## SUNDAY FEATURES

SUNDAY, AUGUST 17, 2008

The Michael Phelps Diet:

don't try this at home

BY JON HENLEY
THE GUARDIAN, LONDON

The greatest swimmer of all time eats 12,000 calories a day.
Eggs, mayonnaise and assorted fats make up a jaw-dropping proportion of his diet. How can he force it all down? And what is it doing to his body?



ere we go then: The Michael Phelps Diet for Health, Happiness and More Olympic Gold Medals Than Anyone Else Ever. We'll ignore, momentarily, the fact that the best swimmer the world has seen stands 1.93m tall, has a wingspan — fingertip to fingertip — of 2m, and weighs in at 87kg. We'll ignore also the fact that he spends most of his life in a pool, swimming at least 80km

a week very fast indeed, and the rest of it in a gym. We'll ignore, finally, the fact that I am not quite as big as him, and do not, most days, get quite as much exercise.

I am going to see what it is like to eat what Michael Phelps eats in a day.

"It just smells so horrible," says the photographer, helpfully, as we survey the table before us. On it are a large bowl of porridge; three doorstep-sized sandwiches of white bread, butter, fried egg, fried onion, lettuce, tomato and mayonnaise; a five-egg omelet tastefully garnished with parsley; three slices of French toast liberally sprinkled with sugar; three pancakes topped with chocolate chips; and two large cups of coffee. That's breakfast. Yummy.

Next to it is lunch, which consists of 454g (that's a very large bowl) of pasta with tomato sauce; two large ham-and-cheese sandwiches with more lettuce, tomato and don't forget the mayo; plus four bottles of a proprietary high-energy sports drink that always makes me burp. For dinner, it's another 454g of pasta, a large cheese-and-tomato pizza, and another four bottles of the same proprietary high-energy sports drink that always makes me burp. "You poor thing," says the photographer, generously. "I so don't envy you."

So we kick off with the porridge, which is the your we could get to the large helping of grits the 23-year-old reportedly consumes. It wasn't bad, actually, a reasonably breakfasty kind of thing, and really rather comforting given the massive scale of the task ahead. I manage, I'd imagine, a normal-sized kind of a portion: 10 good spoonfuls. The fried egg, fried onion, lettuce, tomato and mayonnaise sandwiches are more of a challenge. It's the mayo, I think; somehow, you don't quite expect to be scoffing down mayo first thing in the morning. It's greasy, and it smells.

I start to feel slightly queasy. But I struggle through half an egg sandwich — one-sixth of what Phelps manages — and push on to the five-egg omelet. Not bad either: under normal circumstances I might quite have enjoyed this. It was nice and fluffy on the outside and satisfyingly runny in the middle. Most importantly, it did not contain mayonnaise. Half the omelet consumed, and it was time for the French toast. I can't remember the last time I ate French toast and I seem to have forgotten it was made with eggs. There are, I begin to think, rather a lot of eggs in this meal. I feel slightly more queasy.

Plus, I'm now chewing a lot. You know that feeling, when you have to chew an awful lot or you know you'll never get it down? One mouthful at a time. Slowly. Don't think eggs. Or mayonnaise. Which, obviously, contains eggs. And there are still the choc-chip pancakes to come. I force down one-and-a-half of those, very slowly, with the help of both mugs of coffee. I feel dreadful. Gross, bloated, uncomfortable, sick. The photographer, bless, makes little motherly clucking noises as I cram a napkin urgently to my mouth, breathing deeply. "You don't look very well," she observes. "Some water? A break?"

We pause. I make a few calls and write a bit, not very well (it shows). And hey, guess what: it's lunchtime! I find I cannot so much as look at the mayo-plastered ham-and-cheese sandwiches without the bile rising, and manage a couple of forks of pasta before, finally, blissfully, calling it a day. Afterwards, six colleagues pile in and eat their fill for lunch, and it still doesn't look like a dent has been made in the insane, obscene, illness-inducing mountain of food that America's 11-time gold medal winner ploughs through every single day of his life.

