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# Editorial

# Recent highly cited articles in the *British Journal of Nutrition* (including *Supplements*): An update

I have commented in an earlier Editorial on the importance for scientific journals of citations and of 'impact factors' (Trayhurn, 2002). In the January issues of both 2003 and of this year we have reprinted, in the occasional series '*Citation Classics*', the two *BJN* articles which have received the highest number of citations over the 55+ years since we were founded. In an Editorial last year, I highlighted the fact that we are regularly publishing papers that have a high and immediate impact in nutritional science, and listed those key articles for 2000 and 2001 (Trayhurn, 2003). In the present Editorial, I want to consider how these articles have fared in the subsequent 12 months, and to update and expand the analysis of our recent most highly cited papers (2000 onwards) so as to include the *Supplements* that we now publish.

Examination of the *Science Citation Index* database at the time of writing (April, 2004), indicates that the list of the ten most highly cited articles for 2000 remains unchanged from that at the same point last year (Table 1). However, although each of these papers has received further citations over the past 12 months there has been some change in the rank order. There has, in particular, been a marked increase in citations to the paper by Jebb *et al.* (2000) reporting on an evaluation of a novel system for the measurement of body composition in humans. The most cited paper in 2000 is a study on the positive benefits for natural and acquired immunity of feeding mice supplements of lactic acid bacteria (Gill *et al.* 2000).

All but one of the highly cited articles for 2000 are primary research papers, there being only a single review in the list. In contrast, reviews feature prominently among the most cited articles published in 2001 (Table 2). However, the key change from a year ago is that the most cited article is now a primary research paper, describing the dietary manipulation of the fatty acid composition of muscle and adipose tissue in beef cattle (Scollan *et al.* 2001). The rapid increase in the number of citations to this paper over the past year illustrates the greater time lag that there often is in the citation of primary articles compared with reviews, particularly in long-term nutritional studies.

The significance of reviews varies markedly from year to year since the list of most cited papers published in 2002 contains no such articles, there being only primary research papers. The list is headed by two articles with the same first and last named authors; at the time of writing these papers, which are on essential fatty acid metabolism in humans (Burdge *et al*. 2002; Burdge & Wooton, 2002), have each received 19 citations. This is impressive, particularly since they were both published in October 2002, thus accumulating their combined total of 38 citations in a period of just 18 months. It seems probable that these two articles are destined to be extremely influential over the long term.

It is also important to note that several papers published only last year have already been cited 5 or more times. The most highly cited (10 citations), which is an overview of the expanded gene families of sugar transporters, appeared in the January 2003 issue as the first article in the

**Table 1.** Most highly cited articles published in the *British Journal of Nutrition* in 2000

| Authors | No. of citations* | |
|---|---|---|
| Gill *et al.* 2000 | 44 | (32) |
| Kritchevsky, 2000 | 37 | (27)† |
| Jebb *et al.* 2000 | 31 | (15) |
| Hoggard *et al.* 2000 | 26 | (21) |
| Liggins *et al.* 2000 | 26 | (17) |
| Brennan *et al.* 2000 | 24 | (19) |
| Mazur *et al.* 2000 | 24 | (15) |
| Chango *et al.* 2000 | 23 | (17) |
| Hamilton *et al.* 2000 | 22 | (13) |
| Takahashi & Ide, 2000 | 21 | (13) |

* As at 26 April 2004. The ten mostly cited papers, each of which has received >20 citations, are listed. The figures in parentheses refer to the number of citations as of 1 year ago (April 2003).
† Review article.

