



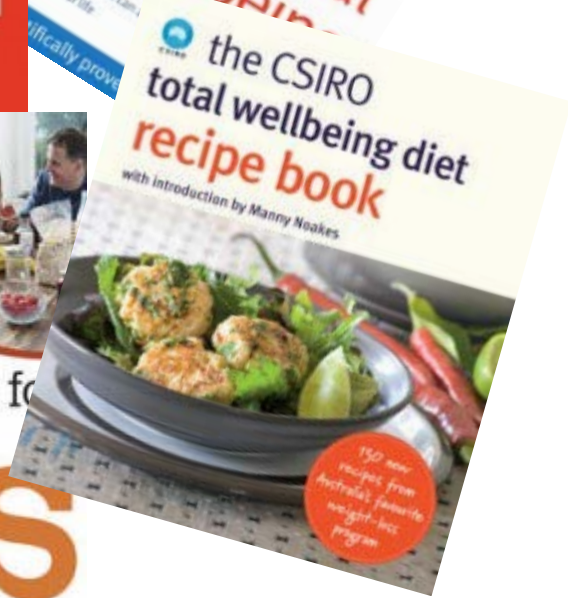
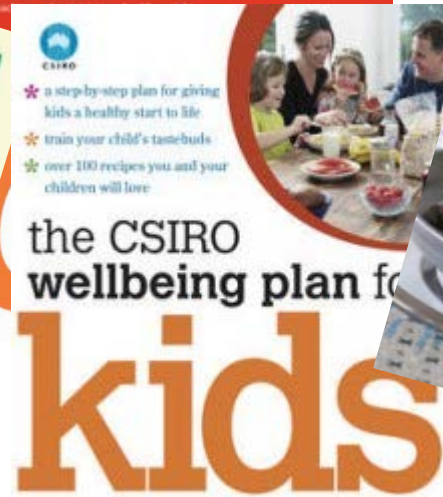
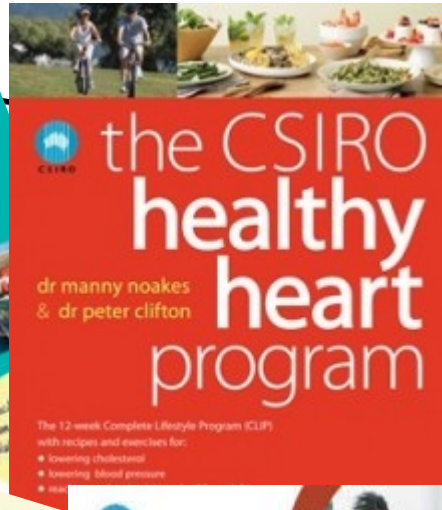
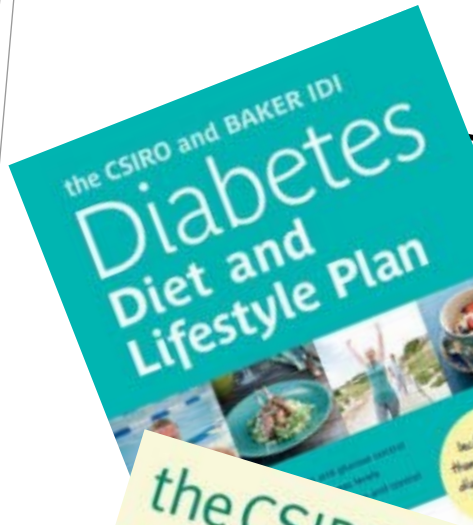
[www.csiro.au](http://www.csiro.au)

# Digital Evolution of CSIRO Total Wellbeing Diet (TWD)

**AHIA Annual Conference November 2011**  
**Dr. David Kannar**



# CSIRO Wellbeing Programs



# Status of TWD program & Digital Evolution

## Current

- Launched 2005
- TWD is a scientifically supported health and wellbeing weight management program
- Penguin Publishing sold over 1m books
- Books are a static, mature media and offer limited personalisation and impact on behaviour
- CSIRO is developing a multimedia approach with interactive tools and is looking for partners

# Status of TWD program & Digital Evolution

## Future

- Address chronic disease prevention by empowering people to take control of their health with a scientifically evaluated program
- Partner with interested AHIA member(s) to further develop program delivery to the Australian community
- Build a long-term cohort for data collection
- Ongoing need to evaluate impact of alternative ways of providing TWD relevant to commercial partner needs and metrics



