**FROM THE EDITOR**

"Gran fondo" is an Italian term for a long distance, organized mass cycling event. This past July, I completed my first 100 km gran fondo bike ride in the foothills of the Rocky Mountains, Canada. I was inspired to see a multi-generational crowd, all of whom have clearly embraced an active lifestyle. Not working in the area of sports nutrition, I used PEN to help me prepare and optimize my performance during this ride through the incorporation of pre-, during and post-event nutrition and hydration. I paid special attention to the practice guidance around carbohydrate, which I ingested every 30 minutes. I could feel the difference the carbohydrate made, as I was suddenly able to power up hills and pass fellow riders. This ride taught me about pushing personal boundaries, seizing new challenges when the opportunity presents itself, and about adding life to my years.

While waiting for the event to start, my friend asked me – what would have been the best breakfast to consume this morning? PEN also helped me provide the answer. As dietitians, we cannot possibly know all the current information, but we can know where to go to look up the answer.

In September, PEN will turn six! In its short life, PEN has pushed its boundaries, growing in breadth and depth to offer practice guidance for diverse dietary practice areas. As of September 1, PEN has 162 published knowledge pathways, 980 practice questions, and 2306 tools/resources. PEN has gone international, becoming a multi-generational crowd, all of whom have clearly embraced an active lifestyle. Not working in the area of sports nutrition, I used PEN to help me prepare and optimize my performance during this ride through the incorporation of pre-, during and post-event nutrition and hydration. I paid special attention to the practice guidance around carbohydrate, which I ingested every 30 minutes. I could feel the difference the carbohydrate made, as I was suddenly able to power up hills and pass fellow riders. This ride taught me about pushing personal boundaries, seizing new challenges when the opportunity presents itself, and about adding life to my years.

In this issue of PEN eNews, you will find articles to enhance your skills in evidence-based practice. Health Literacy – What Every Dietitian Needs to Know explains the elements of this term and will help you understand the complexities of knowledge transfer and application for your clients. What is in a PICO Question? The 4 Parts to a Searchable Practice Question helps you formulate searchable practice questions. And, for the first time, All in a day’s work…a PEN case study. These articles, and more, in PEN eNews 1(3).

Abraham Lincoln said “It’s not the years in your life that count. It’s the life in your years”. In six years, there has been a lot of life added to PEN. Happy Birthday - here’s to continuing to add life to our years.

Kristyn Hall MSc, RD
Editor, PEN eNews

### WHAT’S NEW IN PEN

#### New Practice Questions
- Do individuals with rheumatoid arthritis who follow a Mediterranean diet have improvement in their arthritic symptoms compared to individuals with rheumatoid arthritis who follow a non-Mediterranean (regular) diet?
- Do children and adults with attention deficiency hyperactivity disorder (ADHD) who are treated with stimulant medication have more nutrition-related side-effects (appetite suppression and stomach pains) than those treated without medication?
- For adults with attention deficit hyperactivity disorder (ADHD), is any special diet or nutritional supplement associated with an improvement in ADHD symptoms?
- What are the recommendations for the preparation, use, handling and storage of infant formula?

#### Updated Knowledge Pathways

Announcement: The following new Knowledge Pathway will soon be added to PEN:

Systemic Lupus Erythematosus/Telehealth/Teledietetics
And...the following Knowledge Pathways will be updated:

- Food Security
- Healthy Weights/Obesity – Natural Health Products Media Literacy
- School Health
- Toddler/Preschool Nutrition
- Vegetarianism

If you have a practice question or a suggested tool/resource, email us at eNews@pennutrition.com

#### Updated Practice Questions

- Does the amount, timing or distribution of dietary protein affect levodopa activity?
- Does selenium supplementation improve the immune system?
- What nutrition strategies can prevent cardiovascular disease (CVD) in the healthy population (primary prevention)?

#### In pediatric obesity intervention studies, the development of eating disorders, eating disorder pathology and other harms have been minimal. True or False?

