



## A 35-Month Injury Analysis Comparing the IPCS Isokinetic Evaluation to a Functional Capacity/Cardiovascular Evaluation On Reducing Injuries For Large Food Distribution Company

### Executive Summary

*The analysis of the injury data clearly demonstrates that the IPCS physical capability assessment program had a dramatic impact on reducing both the frequency and severity of injury as measured by incident rate, total cost of injuries and average cost per injury in comparison the FCE group. The combination of reducing the frequency of injury and reducing the average cost per injury resulted in greater savings and return-on-investment for The Company with the IPCS program than with the FCE program.*

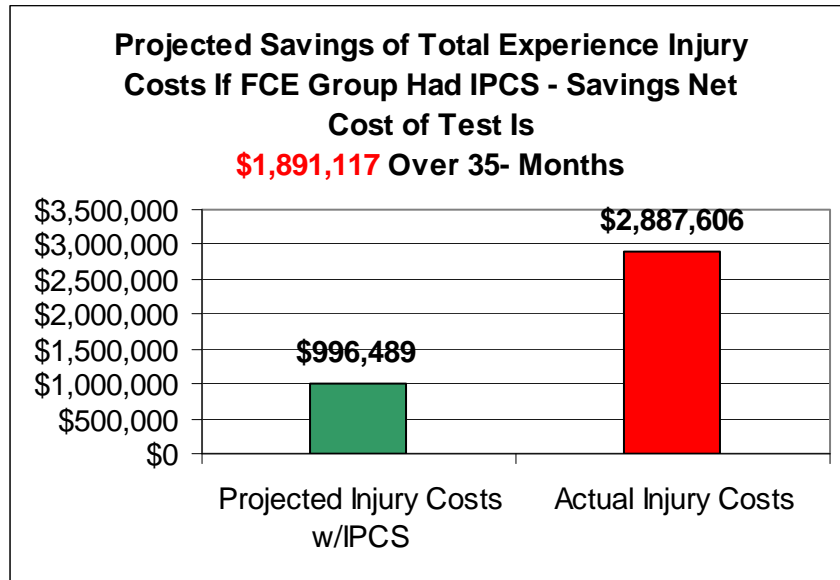
*If the IPCS program had been in place during the 35-month FCE period, the net savings minus the cost of the program would have been **\$1,891,117**.*

The following comparative study was performed to evaluate the impact of the IPCS new hire physical capability evaluation program on reducing both the frequency and severity of injuries.

- The analysis included injury data from 14 food distribution locations across the United States.
- The injury analysis was for the period of October 1, 1998 through July 31, 2004. The analysis is divided into two parts: the first part covers the period of October 1998 through August 2001 (**FCE group**) and the second part for the period September 2001 through July 2004.
- The **FCE** group underwent a functional capacity evaluation with a cardiovascular component (step test) as their physical capability evaluation program. The **IPCS** group underwent an isokinetic knee-shoulder evaluation as their physical capability evaluation.
- During the IPCS time frame, IPCS evaluated and recommended for hire 3,400 individuals. During the FCE time frame, the other vendor evaluated and recommended 3,039 individuals.
- All individuals included in the analysis worked no more than 1,050 days. This number represents the 35-month period for each group and provides a means to equalize the two groups based on same length of employment.

The chart below shows that if the **FCE Group** had the **IPCS** program in place for its 35-month period, the net savings minus the cost of the program would have been **\$1,891,117**.