# Digital Product Opportunities.....

## Focus on relevant key Australian consumer segments:



### Families:

- Trusted name
- Flexible – fits your family
- Sustainable
- Easy to understand



### 60+:

- Trusted name
- Structured eating plan
- Tailored advice
- Overall lifestyle advice



### Young adults:

- General nutrition information
- Weight loss
- Healthy lifestyle

## Opportunities for new digital products and services specific to health insurance industry



TWD website (with social media)  
Adapted to member site



Mobile / iPad app's



Clinic based programs – Primary Practitioners



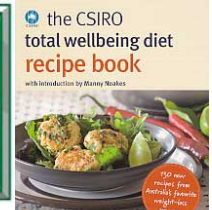
In-school programs



Grocery shopping app's



Pharmacy Program



TWD recipes



- To be sure we're on the right trail.....

# TWD Website (ICT trial 2010-11)

Content

## The CSIRO Total Wellbeing Diet

As the obesity epidemic loomed, we at the CSIRO realised that scientific research into dietary patterns and weight control was urgently needed. (Keep in mind that Australians are now on average around 6-7 kg heavier than our counterparts of 20 years ago and more than half our population is either overweight or obese.) Since 1995, we have conducted a number of controlled trials to find out which dietary approaches will give the best results, not only in terms of the amount of weight and fat you will lose, but also in terms of your overall health and wellbeing. In our early studies we looked at the amount of dietary fat and what kind of fats dieters should eat for weight loss, at the psychological impacts of dieting, and at how much protein would help dieters control their appetite and prevent muscle loss.



The good news is that losing even a small amount of weight with the right diet can have substantial benefits for total physical wellbeing - lowering blood pressure, blood glucose levels, LDL cholesterol levels and insulin levels. No one drug could have that kind of impact!

### what we found out about fat

We quickly discovered that eating less fat was not the only approach to weight control. Our very low-fat and higher fat diets resulted in equal weight loss, as long as people consumed the same total daily amounts of energy (kilojoules).

We also found, just as previous research had shown, that the type of fat you consume makes a difference to risk factors, such as the concentrations in the blood of LDL and HDL cholesterol. In fact, provided our volunteers ate "good", healthy fats, such as those found in nuts, oils and soft margarines, the higher fat weight-loss diets had a better effect on these blood fats than the very low-fat diets.

### should you go on a diet or not?

Experts don't agree on the best way to help people lose weight, because there is no such thing as a "best" way - only a best way for you. We tried a number of dietary approaches and a number of ways of helping our volunteers go about them.




One school of thought says it's counterproductive to encourage people to go on a restrictive diet. The concern seems to be that because dieting is normally a short-term activity, many people find it hard to stick to the program in the long term and then regain all the weight lost, plus a bit more. The usual recommendation is to make gradual rather than radical changes to existing eating patterns.

We have to say that we found absolutely no evidence to support this approach for the majority of people. In fact, we found the opposite. Whenever we tried the "take it slow and easy" approach,


### Recipes

TWD provides you with tasty [recipes](#).




### Menu Plans

TWD Provides you with a [12 week Menu Plan](#)




### Exercise Plan

TWD provides [exercise ideas, explanations and schedules](#) to help you on your way.




### Alcohol Management

[Alcohol](#) and the CSIRO Total Wellbeing Diet.



### Quizzes

Test your knowledge with [quizzes](#) from the Better Health Channel.



### Success Stories

# TWD interactive & personalised menu planner

The screenshot shows the 'My Meal Planner' web application. At the top, there's a navigation bar with the title 'My Meal Planner' and standard browser controls. Below the navigation bar, there are four radio buttons for switching views: 'Plan your meals' (selected), 'View your plan', 'Create shopping list', and 'View recipes'. A 'Find recipes by:' dropdown menu is set to 'category'. Below this, there are several sections:

- Find recipes by:** A list of recipe categories including vegetables, other, lamb, seafood, beef and veal, desserts, breakfast and brunch, chicken and pork, soups and salads, and eggs and things.
- Recipes for soups and salads:** A list of 20 recipe titles such as 'tandoori chicken salad', 'beef, spinach and pumpkin salad', 'portuguese chicken salad with charred lemons', etc.
- Plan for today:** A section with four meal categories: Breakfast, Lunch, Dinner, and Snack. Each category has a link to 'Drag [meal] meals here'. Below this is a 'Change to:' section with the date '28 Sep 2010' and a calendar icon.
- Recommendations:** A section with three sub-sections: 'Alternative breakfasts' (scrambled eggs, french toast), 'Alternative lunches' (baked mediterranean vegetables with ricotta zucchini and mint pie, tuna with cannellini bean and basil salad, baked mushrooms with goat's cheese and watercress), and 'Alternative dinners' (barbecued swordfish with charred mediterranean vegetables and olives, seeded-mustard rack of veal with roasted vegetables, barbecued steak with artichoke and herb salad, baked snapper with basil, capers and tomato).