Here is a quick glance at some of the new and updated content in PEN. In your search results, or when viewing the table of contents by practice category, look for the symbol **Updated** next to the Knowledge Pathways to see more new and enhanced content!

#### Coming Soon

The following new Knowledge Pathway will soon be added to PEN:

Infant Formula
Rheumatoid Arthritis

#### True or False?

- Does the amount, timing or distribution of dietary protein affect levodopa activity?
- Does selenium supplementation improve the immune system?
- What nutrition strategies can prevent cardiovascular disease (CVD) in the healthy population (primary prevention)?
Find a Specific Tool and Resource on PEN?

Written by Lisa Koo, RD
PEN Quality Assistant

There are 2306 tools in PEN. How can you find the information you are looking for quickly and efficiently? How do you narrow down your search to find the right one? In this issue, I will offer tips to help you answer these questions using different examples.

Let’s say you are a consulting dietitian who has been asked to deliver a class on celiac disease. When you type in “celiac disease” into the search field, several results are displayed. There are two ways to sort through your results. The first is to sort through by Relevancy (the number of times the keywords you searched for appear in the resource), Date (when the resource was published on PEN) or Alphabetically. These options are on the top right of the display page.

The second way is on the menu bar on the left side of the display page that organizes the results into categories by type. Knowledge Pathways and Practice Questions are listed at the top and the rest of the items below are Tools & Resources, which are also organized based on type (Professional Resources, Consumer Resources and Target Country).

If you are looking for resources targeted towards health professionals you will peruse through the list of tools listed under the “Professional” heading (e.g. Practice Guidance Summaries, Evidence Summaries, Backgrounds, Other Tools & Resources).

To find resources in specific languages, use the “Advanced Search” engine (located at the top right hand corner of the display page) where you will be able to specify that you are looking for resources in a specific language.

Finally, you can also search for tools and resources within specific knowledge pathways. Once viewing a specific knowledge pathway, for example, Celiac/Coeliac Disease, go the left side, and under More on this Knowledge Pathway, click on “Related Tools and Resources”. Your results can then be sorted alphabetically by title, date added to PEN or resource type.

Other Searching Techniques

Quotation marks: To use another example, if you enter “breast milk” into the search field, you will retrieve records that contain the exact phrase “breast milk”. It will not retrieve records that have the word breast or the word milk listed separately.

Percentage sign: Using a % symbol after a word will return results that have that word as the stem. For example, if you enter the search term infant, you will retrieve results that include infant, infants, infantile, etc.

OR: Using OR, will allow you to expand your search so that you can search for resources that contain either term or both terms. For example, if you entered breast OR cancer you will get results that contain just the term “breast”, just the term “cancer”, or both words “breast” and “cancer” contained within the resource. Using OR is a way that you can expand your search results.

AND: Using the AND term will retrieve records where both terms are present. So for example, if you did a search for breast AND cancer you will get results that contain both words. It will not bring up records that only contain the word “breast” or only “cancer”.

NOT: Using the NOT term will focus your search on one of the words and make sure to exclude the other word. This can be useful if you are looking for specific information but want to exclude a certain subject (e.g. phytoestrogen NOT soy).

Tip
If you enter lots of search terms, PEN will only retrieve resources that contain all of those words (e.g. soy omega autism). So if you find that you are not getting any results, try using fewer search terms or place OR between each search term to broaden your search (e.g. soy OR omega OR autism).

How do I…is a regular column in PEN eNews designed to help optimize the time you spend in PEN. Have a question for Lisa? Email us at eNews@pennutrition.com
HEALTH LITERACY
What Every Dietitian Needs To Know

Written by
Kerri Staden BSc, RD and Jane Bellman MEd., RD
PEN Resource Managers
Dietitians of Canada

Health literacy is “the ability to access, understand, evaluate and communicate information as a way to promote, maintain and improve health in a variety of settings across the life-course”*. 
• Health literacy requires communication skills (such as the ability to speak, hear, and understand), and some knowledge of health (e.g. knowledge of digestion). For example, imagine trying to explain insulin, carbohydrates, and glycemic index to a client – do clients understand what these terms mean? 
• Health literacy includes the individual, health professionals and their interactions in health systems. Individuals need to be able to find, understand and use health information. Health professionals need to present information in ways that clients can understand and act on in a system that provides shame-free access to health care and health information.