Apparently, he worries about keeping his weight up. I'd

worry about not sinking. "I'm not surprised, dear," says Janice Thompson, head of Bristol University's department of exercise, nutrition and health sciences in south-west England, when, belching quietly, I return to my desk. "There's no way you should be able to eat what Michael Phelps eats. This is not even a normal athlete. I would not recommend this kind of diet for even a fit and serious competitor in, say, a 10km road race. This man is in a very, very different place to the rest of us. He's 1.87m and 87kg of pure joy. From a female perspective, obviously. Though I probably shouldn't say that."

I have here an example of a Phelps training programme from 2002. I don't pretend to understand it fully, but it looks pretty awesome ("pull," by the way, means arms only. No legs.) "After a 4,500 short-course yards moderate morning practice," it reads, "warm-up: 800 mixer on 10:30, 4x150 kick on 2:30 (50 stroke-50 free-50 stroke), 400 pull with buoy on 5:00 (breathe 3-5-7-9 by 100), 200 stroke on 3:00, 10x50 on :45 (2-25kick/25drill 2-25free/25stroke 1-stroke). Main set: 4x50 on 1:30, 1x50 1:20, 1x50 1:10, 1x50 1:00, 1x50: 0:50, 1x50 0:40, 1x50 0:30. Long Swim Down: 100-200-300 pull (lungbusters by quarters), 400 choice kick, 300-200-100 IM Drills."

What that means, as far as I can work it out, is that Phelps swam 12km to 13km at assorted, gradually increasing speeds using a variety of strokes (or half-strokes). He then (and this is the real killer) got out of the pool and, according to the program, did "500 abdominals, and some stretching." Undeniably, the man expends a lot of energy. But can a diet like this one, made up essentially of eggs and cheese and bread and pasta, with a little bit of greenery thrown in for luck, really help him? I mean that's not what most of us would call a healthy diet, is it?

Apparently, he
[Phelps] worries about
keeping his weight
up. I'd worry about
not sinking.

The average adult man, depending on age, height and weight, requires between 2,200 and 2,800 calories a day. According to most media estimates, Phelps' daily intake—the three meals described above—amounts to around 12,000 calories. Anita Bean, sports nutritionist and author of *Food for Fitness*, finds it slightly hard to believe even Phelps can be expending quite as many calories as that. "Say he's doing about 6km to 7km a session, and a couple of sessions a day," she says, "plus his land training—I'd say he's burning

Nutritionists have expressed shock at the high level of saturated fat and lack of fruit and vegetables in Michael Phelps' diet and warn normal people not to emulate the US swimmer.

the point with an athlete like Phelps, though, is that he needs a very high calorie intake but a very low volume, whereas with the rest of us it's the precise reverse

... "

Anita Bean,sports nutritionist

maybe 5,000 calories in training, and maybe 2,500 simply to sustain himself. Something like 8,000 a day in all? Mind you, he is a very big bloke. I haven't looked at his schedules, but 12,000 seems a lot."

Thompson appears less surprised. "I've worked with extreme athletes, triathletes for example who work phenomenally hard, who expend between 6,000 and 10,000 calories a day," she says. "I can believe someone like Phelps is getting through 12,000. And the point is, it's plainly working for him, isn't it? Nobody could say he's not performing well. He's quite clearly expending what he's consuming, and — just like all of us — that's what counts."

Calories aside, Bean is concerned by the makeup of the swimmer's diet. "It does look quite salty, quite fatty, not very high in good fiber or in fruit and veg — he's certainly not getting his five a day," she warns. "I would certainly have expected him to be eating a bit less fat — and it's all saturated fat, the wrong kind. I suppose the point with an athlete like Phelps, though, is that he needs a very high calorie intake but a very low volume, whereas with the rest of us it's the precise reverse: we need a low calorie intake and high volume."