At the bottom of the application, there is a horizontal bar with seven colored boxes representing dietary components: protein (red), bread (orange), cereal (yellow), dairy (green), fruit (blue), vegetables (purple), and fats (brown). To the right of these boxes is a vertical bar with a red, yellow, and blue gradient.

- Build your own plan, with help from the system which understands your preferences and needs
- Instant feedback on the impact of your choices on your diet compliance



# TWD interactive & personalised menu planner

**My Meal Planner**

Switch view to:  Plan your meals  View your plan  Create shopping list  View recipes

Find recipes by: category

vegetables other lamb seafood beef and veal desserts breakfast and brunch chicken and pork soups and salads eggs and things

**Recipes for soups and salads**

- tandoori chicken salad
- beef, spinach and pumpkin salad
- portuguese chicken salad with charred lemons
- rosemary lamb with olive and feta salad
- poached beef salad with vietnamese dressing
- warm salad of moroccan lamb with roasted tomatoes
- lamb shank soup with gremolata
- roast red capsicum and tomato soup
- warm chicken salad
- greek salad
- beautiful borscht
- oriental chicken soup
- thai beef salad
- minestrone with meatballs
- light vegetable soup
- spiced red lentil and vegetable soup
- butternut pumpkin and coriander soup
- salmon salad with tarragon and caper dressing
- sweet corn and crab soup
- roast beef and beetroot salad
- tuna with cannellini bean and basil salad
- thai pork and noodle salad

**Plan for today**

**Breakfast**  
Drag breakfast meals here

**Lunch**  
Drag lunch meals here

**Dinner**  
Drag dinner meals here

**Snack**  
Drag snack meals here

Change to: 28 Sep 2010

**Recommendations**

**Alternative breakfasts**  
scrambled eggs  
french toast

**Alternative lunches**  
baked mediterranean vegetables with ricotta zucchini and mint pie  
tuna with cannellini bean and basil salad  
baked mushrooms with goat's cheese and watercress

**Alternative dinners**  
barbecued swordfish with charred mediterranean vegetables and olives  
seeded-mustard rack of veal with roasted vegetables  
barbecued steak with artichoke and herb salad  
baked snapper with basil, capers and tomato

protein bread cereal dairy fruit vegetables fats indulgence

- Build your own plan, with help from the system which understands your preferences and needs
- Instant feedback on the impact of your choices on your diet compliance

# Learns from meal plans created

Plan for today	Recommendations
<b>Breakfast</b> Drag breakfast meals here	<b>Alternative breakfasts</b> scrambled eggs french toast
<b>Lunch</b> Drag lunch meals here	<b>Alternative lunches</b> baked mediterranean vegetables with ricotta zucchini and mint pie tuna with cannellini bean and basil salad baked mushrooms with goat's cheese and watercress
<b>Dinner</b> Drag dinner meals here	<b>Alternative dinners</b> barbecued swordfish with charred mediterranean vegetables and olives seeded-mustard rack of veal with roasted vegetables barbecued steak with artichoke and herb salad baked snapper with basil, capers and tomato
<b>Snack</b> Drag snack meals here	
Change to: 28 Sep 2010 	

- Learns from the meal plans created
- Recommends recipes based on their ingredients, how much you like them, when you last ate them etc
- Only recommends things which keep you within the rules of the diet
- Generates shopping lists based on your plan