Health Literacy Statistics
• 60% of adults and 80% of seniors in Canada have health literacy skills below the minimum level required to cope with the demands of everyday life and work in a complex society. 
• Health literacy rates vary by area of the country and sub-populations. 
• Groups at most risk for poor health literacy are seniors, immigrants and the unemployed.

Why is health literacy an issue for health professionals?
• Health literacy matters to health professionals because it is connected to health. People with lower health literacy have a poorer ability to interpret health messages, have higher rates of hospitalizations, and have higher risk of some chronic diseases. Even clients with high literacy can have poor health literacy. Health literacy is no longer “their (the client’s)” problem, but is “our (health professional’s)” problem. 
• Health professionals and staff have limited education, training, continuing education, and practice opportunities to develop skills for improving health literacy. There is a need to make health literacy a mandatory component of professional competence, education and certification/registration with their respective colleges, including dietitians.
• Students and dietitians need to become aware and educated in the area of health literacy during undergraduate and continuing education opportunities.

What can health professionals do?
• Health professionals can help people become health literate by increasing their own skills, and by presenting information in ways that can be understood and in ways that allow people to act on the information. Stay tuned for part 2 of this article, coming in a future issue!

When people are more health literate, they can make informed choices, reduce their health risks, better navigate the health system and improve their overall wellness and quality of life. *References are available upon request. Email us at enews@pennutrition.com

For more information, click on:

Want more information about health literacy? Click on the link below to see a video on health literacy. While the focus is on physicians and medications, there are many lessons for other health professionals”.

American Medical Association Health Literacy Video
Interview conducted by Sylvia Turner, RD 
Project Development Officer 
British Dietetic Association

n December 2010, PEN was launched in the UK. Sylvia Turner RD, interviewed diettian and PEN subscriber Andrew Wilson MSc RD, about his experiences of using PEN to inform his practice.

What was it that first attracted you PEN?
When I saw that the BDA had teamed up with the Dietitians of Canada and launched the resource in the UK, I thought it would be a useful tool to access relevant and current evidence regarding areas of dietetic practice that I was less familiar with, particularly as I was about to move into a new area of dietetics.

So when did you sign up to PEN?
I signed up a few months after it was launched, just as I was changing jobs. I currently work part-time as a Lead Specialist Dietitian at St Andrew’s Healthcare, Northampton (Mental Health) and also as a freelance dietitian. My specialist areas are weight management and diabetes.

What was it about PEN that convinced you to purchase a subscription?
During my 15 day free trial, I was surprised just how much I used it! I was able to quickly check for the latest evidence and resources in areas I was less familiar with and get concise information on other areas of interest.

How often do you use the resource?
I’m finding I’m using it more and more, nearly every week in my new role at St Andrew’s and for my freelance work.

What did you previously do in order to practice in an evidence-based manner and how has having a PEN subscription changed this?
I have been practicing as a Dietitian for 5 ½ years now and previously I would use the internet to search for current articles and evidence, often this took more time than I would like or have. With PEN, it is so quick to get to the evidence-base for the practice points in the database and often there are links to patient-oriented information on the internet. If I am pushed for time, as most of us are these days, PEN gives me the confidence that I can find up-to-date evidence quickly, without having to trawl the internet or journals for hours. I am using PEN nearly every week!

Which pathways have you found most useful?
The pathways in dementia and hydration have been helpful in my new role as a Mental Health Dietitian. For my freelance work, I’ve used the pathway on Mindful Eating for general reference; refreshed my knowledge of IBS and more recently to get the evidence for diet and breast cancer prevention.