**Table 2.** Most highly cited articles published in the *British Journal of Nutrition* in 2001

| Authors | No. of citations* | |
|---|---|---|
| Scollan *et al.* 2001 | 29 | (10) |
| Dulloo & Samec, 2001 | 27 | (17)† |
| Combs, 2001 | 26 | (12)† |
| Darlington & Stone, 2001 | 24 | (15)† |
| Hill & Davies, 2001 | 24 | (12)† |
| Olmedilla *et al.* 2001 | 22 | (9) |
| Dudeja *et al.* 2001 | 21 | ‡ |
| Ko *et al.* 2001 | 18 | (10) |
| Kleessen *et al.* 2001 | 17 | ‡ |
| Park *et al.* 2001 | 16 | ‡ |

* As at 26 April 2004. The ten mostly cited papers, each of which has received >15 citations, are listed. The figures in parentheses refer to the number of citations as of 1 year ago (April 2003).
† Review article.
‡ Not included in the list presented last year.

**Table 3.** Most highly cited articles published in the *British Journal of Nutrition* in 2002

| Authors | No. of citations* |
|---|---|
| Burdge & Wootton, 2002 | 19 |
| Burdge *et al.* 2002 | 19 |
| Alexy *et al.* 2002 | 13 |
| Bates *et al.* 2002 | 11 |
| Young *et al.* 2002 | 11 |
| Noone *et al.* 2002 | 10 |
| Donovan *et al.* 2002 | 9 |
| Loison *et al.* 2002 | 8 |
| Wolever & Mehling, 2002 | 8 |

* As at 26 April 2004. The nine mostly cited papers, each of which has received 8 or more citations, are listed (several more papers have received 7 citations).

new series *'Horizons in Nutritional Science'* (Wood & Trayhurn, 2003). Within a given year, self-evidently the earlier the month of publication the more likely it is that there will be citations in the year that immediately follows.

The *BJN* now publishes special *Supplements*, as well as our regular issues, and these are usually based on a focused Symposium. This initiative was introduced by the current Supplements Editor, Keith Frayn, when he was Editor-in-Chief, with the first *Supplement* appearing in 1997. The topics presented in *Supplements* to date have ranged widely – from functional foods and bioactive substances in milk and colostrum, to immunonutrition and the effects of phyto-oestrogens on bone health. The list of highly cited articles documented last year did not include those published in the *Supplements* (Trayhurn, 2003), because of the way in which they are named in the *Science Citation Index* database, but they have now been analysed and are presented in Table 4. All but two of these papers appeared in the March 2000 *Supplement* from the highly successful Symposium entitled '*Diet and the Metabolic Syndrome*', which was held in Ystad, Sweden, in August 1999. The most cited *Supplement* article, which considers the epidemiology of the rapidly escalating problems of obesity and diabetes (Seidell, 2000), has now been cited $>50$ times, with several other papers from the same Symposium receiving $>30$ citations. These figures indicate that the *BJN* can provide a very visible medium for the publication of important Symposia, to the benefit of organisers, sponsors and authors – and, of course, readers.

**Table 4.** Most highly cited articles in *Supplements* published by the *British Journal of Nutrition* since 2000

| Authors | No. of citations* |
|---|---|
| Seidell, 2000 | 52 |
| Frayn, 2000 | 49 |
| Astrup *et al.* 2000 | 48 |
| Vessby, 2000 | 40 |
| Björntorp & Rosmond, 2000 | 32 |
| Clarke, 2000 | 31 |
| Riccardi & Rivellese, 2000 | 26 |
| Jenkins *et al.* 2000 | 25 |
| Shah, 2000 | 23 |
| Calder *et al.* 2002 | 22 |

* As at 26 April 2004. The ten most highly cited articles published in *Supplements* since 2000 are listed, each of which has been cited 20 or more times.

There is a wide geographical spread in the location of the primary authors, as well as considerable diversity of subject, in the lists of the most highly cited papers in Tables 1–4. A number of European countries are included (Denmark, Finland, France, Germany, Italy, Republic of Ireland, Netherlands, Sweden, Switzerland, UK), as well as North America (Canada, USA), Asia (Hong Kong, India, Japan, Korea) and Australasia (Australia, New Zealand). This provides a powerful illustration of the extent to which the *BJN* is very much '*An International Journal of Nutritional Science*.'

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