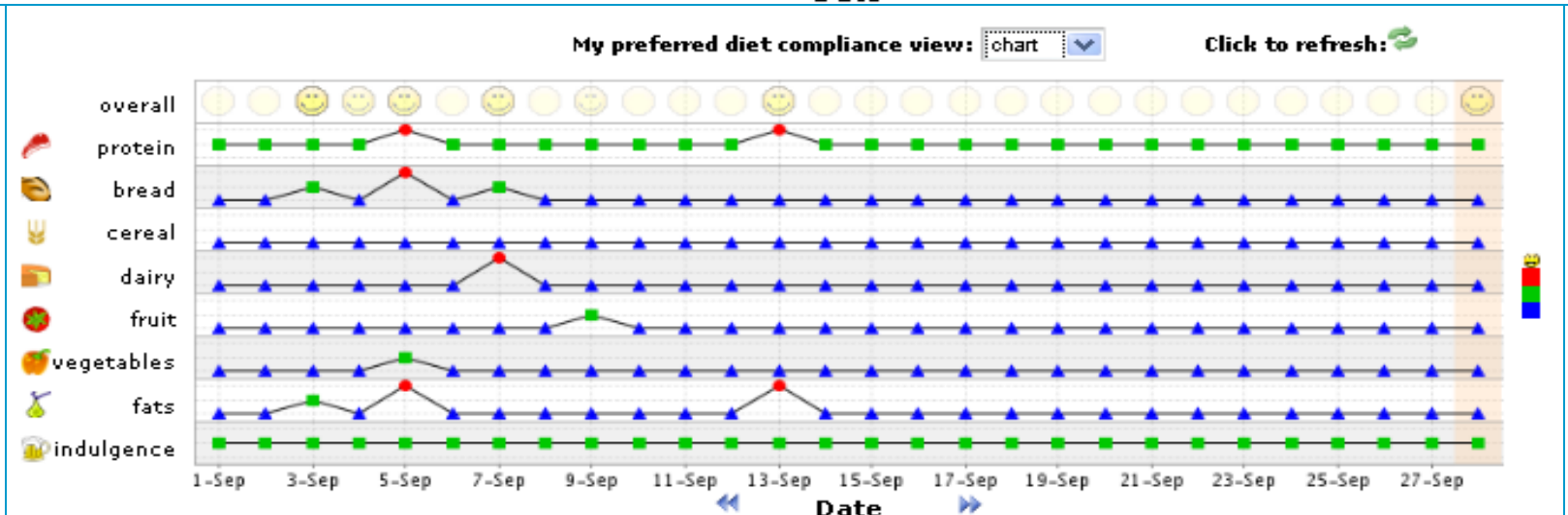
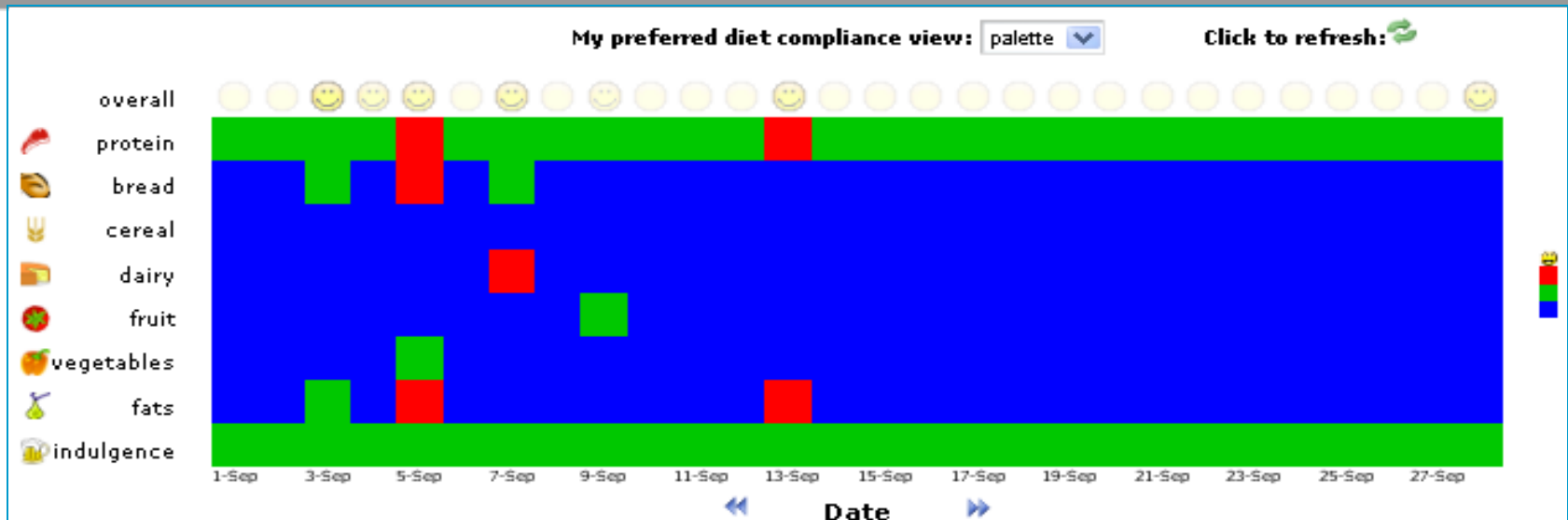
# TWD interactive & personalised menu planner