Do you feel that PEN represents value for money?
The PEN subscription is £7.5 per year with special offers for group subscriptions. It represents excellent value for money when you compare it to subscriptions to journals or the cost of a text book, which is out of date by time it is published.

PEN gives me rapid access to the pre-appraised evidence-base, saving valuable time. The internet links to good quality additional resources are also valuable as I would not have found them otherwise. Personally, I feel it is a great investment in a resource that really helps keep me up to date and saves so much time.

Are you confident in the content that is included in the resource?
The content on PEN is concise and referenced, with links to the original articles or abstracts if you need them or want to read more. This gives me the ability to drill down and read more on a subject if I need and the references are dated so you can see that they are current.

How easy do you find accessing and navigating the online system?
PEN is really easy to navigate round; I tend to use either the search engine function to get a list of results or I access the main contents page and then drill down from there.

What opportunities to you feel PEN offers to the dietetic community as a whole?
With the current pressure on the National Health Services and healthcare community in the UK, having access to a resource that saves time and can improve the quality of our practice has got to be a good thing for the whole profession. It’s very handy if you are going into a new area of practice and as a research tool. It’s also good to be able to see and compare practice points from other countries. I can see lots of potential; it could even be used as a tool for online training and not to mention the opportunities to contribute to this valuable resource. This is a must-have resource for all dietitians!

Continued from What’s New in PEN?”

True, however, these variables have not routinely been assessed in the short- and long-term, making definitive conclusions premature about possible iatrogenic consequences of these programs. It is unknown whether some sub-groups are more susceptible to harm than others. It is unclear whether there is a reporting bias of researchers and bias against publishing these results.

For this question, go to http://www.penutrition.com/KnowledgePathway.aspx?kpid=8325&pqcatid=146&pqid=11380
To sign up for a one-time free 15-day trial, go to www.pennutrition.com and go to the “Subscribe” button on the top tool bar.

Want to try before you buy? PEN offers a free 15-day trial subscription. This gives potential users the chance to explore PEN and decide whether they would like to sign up for an annual subscription. To sign up for a one-time free 15-day trial, go to www.pennutrition.com and go to the “Subscribe” button on the top tool bar. You will be prompted to register for a PEN account and sign up for a free 15-day trial. At any time during the 15 day trial you can change the trial to a subscription by clicking on “My Account”.

WHAT IS IN A PICO question? THE 4 PARTS TO A SEARCHABLE PRACTICE QUESTION

Written by: Dawna Royall, MSc, RD, PEN Evidence Analyst

This article contains material adapted from the workshop Your GPS from Evidence to Practice presented at the Dietitians of Canada Annual Conference June 2011.

You may have heard of ‘PICO’ questions before, but what about ‘PICOD’ and why are PICO questions so important?

PICO is the acronym for the elements of a practice question (see below). Evidence-based practice depends on developing focused questions that guide us to search the literature. A well-built PICO question increases our chances of finding the best evidence to inform our practice quickly and efficiently.

The elements of a PICO question are:

- **Population (P)** - how would you define your population e.g. demographics, medical condition?
- **Intervention (I)** or exposure of interest - what are the intervention or prognostic factors (factors that can be used to estimate the chances that one recovers from a disease or that the disease reoccurs)?
- **Comparison (C)** - is there an alternative to compare to?
- **Outcome (O)** - what do you hope to accomplish, improve or affect?

A fifth element, Design (D), is sometimes added. Studies are designed to ask different types of questions. What type of literature are you looking for – a clinical trial or an observational study?

Questions can be related to prevention / etiology or treatment / intervention. For example, prevention examines factors that may contribute to disease risk or be involved in the etiology of a condition. These factors generally assess exposure using an observational study design. In contrast, examining effective treatments for an existing condition, usually involves an intervention using a clinical trial design.