### Projected Savings for The Company



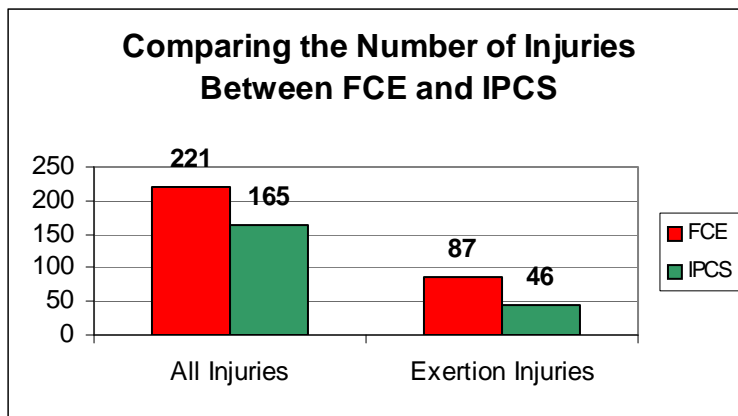
# Results

## Incident Rate of Injury

The average headcount for the FCE Group for FY '99 - '01 was 1,295 and for the IPCS Group for FY '02 - '04 was 1,607. These numbers will be used when calculating the incident rate of injury for each group.

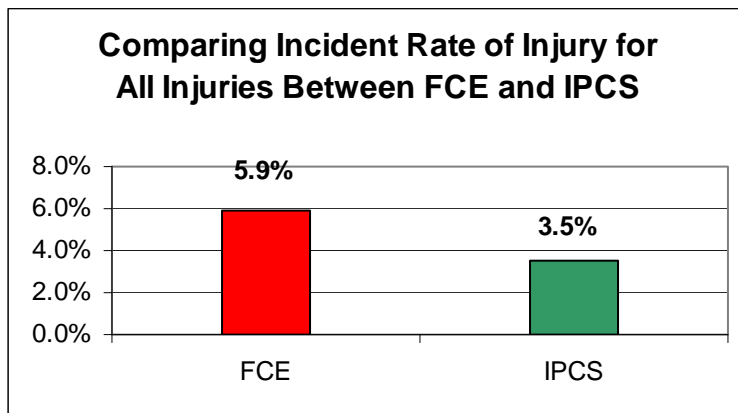
Chart 1 shows the total number of injuries that occurred for the IPCS Group versus the FCE Group. The number of injuries is also shown for exertion injuries only. The absolute numbers show that the number of injuries for IPCS group was dramatically less in comparison to the FCE group for all injuries and exertion injuries.

**Chart 1**



Expressing the frequency of injury relative to the headcount (incident rate) for each group shows the incident rate of injury for the IPCS group was about 40% less than the FCE group (Chart 2).

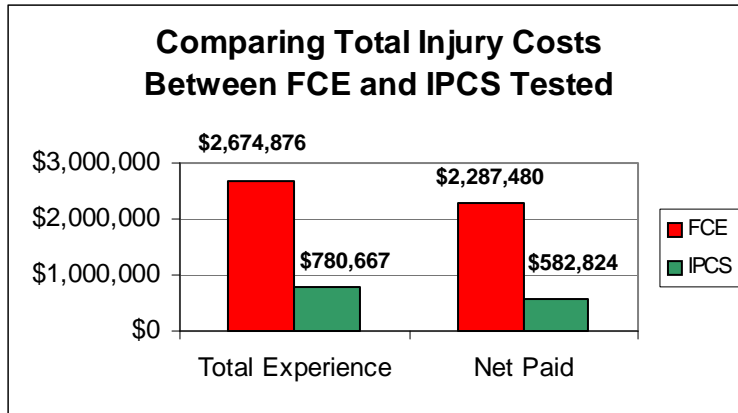
**Chart 2**



Total Costs and Average Costs for All Injuries

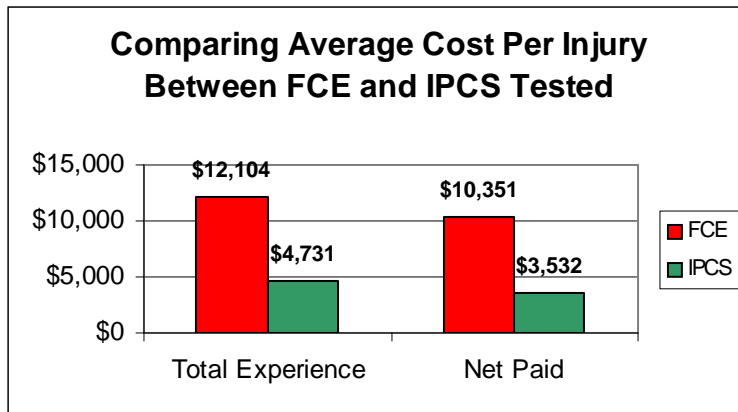
Chart 3 compares the Total Experience Costs (including reserves) and Net Paid for all injuries for the IPCS Group to the FCE Group. The Total Experience Costs for the FCE Group was nearly 3.4 times greater than the IPCS Group. The Total Net Paid costs were nearly 4.0 times greater for the FCE Group in comparison to the IPCS Group.