Thompson concurs. "Phelps' primary fuel source is going to be carbohydrates," she says, "and he's going to be burning them at a truly phenomenal rate. There's protein in there too, obviously, which he needs to maintain and repair muscle mass and tissue. But for someone like him,

in a sport like his, it's really a question of how many carbohydrates he can get in, as quickly as possible. So this diet might look very high in fat, but if he had to eat this same number of calories in a diet that contained, for example, more fruit and vegetables, he'd simply never manage it. His body just couldn't hold it. His intestines would give up. He's lucky as it is that he doesn't have a sensitive digestive system. That's one of the myriad factors that contribute to make him the exceptional performer he is."

Phelps is indeed lucky: many top-level athletes have tremendous problems with their diets. Jennifer Sey's were the reverse of Phelps'; the former US gymnast revealed in a shocking book published in the run-up to the Beijing Olympics that young girl gymnasts routinely binge and purge their food and suffer from what most doctors would call eating disorders. Sey recounts how one coach picked up a loud-hailer and berated one of her teammates in public for putting on 1kg. Sey's coach told her off for eating a whole bagel for dinner.

Only this week, a 27kg Chinese gymnast revealed she had long ago stopped eating anything after lunch. Boxers, too, have their issues: British boxer Frankie Gavin, the world lightweight champion, failed to make his weight for the Beijing games and had to return home last week, while American bantamweight Gary Russell Jr has also had to leave the Olympic village after collapsing unconscious while trying to make his weight. Both were too heavy for their classes. Footballers, meanwhile, are a lot more diet-conscious now than they were when Gary Lineker played for Barcelona and discovered the benefits of pasta versus steak and chips. One of Arsene Wenger's first moves as manager of Arsenal was reportedly to put the team on a strict diet, and Thierry Henry is said to have employed his own dietician. England manager Fabio Capello this week told striker Dean Ashton he will have to shed a couple of kilos if he wants to be considered for

Many sportsmen and women also balloon spectacularly once they retire: think Greg LeMond, Matthew Pinsent and most spectacularly of all, Maradona. Can a diet like Phelps' possibly be healthy long-term? "It's very hard for athletes when they stop," says Thompson. "Most have been training since they were children, remember, and it's a very difficult transition to make. They have to be very, very careful because they're going to be cutting their level of activity to maybe a fifth, and their diet has to change accordingly."

"I'd worry he might be clogging up his system," says Bean. "I might design him a similar diet but with a bit more fiber, maybe wholegrain pastas and bread. It's plainly not affecting his performance, but many people would be constipated on a diet like that. That said, we all have different needs. The important thing for Phelps right now is that what he's eating works. He's like a turbo-powered engine revved up to maximum speed, and that's the only reason he's burning it all up. Different athletes handle carbohydrates differently. He's obviously converting them very, very effectively, but it's not a sustainable diet long-term."

What both Thompson and Bean are clear about, however, is that Phelps' gargantuan daily food intake is absolutely not suitable for a normal person to consider emulating. "Look, he needs these vast amounts of carbohydrates simply to get through the training sessions, let alone compete," says Bean. "He eats, swims and sleeps, and that's about it. When it comes to carbs, he's in burn mode; most of us — particularly the couch potatoes — are in storage mode. And it really wouldn't do to be storing what you've just eaten on a regular basis."

Thompson manages to find a silver lining. "The good lesson for the rest of us in all this," she says cheerily, "is that if we do increase our level of physical activity, we can afford to relax a little with the diet. If we go to the gym or exercise regularly, we can allow ourselves the odd little treat. A lot of people make that mistake — they think they've got to deny themselves everything vaguely sinful. It's not the case." The problem for anyone normal who eats like Phelps, of course, is that it would be physically impossible for most of them to expend anything like 12,000 calories a day. In a good hour of dedicated jogging, Thompson points out, "the average person is going to burn about 400 calories."

So what do I need to do to burn off my bowl of porridge, half a fried-egg sandwich, half a five-egg omelet, slice of French toast, two choco-chip pancakes and several forkfuls of pasta (not to mention the lashings of mayonnaise, which I had, until now, forgotten)? Hard to say, really. Especially since at present I'd feel I was doing pretty well if I managed to walk slowly down the stairs. Let alone bend over and tie the laces of my trainers. On no account, in fact, thinking about it, will I do that. The consequences are too unseemly to contemplate.