A closer look at writing PICO questions according to study design can be seen below:

**Prevention / Etiology**

- In _____________________ (P)
- how does _______________ (I)
- compared with ___________ (C)
- affect __________________ (O)

Example: Are post-menopausal women who have a high intake of soy products, compared to those with a low intake, at decreased risk for developing breast cancer?

**Treatment / Intervention**

- In _______________ (P)
- how does _______________ (I)
- compared with ___________ (C)
- affect __________________ (O)

Example: Among individuals with osteoarthritis, do glucosamine supplements compared to no treatment improve symptoms of osteoarthritis?
My role in the PEN Team involves overseeing the development of new PEN content, updating current PEN content, and involvement in the processes that support the quality and consistency of the PEN service. This could not be accomplished without the involvement of other members of the PEN team. Part of my role is working with universities and internships to see how best to engage students in developing PEN content while meeting their educational requirements.

A day in my life as the PEN Content manager is very diverse, never the same one day to the next. Working from a home office means I can start my day anytime after 06h00. In a day I could be working on the PEN Content development plan, giving initial feedback to a dietitian or dietetic intern on the PEN content they have been developing, answering content-related questions from PEN subscribers and, in the late afternoon, having a conference call with staff from the Dietitians Association of Australia. One thing for certain is I’m never far away from my computer! The bottom line is, like most of you, the PEN Content Manager’s work is never done!

My first involvement with PEN was as the Eastern and North-Eastern Ontario and Quebec representative on the PEN Planning Advisory Committee who helped define what PEN would look like. My first PEN-related contract was to take the Centre for Health Evidence’s evidence-based tutorial and help to adapt it to the nutrition/dietetics world. In August 2004 I was hired on contract as the PEN Content Manager.

Beth’s thoughts about dietitians as leaders in evidence-based practice.

“PEN is the best thing since sliced bread, whole-wheat of course! PEN adds credibility to our practice and the evidence provided supports us in being the go-to person for nutrition. With the global expansion of PEN it provides wonderful opportunities for us to network with and learn from colleagues around the globe.”

My favourite thing about PEN is... how dynamic it is and how easily it can be updated. A new practice-changing article comes out and within hours of learning about it we could have it added to the relevant PEN content – no need to wait for the next printing of a manual.

There are 3 ways you can reach me...
• Click the Submit a Practice Question on PEN home page
• Submit a PEN Contact Us form – choose Content on the Subject drop down menu; or
• Send an email directly to: beth.armour@dietitians.ca

“PEN is the best thing since sliced bread, whole-wheat of course! PEN adds credibility to our practice and the evidence provided supports us in being the go-to person for nutrition. With the global expansion of PEN it provides wonderful opportunities for us to network with and learn from colleagues around the globe.”
This month we are featuring PEN in a case study. We would love to hear how you use PEN in your day-to-day practice. Email us at eNews@pennutrition.com. We look forward to hearing your stories!

Stacy is a community dietitian who is preparing for an upcoming infant feeding class for new moms. In addition to reviewing the information in the breastfeeding knowledge pathway, she knows that there might be some new mothers who will be formula feeding their baby. Stacy is aware that there is some safety concerns with mixing powdered infant formula but can’t remember the name of the harmful bacteria or how to safely prepare the formula.

She would like to demonstrate the proper procedures in her session and provide her clients with some information that they can take home with them to reinforce the points that she will be teaching in class.

Stacy goes into PEN and enters the keywords “infant formula” into the search field which results in relevant practice questions, professional and consumer tools being displayed. She also notices that two knowledge pathways are displayed. She decides to click on the knowledge pathways since they will provide the most comprehensive overview of the information.

She notices that there is a knowledge pathway called Infant Formula – Enterobacter Sakazakii and recalls this is the bacteria that she has heard about. She reads through the four practice questions to find out more information on the cause, rationale and risks of preparing infant formula and which infants are at greatest risk.