**Chart 3**



To put these costs from Chart 3 in perspective, the average cost per injury was calculated. When comparing the average cost per injury between the IPCS Group and FCE Group, Chart 4 clearly shows that the FCE Group average Total Experience cost per injury was nearly 2.6 times greater than the IPCS Group. For Net Paid, the FCE Group average cost was nearly 3 times greater than the IPCS group.

**Chart 4**

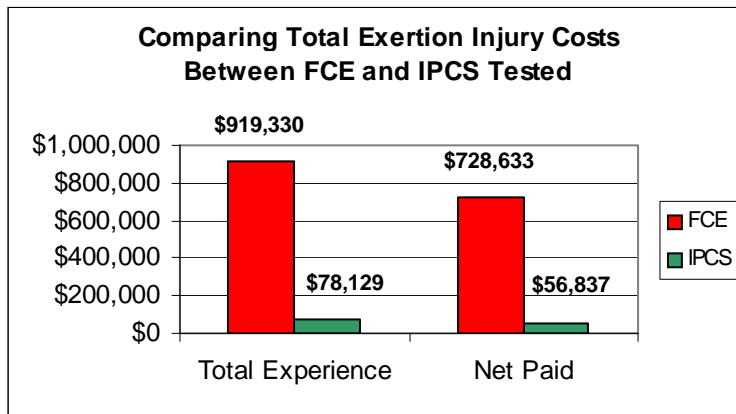


Total Costs and Average Cost of Exertion Injuries Only

Chart 5 shows dramatic differences between the IPCS Group and FCE Group when reviewing the Total Experience Costs and Total Net Paid for Exertion injuries. The FCE

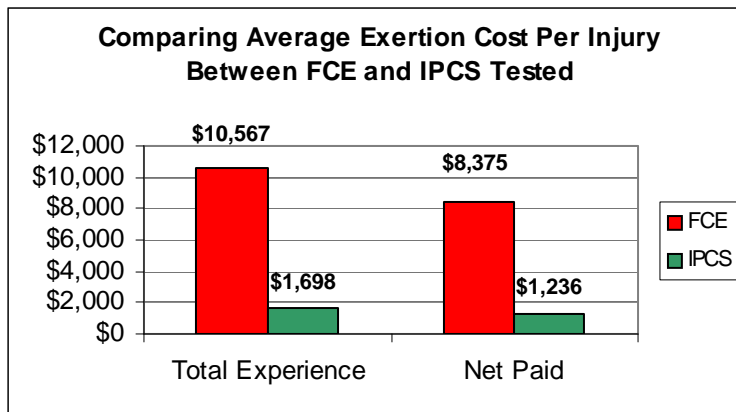
Group spent approximately 12 times more for Total Experience and nearly 13 times for the Net Paid when compared to the IPCS Group.

**Chart 5**



Again, to put these numbers from Chart 5 into perspective, the average cost of an Exertion injury for the FCE Group is more than 6 times greater in comparison to the IPCS Group for Total Experience and for Net Paid as shown on Chart 6

