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**Practical Diabetes** 

## Vacation Ease: Travelling with an Insulin Pump

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#### ABSTRACT

*Background:* Vacation travel is a welcome retreat from our everyday world. Whether the trip is trekking in Nepal, a ski vacation in the western Rockies or a beach holiday to the Caribbean, the insulin pump is a constant companion for many people with diabetes. As a healthcare professional assisting individuals in their travel plans, we can contribute to the success of their trip by encouraging early preparation and by sharing practical and timely tips.

*Purpose*: To provide current information and practical insights for healthcare professionals (HCP) who are counseling patients with diabetes travelling with an insulin pump.

*Limitations:* There are numerous suggestions for all patients with diabetes who travel. This article will focus on travel recommendations specific to the pump user. Due to the lack of research in this area the information shared is based on evidence where possible and otherwise patient experience.

*Conclusion:* Insulin pump users can enjoy any type of vacation travel. Certain destinations require more preparation than others but regardless of the choice of venue, preplanning in collaboration with a knowledgeable health care provider can contribute to a successful experience.

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#### RÉSUMÉ

Introduction: Les vacances sont bienvenues pour s'évader de notre quotidien. Qu'il s'agisse d'un voyage d'aventure pour réaliser un trekking au Népal, de vacances de ski dans les Rocheuses occidentales ou d'un séjour de vacances sur une plage des Caraïbes, la pompe à insuline est le fidèle compagnon de nombreuses personnes diabétiques. En tant que professionnels de la santé qui aident les individus à planifier leurs voyages, nous pouvons contribuer à la réussite de leurs excursions en les encourageant à les préparer, et en leur partageant des conseils pratiques et opportuns.

Objectif: Fournir de l'information à jour et des connaissances pratiques aux professionnels de la santé (PS) qui conseillent les patients diabétiques apportant en voyage une pompe à insuline.

Limitations: De nombreuses suggestions sont proposées aux patients diabétiques qui voyagent. Le présent article porte principalement sur les recommandations de voyage propres aux utilisateurs de pompes. Faute de recherches dans ce domaine, l'information partagée repose sur les données probantes, si possible, ou sur l'expérience des patients.

Conclusion : Les utilisateurs de pompes à insuline peuvent jouir de tout type de vacances. Certaines destinations exigent davantage de préparation que les autres, mais, quel que soit le choix de l'endroit, la planification préalable en collaboration avec un prestataire de soins de santé bien informé peut contribuer à la réussite de l'expérience.

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#### Introduction

Vacation travel is a welcome retreat from our everyday world. Whether the trip is trekking in Nepal, a ski vacation in the western Rockies or a beach holiday in the Caribbean, the insulin pump is a constant companion for many people with diabetes. As healthcare professionals assisting individuals in their travel plans, we can contribute to the success of their trips

by encouraging early preparation and by sharing practical and timely tips.

There are numerous suggestions for all patients with diabetes who travel. This article focuses on travel recommendations specific to the pump user. Because of the lack of research in this area, the information shared is based on evidence where possible and, otherwise, on patients' experiences.

Insulin pump users can enjoy any type of vacation travel. Certain destinations require more preparation than others, but regardless of the choice of venue, preplanning in collaboration with a knowledgeable healthcare provider can contribute to a successful experience.

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#### Vacation Ease: Travelling with an Insulin Pump

Vacation destinations have changed dramatically with the advent of more easily accessible transportation and communication. Our more adventurous insulin pump users have explored the mountainous heights of the Himalayas and even Mount Everest, whereas others have sought silence and relaxation on the most remote beaches of the world. Whatever destinations they choose, pumpers need to feel confident that they can successfully manage diabetes while travelling (1). Healthcare professionals (HCPs) can provide specific planning tips to help patients prepare for some unique challenges they may experience during their travels. We cannot control the weather, but we can control many factors that will play roles in the success of the trips.

The purpose of this article is to highlight pertinent information available for pump travellers and to share some insights and experiences. Although this article discusses travel recommendation specific to the pumper, all other general travel precautions, such as vaccinations and immunizations, should be adhered to. Because there is a scarcity of research in regard to pump use and travel, the authors are presenting strategies and facts that are currently available. We have been fortunate to obtain some invaluable anecdotal experience from pump travellers and diabetes educators.

#### Pretravel planning: The healthcare visit

A common theme throughout the travel experience is that the amount of preparation made for the trip is directly proportionate to the success of the trip. For insulin pumpers, planning should start once the decision to travel has been made. A visit with the healthcare team is recommended to occur a minimum of 4 to 6 weeks prior to the commencement of travel (1,2).