The key practice points also outline what steps and techniques can be followed in order to decrease the risk of Enterobacter Sakazakii infection when preparing powdered infant formula (e.g. the required temperature for the water, and the thorough cleaning and disinfection of the infant feeding equipment).

While in the Infant Formula – Enterobacter Sakazakii knowledge pathway, she takes a moment to look through the “Related Tools & Resources” section and sees several applicable handouts from PEN and the World Health Organization.

Stacy decides that the PEN handout meets her needs and prints out the “How to Prepare and Feed Powdered Infant Formula” (available in both English and French). The handout provides step-by-step instructions and other important information that her clients who are going to be formula feeding their newborns can use to follow along with during the session and then refer to later. In addition, the last two pages of the handout provide illustrations of the preparation instructions and she will advise her clients to hang these on their fridge at home as a quick and easy reminder.

With PEN, Stacy was able to source the information she would need to prepare an infant feeding class, including information on the risk and proper procedure for preparing powdered infant formula. She was able to print off handouts for her clients and was also able to look up background information and rationale.

Stacy was able to deliver her class with confidence, knowing that the information provided was based on best practice and approved guidelines from reliable government agencies and organizations. All in a day's work for PEN.

Note: The preferred and recommended source of nutrition for infants under six months of age is human milk and breastfeeding is the best method of feeding infants. This case study is not intended to promote infant formula but is to demonstrate search methods and to highlight the new information on the importance of following sterile procedures for mixing of powdered infant formula.

Was this article helpful? Email us at eNews@pennutrition.com.
**KNOWLEDGE TRANSFER EVENTS AND RESOURCES**

Article: Update on Nutrition Research Methodologies: A Selective Review. This review is a synopsis from a symposium entitled “Update on Nutrition Research Methodologies” presented at the American College of Nutrition’s Annual Meeting in Orlando, Florida in October 2009. The speakers provided an overview of handheld and Web-based dietary assessment tools and their application to clinical and epidemiologic studies, identified how to critique the literature on nutrition and dietary supplements and apply the principles of evidence-based reviews to their research, and examined the level of evidence needed to support the development of public health policy for nutrients and dietary supplements.


**e-learning program by Macmillan Cancer Support: Nutritional Care of People Affected by Cancer**. This is an online course available free for health professionals containing materials to enhance knowledge of:

* Weight (covering weight loss and weight gain)
* Therapeutic, complementary and “alternative” diets
* Medications and treatments
* Provision of information (including issues surrounding health literacy) and
* Body-image

Once completed participants can complete an assessment and print a certificate of completion. The program also provides downloadable resources and links to other useful websites. Go to http://learnzone.macmillan.org.uk/index.php and register for free Learn Zone account.

Upcoming Conference: “Childhood & Adolescent Obesity: a whole-system strategic approach”, which will be held in London, September 22, 2011. This is an essential one day conference, which will explore the need for a strategic approach to tackling childhood obesity and examine what a good strategy looks like. With the help of a line up national UK experts in the field of childhood obesity, we will look at the elements that are involved in designing a ‘best practice’ strategy and the practical challenges of how to focus strategic action to produce desired outcomes in a time of great economic pressure. For more information, email info@medineo.org

**ANNOUNCEMENTS FROM PEN**

Your PEN user account is separate from your National Dietetic Association account, and so needs to be updated separately. To avoid missing any communications from PEN, please ensure your PEN user account is kept up-to-date. Login at www.pennutrition.com and select Change Contact Information.

**COMING NEXT ISSUE**

- How do I get a quick overview of answers to my practice question?
- What is PEN doing for food service?
- Favourite nutrition apps
- Profiling a PEN user

**CONTACT US**

PEN eNews is a newsletter to help you:

- keep up to date on new content, features and technology available in PEN
- optimize your time spent in PEN
- enhance your skills in critically appraising the literature
- enhance your knowledge of and participation in knowledge transfer
- position yourself as a leader in evidence-based practice

To access current and archived copies of PEN eNews, go to http://www.pennutrition.com/enews

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