**Chart 6**

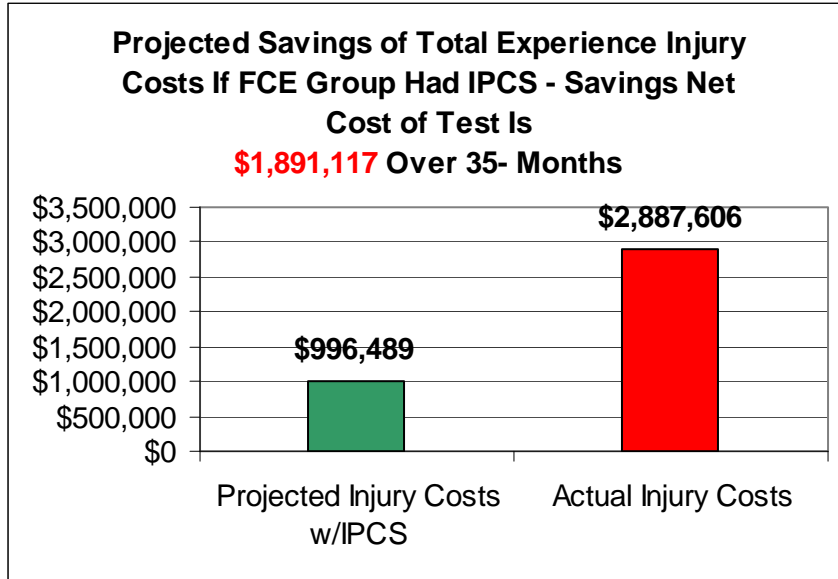


Projected Savings

To calculate the projected savings for the 35-month time frame identified, the average cost per injury for Total Experience for all injuries for the IPCS group (\$4,731) was multiplied times the incident rate of injury for the IPCS group (3.5%) times the headcount for the FCE group. This calculation equaled the Projected Costs of \$629,057 for the FCE Group had the IPCS program been used instead of the FCE. Added to the Projected Cost is the cost to implement the IPCS program, which was calculated by using the cost of the IPCS test times the number of assumed new hires for the 35-month period for the FCE group (~\$88/IPCS evaluation times 3,039). Thus, the Projected Injury Costs was \$996,489 had the IPCS program been in place.

The Actual Injury Cost shown on Chart 7 includes a \$70 cost per test from the other vendor times the number of new hire evaluations (3,039). Thus, the Actual Injury Costs for Total Experience for the FCE was \$2,674,876 plus the cost of the FCE (\$212,730 - \$70 times 3,039), which equals \$2,887,606. Chart 7 shows the projected savings for the Company over the 35-month period is **\$1,891,117** (Actual Injury Cost minus Projected Injury Costs).

**Chart 7**



Added Health Benefit

The obese employee costs a company not only more money in direct costs but much more in terms of indirect costs – loss of productivity, added training and replacement costs and so on. Because of obesity, the available pool of healthy and fit workers to perform physically demanding jobs is rapidly shrinking. When IPCS performs a new hire evaluation, body weight is a factor when determining whether a new hire applicant is recommended or not recommended for hire.

Chart 8 shows the body weight of males who were not recommended weighed 45 pounds more than the males recommended and the females not recommended weight 35 pounds more than those females not recommended.

Chart 8

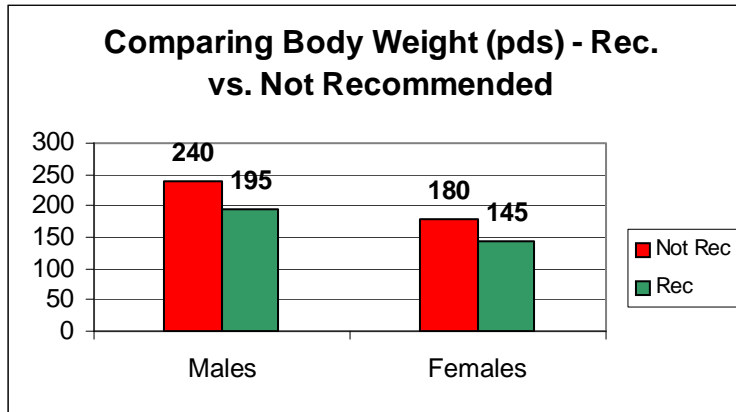
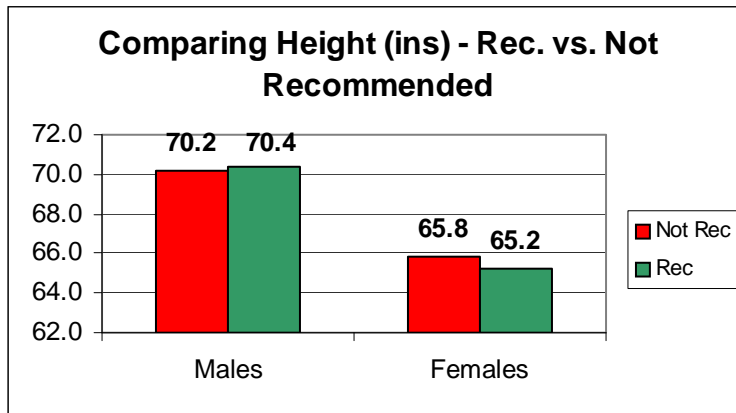