## Does your meal plan comply with the Total Wellbeing Diet?

Overall	>60%	>30%								
Lean protein	ok	ok	ok	ok	ok	ok	ok	ok	ok	ok
Wholegrain bread	under	under	under	under	under	under	under	under	under	under
High fibre cereal	under	under	under	under	under	under	under	under	under	under
Dairy	under	under	under	under	under	under	under	under	under	under
Fruit	under	under	under	under	under	under	under	under	under	under
Vegetables	ok	under	under	under	under	under	under	under	under	under
Fats and oils	ok	under	under	under	under	under	under	under	under	under
Indulgence foods	ok	ok	ok	ok	ok	ok	ok	ok	ok	ok
	28-Sep	29-Sep	30-Sep	1-Oct	2-Oct	3-Oct	4-Oct	5-Oct	6-Oct	7-Oct

- Easy tracking of where to improve

# Multiple viewing interfaces



- Multiple interfaces to track your diet compliance

# TWD + Social Networking

The screenshot displays the TWDOnline website interface. At the top, the logo "TWDOnline" is prominent, with a navigation bar containing "Profile", "Content", "Home", and "FAQ". A user greeting "Welcome Jill Freyne!" is visible in the top right corner.

The main content area is divided into several sections:

- Social Comparison:** A graph comparing diet-related activities (blue curve) and social network activities (red curve) against community averages (vertical lines). The legend indicates: "Dot shows your usage of diet related activities", "Curve shows community usage of diet related activities", "Vertical line shows community average on diet related activities", "Dot shows your usage of social network activities", "Curve shows community usage of social network activities", and "Vertical line shows community average on social network activities".
- Announcements:** A section for site updates.
- Activity Updates - what are others doing?:** A list of recent user activities, such as "commented on a blog message", "viewed a TWD recipe", and "updated her meal plan".
- Discussion Forums - do you have a question?:** A forum section with tabs for "Categories", "My Posts", "My Subscriptions", "Recent Posts", and "Statistics". A search bar is present. Below the search bar, it shows "Showing 19 results." and a table of forum categories.

The "Quick Links" sidebar on the left includes "People Search" and "Blog Summary". The "Blog Summary" section lists several recent posts with titles like "A funny way.....", "Time to return to reality", "so sore I can barely type, but happy :)", "Target: Sub 71minutes", and "Beat the Snack Attack!".

- Discussion Forums
- Blogs
- Social Comparison
- Activity Updates



# Positives of Social Support & Learning

- Sharing
  - experiences, recipes, meet up with others in real world, successes failures
- Motivation
  - Encouraged by success of others
- Similar hurdles experienced by others
  - When you hit the slump others may be in the same boat
- Open to all
- Low cost

# Live User Study

- 8000 participants recruited, 5000 visited the site
- Various ICT features well received during use
- 12 week study
  - 3,000 kg excess weight lost
  - ~600 forum posts created (2700 responses)
  - ~4500 friendships formed (9000 initiated)
  - ~2300 blog messages added
  - 200,000 content page views
  - 31,000 forum views
  - 57,000 blog views

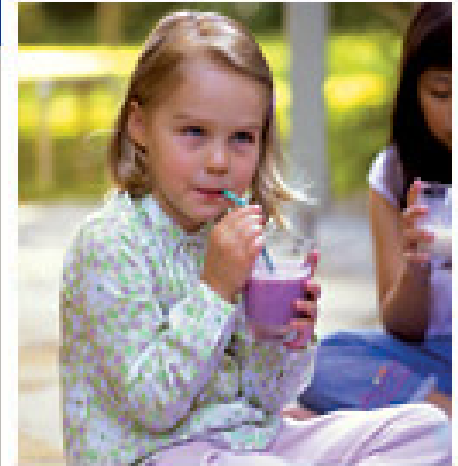
## Next Steps

- Further develop digital program for AHIA members
- Run short term online program with optimal ICT features
  - Evaluate uptake and efficacy in targeted health insurance members
- Potential for roll out dynamic program according to needs of each AHIA company and continue to evolve



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# Thank you

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