To formulate individualized travel plans, it is helpful for HCPs to know the anticipated duration of travel, the season of travel, the countries and regions that will be visited and the planned accommodations. This information will influence the discussion with regard to accessibility of supplies, insulin storage and pump use. Preparing for a week-long beach holiday in a tropical resort where relaxation is the aim requires a plan that's very different from that of preparation for a 2-month trek in the Italian Alps.

Experienced travellers often remark that travelling with an insulin pump is easier because time zone changes, irregular eating times, correction for hypoglycemia or hyperglycemia and unanticipated activity can be more immediately accommodated (1). However, to facilitate this ease in travelling, there are some specific considerations related to pump use that require thoughtful planning.

#### Glucose control

Reasonably good blood glucose control prior to travelling provides the best advantage for avoiding wide blood glucose fluctuations. Regulation of glucose control 4 to 6 weeks before travel will allow sufficient time to review pump records and make changes to stabilize the blood glucose. Vacations are notoriously difficult times to control blood glucose, with significant changes in food, activity and stress. One study of university-aged students showed that 55% experienced episodes of hyperglycemia and/or hypoglycemia during their travels, resulting in a worsening of their overall glycemic control (1,3). During the initial planning, one of the most important factors to review is the accuracy of the carbohydrate-to-insulin ratios being used because they have direct impacts on blood glucose control (1). Similarly, awareness and maintenance of the goal carbohydrate levels for snacks and meals assist individuals in better blood glucose control while travelling. Estimating the amount of carbohydrate in unfamiliar foods is a common problem while vacationing. Several pumpers have stated that they have tried similar foods before their travel to gauge the effect on their

blood glucose levels. Visits to dietitians are strongly recommended because they are excellent resources for advice about adjusting for different foods and can provide support via apps and international websites (4).

#### Physician letters

Letters from physicians written on letterheads that include the office numbers and emergency contacts are recommended for individuals wearing insulin pumps. The supplies accompanying patients should include pump equipment, namely, reservoirs, secondary injector sets, infusion sets, loaner pumps, insulin supplies, glucose metres, strips and lancets (1,2). The letters should also state that these supplies are to be carried in the hand luggage. Some travellers recommend that the letters be shown to screeners immediately, whereas others state they have never been asked for such letters and thus have never shown them. With increasing security measures, it is advisable that travellers be prepared and have these letters, as well as multiple copies, available. VoyageMD has excellent templates of physicians' letters on line (5).

#### Medication list

Updated medication lists provided by pharmacists are necessities when travelling. This information can be invaluable to both patients and healthcare personnel so as to avoid any potential drug interactions when receiving treatment abroad. MedicAlert, which is recognized worldwide, should be worn to identify allergies, medical conditions and current immunizations (1). It is also recommended that individuals have prescriptions with them and know the types, strengths and doses of insulin they are using, primarily to avoid confusion should they have to purchase insulin in another country. The same insulin may go by different names in different countries. Also, different strengths of insulin are used throughout the world. The majority of pumpers in Canada and the United Sates use U-100 insulin. Elsewhere in the world, U-40 or U-80 insulin is also available (5). Insulin strengths are not interchangeable and can have deadly consequences for uninformed consumers. The newer strengths of U-200 and U-300 insulin available in Europe and elsewhere are supplied in pens, which allow for easier conversion, thus possibly less confusion, but they should not be used without medical direction. It is advisable to check with the insulin manufacturers or the International Diabetes Federation website regarding further information to determine the availability of insulin in the countries being visited (6).

Patient experience: George misplaced his insulin while travelling in Florida. When he went to the pharmacy to replace the insulin, he did not recognize the name of the insulin the pharmacist recommended. When George referred to the prescription he had brought with him, the pharmacist explained that his NovoRapid in Canada is called Novolog in the United Sates.

### Checklist for pump-specific supplies

Experienced travellers suggest packing double the pump supplies for a trip (1,4). This would include the usual items—insulin, infusion sets, batteries, a second metre, glucose strips and lancets. Supplies such as caps for the infusion sets, ketone testing strips and, in some instances, visual glucose test strips, should be considered for travel. Pump failure and "pump holidays" are possible occurrences when travelling. Having a plan and the supplies for the basal/bolus replacement using pen and/or syringe are vital before departure (1). There should be several copies of the conversion plan on line, on the person and in the luggage. This helps to reduce stress

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