Chart 9 shows that the height in inches for the new hire applicant tested by IPCS during the 35-month period was the nearly the same for both the recommended and not recommended groups.

Chart 9

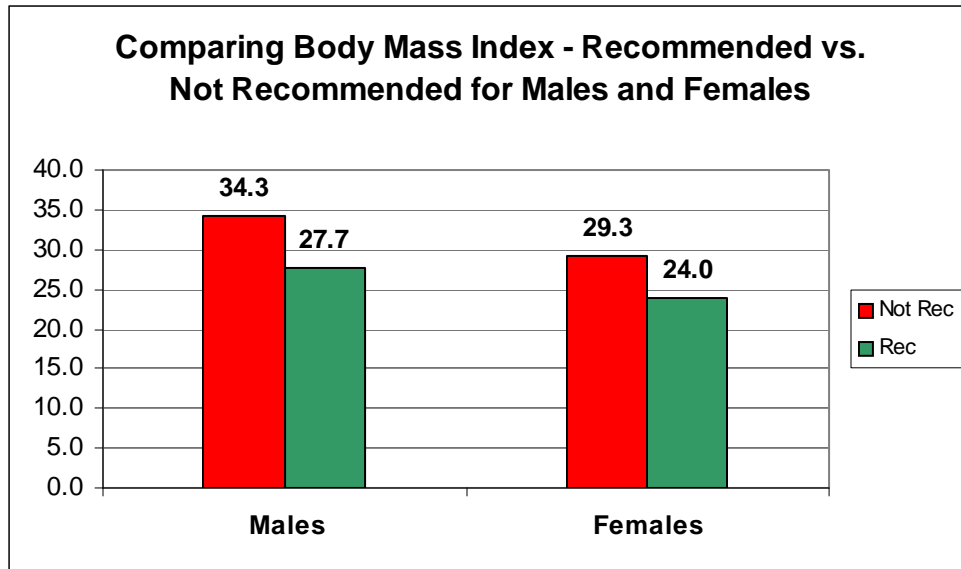


### Body Mass Index

Body mass index (BMI) has been used for many years in research to determine obesity, but recently it has gained in popularity with the consumer because of so much emphasis on obesity. Many web sites have BMI calculators so individuals can determine their BMI scores. Usually scores of less than 25 are considered healthy. A BMI of 25 or greater but less than 30 is considered overweight. A BMI score of 30 or higher is considered obese and 40 and greater is morbidly obese. BMI uses both height and weight in its calculation.

Chart 10 clearly shows that the males tested by IPCS and not recommended have a BMI of 34.3, which puts them in the obese category. The males recommended have a BMI of 27.7, which classifies them as overweight. The females not recommended are overweight with a BMI of 29.3; whereas the females recommended are considered healthy.

Chart 10



Conclusion

The analysis of the injury data clearly demonstrates that the IPCS physical capability assessment program had a dramatic impact on reducing both the frequency and severity of injury as measured by incident rate, total cost of injuries and average cost per injury in comparison the FCE group. The combination of reducing the frequency of injury and reducing the average cost per injury resulted in greater savings and return-on-investment for the Company with the IPCS program than with the FCE program.

Further, The IPCS program is contributing to The Company's effort to control healthcare costs by recommending healthier individuals, which in the long run will bring added cost benefits to the company.