimming in the river running through the City of Bern.



I would like to thank the college for offering me the opportunity to visit the University of Bern and participate in the International Team for Implantology education week through the award of the TC White Travel Grant. I hope to utilise and share the skills and knowledge gained on this course while providing care to patients in Glasgow Dental Hospital and School.

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