```
int atomicExch(int* address, int val);
unsigned int atomicExch(unsigned int* address,
                        unsigned int val);
unsigned long long int atomicExch(unsigned long long int* address,
                                  unsigned long long int val);
float atomicExch(float* address, float val);
```

reads the 32-bit or 64-bit word **old** located at the address **address** in global or shared memory and stores **val** back to memory at the same address. These two operations are performed in one atomic transaction. The function returns **old**.